On the south and west sides of the region, the Utica shales are overlain conformably by a group of shales and sandstones, often with passage beds between; and the group has usually a large thickness, as the section and well records just quoted demonstrate. There is no direct evidence that equivalent rocks were ever deposited in the Chazy basin of the Champlain valley, but neither is there any weighty evidence that they were not. South of the Mohawk, however, and all along the west side of the region, they appear in force. The above quoted records show that the formation thins westward through the Mohawk valley, is thinnest at Utica, where only its base is present, and thence thickens rapidly to the north and west. Walcott has given a thorough discussion of the evidence, showing that it argues for a shallowing of the sea along the Utica meridian early in Lorraine times, thinning the section there, and preventing thereafter a commingling of the western (Lorraine) fauna, with the forms to the eastward of the barrier, which hence separated the eastern Mohawk basin from that of the interior.[1] It is by no means improbable that this uplift at Utica is but part of a greater movement, which extended thence to the northeast, bringing much, if not most of the Adirondack region above sea level and causing also cessation of deposition in the Chazy basin.

The great thickness of the Lorraine rocks, both in the eastern Mohawk region and in Jefferson and Oswego counties, together with the fact that their present line of outcrop is owing to long continued, surface erosion, and that the effect of this erosion is to cause the line of outcrop continually to recede from the Adirondacks, sufficiently indicates that in the past they must have extended in over them, likely for several miles, and that in some considerable thickness; and that during Lorraine times a considerable area, specially on the northwest and the southeast, remained yet submerged, in spite of the uplift described above. In addition, it is by no means impossible that some of the later Siluric rocks may have overlapped on the southern and western margins of the region, though this is much more open to question than is such a former extension of the Lorraine rocks. Certainly, the general tendency to subsidence over the district, initiated in

[1] Geol. Soc. Am. Bul. 1:344–50.