

are interrupted by a great mass of syenite, the contact between the two being marked by a hard laminated black and white quartzose slate, of somewhat gneissic character.

Chilukweyuk
Lake.

The syenite of Chilukweyuk Lake forms a belt of between four and five miles in breadth, measured from west to east. It is remarkable for its hardness and regularity in mineral composition, being a finely crystalline mixture of white and pink felspar, with a small quantity of quartz and well-formed crystals of hornblende, of a somewhat slender columnar type. Crystals of black mica are seldom seen. In some places the syenite is divided by a system of joints, which are arranged so as to produce a kind of imitative stratification, having a regular northwesterly dip of about 45° ; but no well-defined lamination or foliation is anywhere visible. It is from this mass, or others of similar composition, that the principal part of the erratic blocks which are found scattered over the coasts of the mainland and the southern portion of Vancouver Island have been derived. The Chilukweyuk syenite is, in this latitude, the nearest point to the coast presenting a supply of the requisite material*.

Chilukweyuk
Mountain.

The highest granite peak in the mountains surrounding Chilukweyuk Lake is on the western shore. It rises to a height of 6,570 feet above the sea level, the summit presenting a nearly vertical cliff-face of about 1,200 feet in total height. In this cliff two thin black dykes are seen penetrating the syenite. From fragments picked up at the foot of the slope they appear to be dark quartzo-felspathic porphyries or elvans containing large white felspar crystals, and similar in character to the elvan dykes found in the gneiss of the lower part of the Columbia Valley.

Watershed
ridge west of
Skagit.

After crossing the syenite, the next rock encountered to the eastward is near the latitude-station of the Chucchehu a. It is a hard, highly micaceous and quartzose gneiss, showing irregular wavy laminations, which have their principal inclination toward the east. On the top of the dividing ridge between the Chilukweyuk and Skagit waters, a kind of outlying mass of slaty rocks is seen above the gneiss. These rocks are chiefly earthy clay-slates with conglomerates of gneiss, sandstone and slate pebbles; and purple slates, containing epidote and calcite.† The structure of this outlier is not well seen, for at the top of the ridge and for some distance on each side, the rocks are hidden by a thick talus of rubbish, in addition to which the height (4,700) is insuffi-

* (Note by Mr. Baerman) In 1858 syenitic boulders were visible in extraordinary numbers in and near the town of Victoria. Since that time they have been largely drawn upon for a supply of building material owing to the great ease with which they can be blown to pieces, and the absence of any other suitable building stone in the immediate vicinity.

† These doubtless represent an outlier of the Lower Cretaceous rocks, which commonly occur in similar positions in parts of this region further to the north.