the tilting of the old water levels in the upper Hudson valley. The following note on the faults at Defreestville shows that these movements may assume some importance in the solution of the problem when their distribution has been accurately determined.

At Defreestville east of Albany a few rods from the road corners on the southeast road from that place there may be seen in the gutter well glaciated rock surfaces broken into small step faults each with a downthrow from a fraction of an inch to as much as 3 inches on the west. In a horizontal distance of 12 feet I measured a westerly downthrow of 1 foot vertical. It is probable that this zone of displacement has narrow limits but the local rate is as great as 440 feet change of level to 1 mile horizontal. The fact that the same small faultings occur on the bank of the river at Greenbush is indicative of a measurable change of local levels in the terrace of this part of the valley. No allowance has been made for these movements in the present report.

Mather[1] reported the existence of similar faults in slate rocks in Copake and Ancram. He mentions a locality near the end of Winchell's mountain and not far from the base of Mt Washington on the road from Copake to Boston Corners. He further cites Professor Merrick as having seen other examples, ½ mile west of Long pond in Clinton, in which the surface was displaced from 2 to 3 inches.

What appears to be a nearly north and south fracture with 3 or 4 feet throw with broken blocks of rock thrown into a narrow fissure occurs on the lake side of Trembleau mountain just south of Port Kent station. The downthrow in this instance is on the east in the direction of the lake valley. On Mt Monnoir near St Johns, Quebec, on the eastern side near the summit, similar evidences of fracturing appear with large inthrown blocks of rock from the sides. One of these cases was within the zone of wave action during the submergence; certainly that at Port Kent was within the zone of marine action. Wave action frequently opens small chasms in jointed and fractured rock but in a regressive movement of the sea it would hardly choke up such openings with large blocks from the sides in tumultuous disorder.

[1] Mather. Geol. N. Y. 1st Dist. 1843. p.156–57.