

tend, a balance upon which, in the incompleteness of the geological record, the solutions of many problems depend.

Because of the uneven character of the floor upon which the sediments are laid down the dips of the beds near the floor are unreliable as criteria with reference to the general dip. Where there is evidence that the sediments are some distance vertically above the crystalline floor the dip may be measured with some degree of certainty that it represents the average dip of the sediments in that locality.

Near Batterssea, at which place some of the sandstones are found, the average dip is a little over half a degree to the east of south. What the gradient of the floor upon which they rest may be is not known. It possibly is the same as that of the overlying sediments, it may be even inclined towards them, or what seems to be the more justifiable assumption, it may dip in a similar direction at a somewhat greater angle. If the generally accepted interpretation as to the method of the formation of deposits is correct, the sandstone beds whose shoreward ends are here exposed will gradually merge into argillaceous beds and finally into calcareous members. The argillaceous beds which vertically overlie them will also merge into the limestones further out from the oldland shore. In many of the localities, because of the unevenness of the floor these sandstones are not thick enough to pass over the crystalline ridges, but are limited by them. In some cases at least the sandstones are probably subaerial deposits rather than subaqueous.¹

In the vicinity of Kingston the limestones are found to rest directly upon the crystallines, which, from their associations probably formed islands in the Palaeozoic sea. Between Kingston Mills and Gananoque there are a number of Archean exposures, some of them several square miles in area. Between them and the main crystalline area to the north the sediments rest in more or

¹ Wilson, *Phys. Geol.*, Central Ontario, *Trans. Can. Inst.*, Vol. VII., p. 159, 1901.