

boundary of Maiac. It lies between the two belts of the cambrian system. This region consists of gneiss and mica stone.

TRAP.—The country over which this division runs is not very extensive in any one place; yet there are beds of it interspersed throughout the other formations, except the grey sand-stone, or coal formation. The trap rock of this province, is principally confined to the counties of Kings, Saint John and Albert.

Our knowledge of the geology of New

Brunswick, from the partial explorations made, must necessarily be very limited. The principal minerals of commerce as yet discovered in the province, are, coal, iron ore, lime-stone, hydraulic limestone, marble, graphite or plumbago, roofing slate, copper, carbonate of lime, manganese ores, galena, or lead ore, grind stones, free stone, amethyst, agate, jasper, gypsum, potter's clay and salt springs.

PRINCE EDWARD ISLAND.

LESSON SECOND.

RED SAND STONE.—This island “consists almost entirely of soft red sand-stone and arenaceous shale, much resembling the new red of Nova Scotia, and like it having the component particles of the rock united by a calcareous cement,” except “a few limited spots on the south side, which present brown and grey sandstones, and shales.” The only minerals of economic value known

to exist on the island are some thin beds of limestone.

NOTE.—In condensing the geological descriptions of the lower colonies, we have been guided principally in that of Nova Scotia and Prince Edward Island by the works of J. W. Dawson, Esq.; and in the New Brunswick description by Professor Johnston.—the best authorities on the subject.

“THE AGRICULTURAL CAPABILITIES OF A COUNTRY depend essentially upon its Geological structure.”

Professor Johnston.

AFTER removing the loose covering of the earth, the underlying soils will be found to partake of the chemical character and composition of the rocks on which they rest,—if sand-stone, the soil is sandy,—if lime-stone, it is more or less calcareous,—if a clay-stone, it is more or less stiff clay,—and if these substances are all found intermingled with each other, that is, sand-stone, lime-stone, and clay-stone, the soil will be found to be composed of a similar mixture. Soils, therefore, generally speaking, have been formed by the crumbling of the solid rock; and no doubt there was a time in the world's history when these rocks were naked and without any covering of loose materials.

1. The soils of the red sand-stones are easily and cheaply worked, and form some of the richest and most productive arable lands,—as those of Prince Edward Island, parts of Nova Scotia and New Brunswick.

2. The soils of the coal measures—grey sand-stones, generally form second rate soils, which require much labour

and skill in order to a profitable cultivation. However, from the great variety of soils found within this formation in these provinces—meadows, flat lands, and other alluvial deposits, composed of the remains of crumbled rocks and decayed vegetation, good crops are obtained in many parts of the grey sand-stone districts.

3. The soils formed by the rocks of the silurean systems, cambrian, mica slate, gneiss, and trap systems, are not generally favourable to agricultural operations; though in some places, in consequence of the presence of lime and magnesia in some of these rocks, good soils are produced.

4. Good soils are often found where two different kinds of rocks meet,—“as where a lime-stone and a clay mingle their mutual ruins for the formation of a common soil,” or when trap soils, as in some countries, composed of large quantities of lime and magnesia—fertilizing properties, are mixed with other rocks.

5. In many places in those provinces