

agents of decay. The piles of volcanic ashes, the crater, the lava streams and other superficial features have long since disappeared; only the hard basal portion of the mountain has survived; even now it is year by year falling to pieces, as can be seen at the foot of all the steep slopes on the mountain side, notably that opposite the head of McTavish Street.

There were, speaking generally, three stages in the history of the activity of the mountain, marked by the outpouring of three different classes of rock. Each of these can still be recognized and studied, and much remains to be learned concerning them. At the first eruption a dark-coloured basic rock was poured out, represented by the main body of Mount Royal, as seen in all the cuttings on the upper part of the mountain and in the cemeteries. This is a rock found in but few other places in the world, and known as Theralite or Essexite. On looking at a fresh fracture it is seen to be composed of constituents, some of which are colourless and some of which are black. The colourless ones are feldspar and nepheline, the black ones pyroxene and hornblende. The relative proportion of these minerals varies from place to place, in that part of the mountain occupied by this rock, the rock being in some places dull gray in colour, but in others black. It often shows a distinct flow structure which it acquired when moving up through the throat of the volcano while still in a semi-fluid condition.

After the rock of this first eruption had cooled, becoming hard and solid, it was rent asunder and shattered, undoubtedly with the accompaniment of violent earthquakes. On a line which runs along the back of the mountain and up through this shattered zone there came a second eruption, of rock of a different character. This is much lighter in colour, a pale gray, and is seen excellently exposed in the great quarry worked by the Corporation for road material at the back of the mountain at