GLACIAL DEPOSITS

STRIE ON KITTATINNY (BLUE) MOUNTAIN

Along road from Water Gap village to Totts Gap.

Water Gap .................................................. S.10W.

\( \frac{3}{4} \) mile from Water Gap

\( \frac{1}{2} \) mile from Water Gap (local deflection due to topography)  S.3W.

Totts Gap, 200' below summit on northern slope

1 mile north of Totts Gap

Kittatinny Valley slate hills.

3/4 mile west of Slateford ................................ S.50W.

1 1/2 mile southwest of Slateford .................................. S.40W.

1 mile northwest of East Bangor, S.55W., S.45W., strata not crossed.

Old Bangor Quarries—on west slope S.80W., at right angles to moraine.

Centerville, in front of Brick Church .................................. S.35W.

One mile southeast of Centerville, at right angles to moraine, S.8W.

The striae are almost too few to warrant any detailed inferences as to the direction of ice motion. The ice crossed Kittatinny Mountain obliquely, the average direction of the markings being about S.25-30W. On the lower hills to the north of this ridge the ice currents moved more nearly parallel to the trend of the ridges. The barrier interposed by the mountain deflected the basal currents slightly, but apparently had no effect upon those which crossed its crest. The meager observations made in Kittatinny valley indicate that the motion near the foot of the mountain was more nearly parallel to the trend of the ridge than toward the axis of the valley, where the direction accords more nearly with that over the crest of the mountain. The few observations made near the moraine indicate that the ice movement was in general at right angles to its course.

In addition to the excellent descriptions given by Dr. Kümmler, the writer may add a few of his own more limited observations.

Prof. Ward presents several bits of evidence in support of his view that all the glacial till found on the crest of Kittatinny (Blue) Mountain in Northampton and Monroe counties belongs to the Illinoian ice sheet rather than the Wisconsin according to other workers. One of the strongest points he makes is the greater age of the mountain till as compared with the till of the slate region. In his report he states that in the Illinoian "limestone fragments generally lacking in the till, for solution has removed them. The rare fragments found are large and are obviously loosened from the underlying bedrock. All of them show evidence of long weathering, being porous and even cavernous or fallen apart." (pp. 43-44.) This description is an excellent one for the Illinoian deposits known to the writer that are southwest of the Wisconsin terminal moraine. However, it does not fully accord with his observations of the till on the top of Kittatinny (Blue) Mountain, especially east of Tott Gap, at Fox Gap and west of Fox Gap to the Little Offset, where numerous blocks of fossiliferous Onondaga limestone, large and small, many of them remarkably fresh, no more