

COLLECTING FOSSILS IN FOSSIL, OREGON

Behind the Wheeler County High School, in the town of Fossil, lies one of the richest fossil beds of the Bridge Creek flora. Next to the baseball field, these beds are easily reached and open for public collection.

The fossil beds were formed about 30 million years ago when volcanic ash fell during the formation of the present day western Cascade Range. The ash was washed into a lake basin along with leaves and other plant material, level after level piling up. The ash preserved the leaves long enough for impressions to form under the pressure of the overlying layers.

The beds were exposed during the construction of Wheeler County High School in 1949 and have been used

on a continuing basis by amateurs and professionals. The town of Fossil received its name from the mammal fossil remains found on Hoover Creek north of town, where the original Fossil post office was established in 1876 prior to the incorporation of the community at its present location in 1891.

No special tools are needed for fossil collection. Most rocks examined on the hillside will contain an impression of leaves. Other fossils can be found by breaking the rock parallel to the bedding plane with a hammer and chisel. As the rock is often very soft, it is necessary to pad the impressions carefully with tissue before transporting them.

About 30 species of plants, most of them belonging to genera that are no longer native to the Pacific

Northwest, are found here. The most common plants are alder, maple, beech, dawn redwood and pine. In what appears to represent a deciduous hardwood forest comparable in stature to the mixed hardwood forest living today in China. This implies that the climate at that time was much moister and more temperate than is presently the case in the shrub steppe and savannah today.

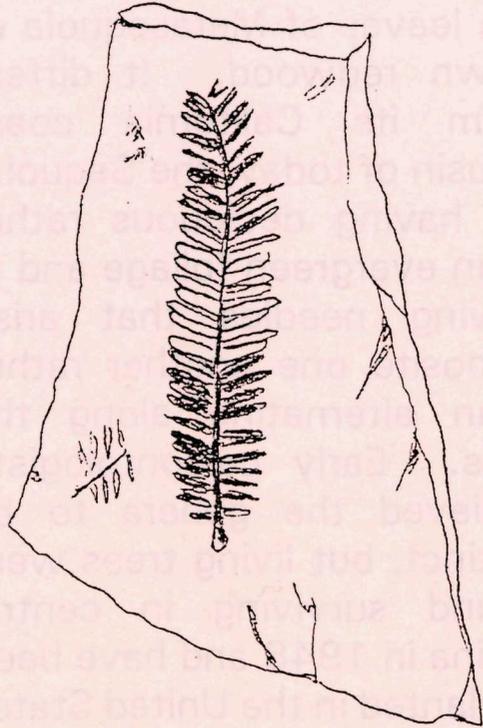
Other fossils found here have included an unidentified bat, a new species of salamander and numerous insects.

Besides leaves, the floral deposits contain abundant fruits, cones, seeds, and occasional flowers. Although original material and pollen are generally not preserved, the preservation of fine veins in the leaves and other organs is often of high quality.

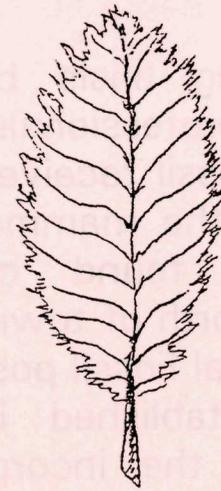
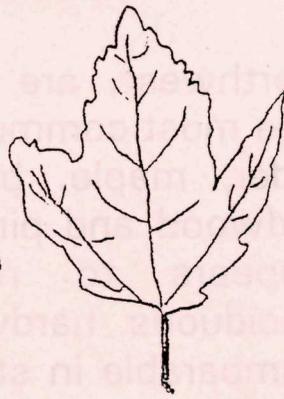
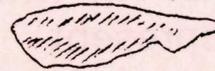
The most abundant fossils are leaves of *Metasequoia* or dawn redwood. It differs from its California coast cousin of today, the *Sequoia*, by having deciduous rather than evergreen foliage and in having needles that arise opposite one another rather than alternating along the axis. Early paleontologists believed the genera to be extinct, but living trees were found surviving in central China in 1948 and have been replanted in the United States on college campuses, arboretums, and private lands.

For more information, see "Oligocene Fossil Plants of the John Day Formation, Fossil" by Steven R. Manchester, published in the Oct. 1987 issue of *Oregon Geology*, an Oregon Department of Geology publication.

METASEQUOIA Fossil in Rock



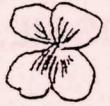
ACER (Maple)



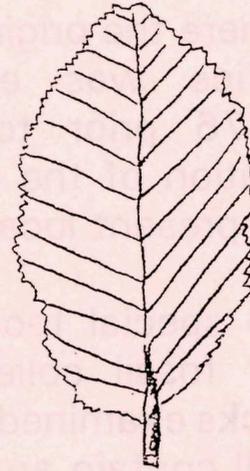
ULMUS (Elm)



HYDRANGEA



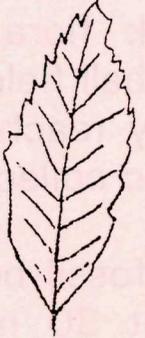
PARACARPINUS



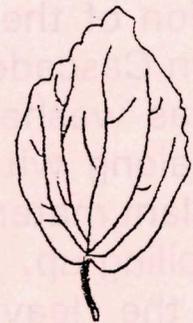
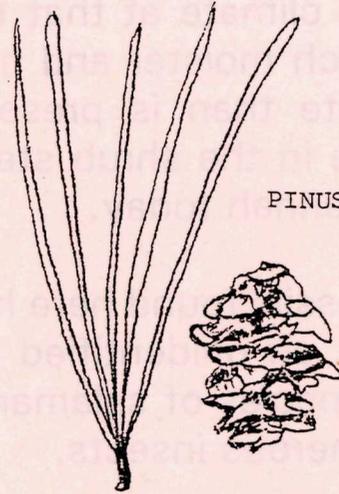
QUERCUS



FAGUS

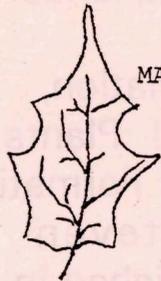


PINUS (Pine)



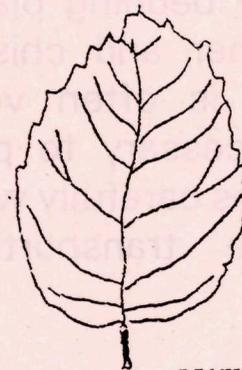
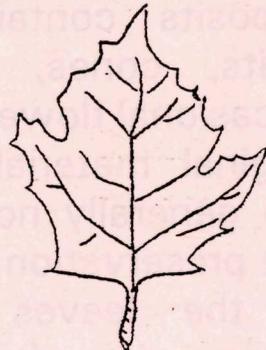
CERCIDIPHYLLUM

MAHONIA (Oregon Grape)



ROSA (Rose)

PLATANUS



ALMUS (Alder)



SEQUOIA with Alternate leaves