

CHAPTER II.

THE PALEOZOIC STRATA IN THE NEIGHBOURHOOD
OF ST. HILAIRE (BELOEIL) AND ROUGEMONT
MOUNTAINS.*GENERAL ACCOUNT.*

St. Hilaire (Beloeil) and Rougemont rise from the portion of the St. Lawrence lowlands underlain by gently dipping Palæozoic strata which are here mainly Ordovician. The lowest member of the series is of late Cambrian or lowest Ordovician age, and overlaps the Pre-Cambrian about 30 miles to the northwest; southward and eastward higher divisions successively outcrop culminating in the Richmond (Lorraine). The total thickness is estimated at about 4,000 feet of apparently conformable strata, but there are doubtless some disconformities.

In the neighbourhood of St. Hilaire and Rougemont the strata consist of shale for the most part, with occasional thin, bedded limestone layers; the measures are comparatively undisturbed and are preserved as a hornstone mantle about the mountains to an elevation of over 1,000 feet above the plain.

THE RICHMOND AGE OF THE SO-CALLED LORRAINE

The series of black shales conformably overlying the Utica shales in the Montreal district, varies in thickness reaching a maximum of about 2,000 feet. It has been commonly classed as Lorraine, and there is said to be a gradual transition from Utica to Lorraine. Collections of fossils have been made at various times from this formation: at Chambly, St. Lambert, Rivière des Hurons, Rougemont, and St. Hilaire station. The fossils thus secured, except in the case of those from St. Hilaire, have been determined by Dr. Ami, and lists of them are published in the *Annual Report of the Geological Survey of Canada, Volume VII, Part I, 1896*. The collection from St. Hilaire station was described by Dr. E. O. Ulrich, in *Memoir No. 7, Geological Survey of Canada*.