

ous slate towards the top, are met with. All these rocks are intersected by numerous small quartz veins, some of which hold considerable quantities of iron pyrites, both ordinary and magnetic (pyrrhotite), thickly disseminated in minute crystals. The black, pyritiferous slates are particularly much impregnated with these metallic ores, and are usually coated on the exposed surfaces with oxide of iron, resulting from the decomposition of the pyrites, which gives them a highly mineralized appearance.

They bear little resemblance to the rocks previously described. They are in a much less altered condition, and their general lithological and mineral characteristics would seem to point to a higher horizon in the geological scale. Their relation to the lower series by actual contact was nowhere observed.

On the shores of Gander Lake and near the crossing of the outflowing river bluish and grayish silky slates, merging into black, pyritiferous shales, with occasional thin, arenaceous layers interstratified, are the prevailing rocks. Some of the slates are peculiarly mottled, and often display a rough, warty surface. Numerous quartz veins intersect them in all directions, and some of the shaley bands are very pyritiferous, containing lumps and small masses of radiated pyrites. The mineral also occurs in thin, stratified layers. A little to the west of Glenwood, at the Gander River, and in the vicinity of Salmon River Bridge, low outcrops of finely micaceous, red sandstone, underlaid further on by red, flaggy or slaty bands, are seen, apparently occupying an inferior position to the silky, blue slates. These would seem to be conformably related to the latter and to constitute the lowest portion of the series. Similar sandstones, with a very coarse conglomerate at the base, occupy the lower valley of the Exploits River, where they are again found to underlie bluish and black, ferruginous slates, sandstones and fine conglomerates, which strike up the valley towards Red Indian Lake, and from thence reach nearly across to the south side of the island. A few fossils were found in these near the mouth of the river, while amongst the black, plumbaginous slates at Little Red Indian Fall, fifty miles up stream, some Graptolites of the genus *Namosus* occur. The late Mr. Billings, Palæontologist of the Dominion Survey, pronounced these organisms Middle and Upper Silurian. Numerous fossils of the same occur on