

side, the streams from the neighboring open country would build their deltas against the ice margin in the form of terraces involving buried shreds of the ice margin, and having when the ice melted away kettles or depressions marking the sites of these buried or partially inhumed ice masses, and a relatively steep but perhaps hummocky or kamelike terrace front overlooking the river gorge and at varying distances from and elevations above the gorge. The water thus impounded against the ice margin would flow along the ice edge or finding its way through crevasses and water tunnels in the ice escape with the glacial drainage without producing marginal stream phenomena.

Finally when the ice had melted off from the rock terraces for a time a long narrow tongue would still occupy the gorge itself forcing some of the drainage over the rock benches and covering them with sheets of clay, sand and gravel. This coating of glacial materials might here and there mantle the ice in the gorge where that had been lowered by melting so that its surface lay below the level of the rock terraces. In any event when the ice finally melted out of the gorge the rock benches would be coated with terrace drift to their edges, the deposit here and there descending into the gorge as if it had once entirely filled it though this may never have been the case. Unless the evidence of ice contacts be found, it would be an extremely difficult task to determine with certainty the original extent and limits of such deposits and to discriminate them from remnants left from a reexcavation of a gorge which has once been filled by glacial sediments.

Moreover, such lateral glacial deposits will depend for their elevation on the height of the rock terraces on which they have been spread out. From point to point they should merge into the frontal deposits of the successive stages of the retreat of the ice front. Along such frontal lines the materials would be coarsest, gradually passing to finer and finer materials toward the south or away from the ice if the drainage was in that direction. Here and there lateral tributary streams would pour in their contribution of detritus and produce local variations of texture or thickness of the sediments.

If the ice retreat by successive oscillations in which the recessional movements overbalance the forward ones, the complica-