Geological Survey of Canada.

Alfred R.C. Selwyn F.R.S. &c. Director.

1880.

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Explanation of Colours.

H.	Triassic.	C1.	Cambrian.
C.2.	Middle Carboniferous.	A.B.	Pre-Cambrian.
C.1.	Lower Carboniferous.	A.	Laurentian Limestone.
C.	Lower Carboniferous Limestone.	A.	Laurentian.
F.	Devonian.	Do.Di.	Dolerite, Diorite &c.
E.	Silurian.	Tr.Fel.	Trachyte, Felsite.
Dm.	Cambro Silurian.	Gr.	Granite.

Geological boundaries.

Parish "

County "

Longitude West from Greenwich.

Compiled and drawn by R.W.Ells, assisted by Wallace Broad, from Plans made by the Admiralty, Crown Lands and Geological Surveys

To illustrate Reports by Messrs Bailey, Matthew & Ells, 1871-79.

The Burland Lithographic Co. Montreal

PROVINCE OF NEW-BRUNSWICK.

Nat. Scale 253$\frac{1}{440}$.

Scale 4 miles to one inch.

1 0 5 10 15 Miles.

C. Plumbago.

Dips. δ Fe. Iron. ♀ Cu. Copper. ✕ Mn. Manganese. V Ag. Pb. Argentiferous Galena. Blue crossbars, Gypsum, ⓕ Fossils.

NOTE 1.

Soft, bright red sandstones, with Triassic plants occur at several points, at Red Head, Quaco and Martin's Head. Intrusions of trap also occur at Quaco, and the sandstones of Martin's Head contain small pieces of lignite.

NOTE 2.

The grey sandstones of this area are of the age of the millstone grit or barren coal measures. Borings for coal were made a few years ago at the month of Tynemouth Creek, but without finding anything of importance.

NOTE 3.

The rocks of the Lower Carboniferous, generally sandstones and conglomerates of red color, lie in basins on the Metamorphic hills They contain gypsum at Martin's Head and also on the Hammond River, and there is a deposit of manganese at Quaco. Manganese has also been reported from Henry's Lake, but not exam ned.

NOTE 4.

The Devonian of St. John county comprises the four divisions, viz: the Bloomsbury conglomerates, the Dadoxylon sandstone, the Cordaite shales and flags and the Mispec conglomerates, with an aggregate estimated thickness of 7500 feet. It contains, in so far as known, no economic minerals, with the exception of the graphitic anthracite of Belas Basin. Many of the fossil plants, in which some parts of the formation are very rich, are graphitic. East of St. John Harbor and west of Musquash, these rocks lie in basins on the pre-Cambrian rocks.

NOTE 5.

The Silurian of western Kings lies in basins upon the older rocks and is found flanking the eastern extremity of the granitic axis where the beds, in contact with the granite, have the appearance of being altered into harder and petrosiliceous rocks. They contain abundance of characteristic fossils, which are distinct even in the altered strata.

NOTE 6.

The Primordial Silurian or Cambrian is most extensively developed to the east of the city of St. John, where it occupies a valley between lofty ridges of pre-Cambrian rocks, on which it apparently rests unconformably. It contains a rich fauna of characteristic fossils, notably at Ratcliff's mill-stream, Porter's Stream and Handford Brook. The rocks are sandstones of grey and purple color, with quartzites at the base, and slaty and sandy beds towards the top. This formation is also found occupying narrow wedge-shaped basins on the islands and along the shores of Kennebecasis Bay.

NOTE 7.

The pre-Cambrian rocks of St. John and Kings counties, as in Charlotte, include the Kingston, Coldbrook and Coastal groups; a large portion is of volcanic origin: felsite, diorite, breccia and petrosilex, with granite and syenite, but the whole is so intimately intermixed that their separation is in many cases impossible. They contain deposits of iron at West Beach, and of copper at Martin's Head.

NOTE 8.

The Laurentian includes the rocks so described in Report of 1870-71. There are two divisions—a lower, consisting principally of protogine, syenite and gneiss, and an upper containing crystalline limestones and quartzites with syenites. The limestones of the upper group have yielded Eozoon Canadense,* and the rocks in general bear a strong resemblance to the upper part of the Laurentian of Ontario. They apparently underlie the pre-Cambrian rocks of this portion of the Province. A deposit of graphite is found near the suspension bridge at the falls of the St. John River, which has been worked at irregular intervals for some years, and in the syenite on the west side of Musquash Harbor, quartz veins carrying argentiferous galena occur.

* Supplement to *Acadian Geology*, 1878; page 89.