

chasms hollowed out by them in the course of ages. As the opposite banks of these ravines are on the same level, including that of the Niagara itself, we come abruptly to their edges before we have any suspicion of their existence, and we must travel out of our way to enjoy a sight of them.

At length we reached the water-shed, where the streams flow, on one side, northwards to Lake Ontario, and on the other, southwards, to the Susquehanna. I began to wonder how the Indians ever obtained any correct notions of topography in so continuous a forest, all the smaller rivers, with their islands, being embowered and choked up with trees. I soon ceased to repine at the havoc that was going on in the fine timber which bounded our road on every side.

After traversing successive zones of the Upper Silurian strata, I at length entered at Bath upon the olive-coloured slates and grey sandstone, which seem to be the equivalent of the lower part of the Old Red, or Devonian of England. In this rock some streaks of carbonaceous matter, which soon thin out, and are rarely three inches thick, are met with. I found a proprietor on Spalding's Creek preparing to sink a costly shaft for coal, and I earnestly dissuaded him from his project, referring him to the New York survey. Every scientific man who discourages a favourite mining scheme must make up his mind to be as ill received as the physician who gives an honest opinion that his patient's disorder is incurable.

After the Olive Slate, I came to an incumbent formation of red sandstone near Tioga, and collected fish of two species of *Holoptichius*, one apparently identical with *H. nobilissimus*, a fossil of the British Old