

distance from the eastern outcrop, 75 feet of shale is recorded above the sandstone, which is there, 50 feet in thickness, thus it is probable that these shales were being deposited at the same time as the upper part of the Winnipeg sandstones. The localities at which examples of these sandstones may be seen are, Elk Island, Black Island, Deer Island, Punk Island, the shore from Little Grindstone Point to Grindstone Point, the shores near Bull Head, and the lower part of the cliffs near Dog Head.

• LOWER MOTTLED LIMESTONE.

Just above the sandstone, horizontal beds of thin bedded mottled limestone form the principle part of the sections at Grindstone Point, Dog Head, Black Bear Island, Tamarack Island, Jack Head Island, and Swampy or Berens Island. The section given by these several exposures amounts to over 70 ft. The lowest beds are those seen at Deer Island and Grindstone Point, capping the sandstone. Immediately above are the beds occurring at Dog Head, followed by the upper part of the Black Bear Island exposure. Those on Tamarack and Jack Head Islands are evidently higher, but belong to the same series, and form, altogether, a section of 65 feet. To the north of this line of section, on Swampy Island and Little Black Island, just to the west, small cliffs of this same mottled limestone occur. The upper part of the cliff on Little Black Island seems to be more fossiliferous than those previously seen, and are probably not represented in the foregoing section, or fill the gap between the Tamarack Island and Jack Head Island sections. This might possibly add a few feet to the total given there, making a total thickness for this series of 70 feet. The character of the beds in this division is quite uniform and varies only in a slight degree in color. The lowest beds are somewhat darker and contain more earthy impurities, but they all have similar fucoidal markings on the surfaces of beds and through the section dark brownish streaks and blotches of finer grained material. The mass of the rock is made up of the debris of shells, etc., many very badly preserved. At Grindstone Point examples of a large cephalopod, probably a *Poterioceras*, have been partially preserved in a vertical position so that frequently slabs of the thin bedded limestone contain sections of the body chamber over