

SESSIONAL PAPER No. 26

yet the drainage is very imperfect, and lakes or ponds, many of them surrounded by muskeg or tundra, now occupy important depressions, through which large and important streams once flowed.

Since the retreat of the ice, V-shaped incisions have been etched in the valley walls, and at the margins of the upland surface, resulting in the production between them of numerous fingered forms. The main streams have also sunk their channels to some extent in the unevenly distributed deposits strewn over the valley floors, so that occasional sand, gravel, silt, or boulder-chans about 200 feet or more in height, have been produced. In regard to these relatively slight changes, however, the topography of Wheaton district is as the result of, and the forms or features which were produced by glaciation still exist in a marked state of preservation.

GENERAL GEOLOGY.

General Statement.

Wheaton district is situated, as before mentioned, along the eastern edge of the Coast range, and practically the entire area is believed to be underlain by the granitic rocks of the great Coast Range batholith; which outcrop throughout by far the greater part of the area. A study of the geology of Wheaton district thus involves throughout, that of this important granitic terrane. In addition to the granitic intrusives, however, which are of Cretaceous or Jurassic age, numerous other rock types occur, including igneous, sedimentary, and metamorphic varieties which range in age from possibly Pre-Cambrian to Recent.

In the eastern portion of Wheaton district, the present upland surface very nearly coincides with the original top of the Coast Range batholith, so that there, numerous remnants of the former roof of this igneous mass are still preserved. The older rocks also constitute walls separating subjacent portions of this vast granitic body; in addition, numerous small isolated masses of the older invaded formations remain, which are distinctly seen to be inclusions in the granitic intrusive, occurring as they do throughout it at various elevations. Toward the west, nearer the centre of the batholith, the older rocks gradually disappear, as the central portion which was originally the highest has been more deeply eroded than the rest and, as a result, the overlying and included older rocks, all of which were originally mainly at or relatively near the surface of the batholith, have been to a great extent removed.

Throughout Wheaton district the geology is complicated and intricate, due in part to the great diversity in age and character of the various formations that occur, but more particularly to the fact that the area has been subjected to a number of intense volcanic invasions. As a result of each invasion the older rocks have been cut pierced, and in some cases buried by the invading volcanics, and so each successive period of volcanic activity added to the geological complexity of the region.