

## The Brush Hollow Limestone of the Canon City Re-Entrant, Colorado

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A Cenozoic, probably Quaternary, limestone of continental origin crops out in the Canon City area of Colorado, in T. 18 S. and Ranges 69 and 70 W. (Canon City quadrangle, 1889). This formation, unconformably overlying sandstones and conglomerates of Cretaceous and Pennsylvanian age, is here named the Brush Hollow limestone, after a reservoir of that name in T. 18 S., R. 69 W.

The Brush Hollow varies in thickness from a few inches to approximately 25 feet. It includes three facies: conglomerate, travertine, and medium-to-fine crystalline limestone. Locally the surface has the appearance of caliche. The color is generally buff to tan. The few fossils found within the Brush Hollow include plant remains and land snails. The conglomerate facies contains pebbles, cobbles and boulders of several lithologies representative of the section upstream: igneous and metamorphic; and early Paleozoic dolomites and cherts. A characteristic "fretwork" structure distinguishes the travertine facies.

The Brush Hollow may be examined in the areas of Oil Creek, Six Mile Creek, and Eight Mile Creek, where it occurs here and there on dip slopes developed on lower Fountain (Pennsylvanian) sandstone and conglomerate, and Dakota (Cretaceous) sandstone. An excellent exposure may be found about a mile east of Eight Mile Creek, along the Dakota-Graneros contact, south and southeast of the Dakota cuesta. Natives recall that this contact was, for many years, a spring and seep line; the springs went dry in the early thirties. It is therefore suggested that the Brush Hollow was deposited by water which fell as rain on the Dakota and Fountain outcrops, dissolved part of the  $\text{CaCO}_3$  cement, and overflowed on Graneros shale and upper Fountain sandstones, siltstones and shales, at horizons below which the Dakota and Fountain aquifers were saturated.

The conglomerate facies of the Brush Hollow resembles, except in position, the Pleistocene "Mesa gravels" or Nussbaum formation of the same general area. The latter formation, in the Canon City re-entrant, commonly occurs as cemented river or creek terrace gravels. The conglomerate facies of the Brush Hollow may have been formed by spring-water deposition of  $\text{CaCO}_3$  in and on pre-existing pediment gravels.

The limestone is probably not now being deposited along the Dakota-Graneros outcrop. This may be due, in part, to a change in climate. Another factor, however, may be the increased use of the Dakota as an aquifer, hence eliminating any appreciable surface overflow onto the Graneros.