

[now known as *Orthis hipparionyx*], *Strophomena depressa* [now usually known as *S. rhomboidalis*], and species of *Avicula*, *Bellerophon*, *Favosites*, *Zaphrentis*, &c. These Prof. Hall compares with the fauna of the Oriskany sandstone; and they seem to give indubitable testimony that the Nietaux iron ore is of Lower Devonian age.

"To the southward of the ore, the country exhibits a succession of ridges of slate holding similar fossils, and probably representing a thick series of Devonian beds, though it is quite possible that some of them may be repeated by faults or folds. Farther to the south these slates are associated with bands of crystalline greenstone and quartz rock, and are then interrupted by a great mass of white granite, which extends far into the interior and separates these beds from the similar, but non-fossiliferous rocks on the inner side of the metamorphic band of the Atlantic coast. The Devonian beds appear to dip into the granite, which is intrusive and alters the slates near the junction into gneissoid rock holding garnets. The granite sends veins into the slates, and near the junction contains numerous angular fragments of altered slate.

"Westward of the Nietaux River, the granite abruptly crosses the line of strike of the slates, and extends quite to their northern border, cutting them off in the manner of a huge dyke, from their continuation about ten miles further westward. The beds of slate in running against this great dyke of granite, change in strike from south-west to west, near the junction, and become slightly contorted and altered into gneiss, and filled with granite veins; but in some places they retain traces of their fossils to within 200 yards of the granite. The intrusion of this great mass of granite without material disturbance of the strike of the slates, conveys the impression that it has melted quietly through the stratified deposits, or that these have been locally crystallised into granite *in situ*.

"At Moose River, the iron ore and its associated beds recur on the western side of the granite before mentioned, but in a state of greater metamorphism than at Nietaux. The iron is here in the state of magnetic ore, but still holds fossil shells of the same species with those of Nietaux.

"On Bear River, near the bridge by which the main road crosses it, beds equivalent to those of Nietaux occur with a profusion of fossils. The iron ore is not seen, but there are highly