

across the axis. The modern divides in that region seem of glacial origin, and our present knowledge does not suffice to determine how much of the drainage west of the axis had been captured in preglacial times. That the drainage of the Long lake and Raquette lake valleys went out to the northwest in preglacial times is exceedingly improbable, and it may well have gone eastward to the Hudson.

The fact that the main axis of the region is to so large an extent the modern watershed, is the strongest of the arguments for its prominence having been given to it in comparatively recent times.

The northeastern streams, the Ausable, Saranac, Big Chazy and English rivers, flow in general northeast courses away from the main axis. Faults control them somewhat, and here the direction of the main faults is also that of the consequent stream flow. The upper Ausable and Saranac are, in part at least, controlled by faults. In their lower courses all cut across the strike of the Paleozoic rocks.

It is in the southeastern part of the region that the streams show the most marked adaptation to the structures, as was noted by Brigham on the publication of the first topographic sheets of the region.¹ The main streams here have n. to n.n.e. or s. to s.s.w. courses and receive their main tributaries from the west. Such Grenville belts as occur trend with the tributaries rather than with the main streams, and the determining cause of location is obviously a structural one. Ogilvie argues that the faulting was accompanied by block tilting toward the east, that the main drainage lines are located along the faults, and that the tributaries on opposite sides work against an abrupt fault cliff on the one hand or down a gently tilted slope on the other; that those down the slope have a conspicuous advantage and have extended their courses much farther back than those flowing in the opposite direction.² That the main streams follow the fault lines, the writer quite agrees. And, if the faults downthrow to the west, the rest necessarily follows. But, if they are normal

¹Am. Geol. 1898. 21:219.

²Jour. Geol. 10:408.