## ROYAL SOCIETY OF CANADA

where the latter series is well developed, whilst the lower division of the St. John group holding *Protolenus* and *Paradoxides* occurs at Hastings cove, along the Kennebecasis valley, and in St. John eity itself. The middle division of the St. John group holding *Lingulella* is well developed in St. John eity, and constitutes a formation consisting of dark and light gray slates and flags, with sandstones seven hundred and fifty feet in thickness. In the upper division of the St. John group, such as it is developed on Navy island and in St. John eity, *Dictyonema flabelliforme*, and *Peltura scarabæoides* are the characteristic fossils of the gray sandstones and fine black shales of this upper series. The rocks of Hanford brook are highly fossiliferous and constitute the *Hanford* formation of Prof. C. D. Walcott. These are of same age, as the slates ot Rateliff's Mill stream, Caton's Island, Porter's Brook, etc.

The limestones, etc., of Chapel Arm, Trinity bay, and at Manuel's brook, in Newfoundland, correspond to the lower division of the St. John group as developed in New Brunswiek. In Gloucester county, on the Tête à Gauche river, on the Nipisiguit river, near Landing Falls, on the Serpentine river, on the Miramichi river, in Northumberland Co., at Porter's brook in St. John county in N.B., the Cambrian has been recognized by Dr. Ells, Dr. Matthew, and Prof. Bailey, and described by them.

The Avalon, Random Sound and Signal Hill series of Newfoundland have been defined by Murray and Howley as well as by Prof. C. D. Walcott from that island and constitute part of the Cambrian system.

South-east of the St. Lawrence-Appalachian dislocation in the province of Quebec, the Cambrian system has been recognized by Logan, Richardson, Ells, and other geologists, and includes the gold-bearing slates of the Chaudière valley and Beauce district, as well as the *Sillery* slates or "pillar" sandstones, which are held by some to be the equivalent of the Potsdam formation of New York state. *Sillery* slates, sandstones, and conglomerates occupy a wide belt in the province of Quebec south of the St. Lawrence.

In the counties of Bonaventure, Gaspé, Rimouski, and Temiseouata, as well as in Bellechasse and Lévis, the *Sillery* shales and quartzites, limestones and argillites, limestone-conglomerate and quartz-conglomerate, slates and felspathic sandstones also occur, and many of them prove to be fossiliferous, as at Matane, Métis, &c., Cape Rosier, Little Fox river, Magdalen river, Ste. Anne des Monts, Cap Chatte, Whale cape, Sandy bay, Little Métis, Island of Orleans, Point Lévis, Sillery, Cap Rouge, and Chaudière falls and river for the most part referable to the Upper Cambrian.

196