

but on the coast, as at Cape York, perpendicular and high limestone cliffs made their appearance. The specimens of limestone in the collection sent for my inspection exhibited the following characters :—

1. *Secondary Limestone of Port Bowen, Neill's Harbour, &c.*

Its colours are ash-grey and yellowish-grey, more or less inclining to ochre-yellow and yellowish-brown. In some varieties the brown colours are disposed in horizontal stripes. The lustre is glimmering; the fracture is splintery, or splintery combined with minute foliated, or simply granular foliated, and some varieties are slaty. It is more or less translucent on the edges, and generally yields readily to the knife. Some varieties, however, are so hard as to give a few sparks with steel. All the varieties, by friction, give out that disagreeable smell which is so well known in stinkstone, and to which mineral they may be referred. The external characters intimate its magnesian character, which is confirmed by the experiments of Dr Neill, who found it to contain from 20 to 30 per cent. of carbonate of magnesia.

It is everywhere very distinctly stratified, and the strata are uniformly horizontal. Imbedded in them masses of chert occur, but not frequently. The organic remains observed in the limestone are entrochites, catenulariæ, spiropore, turbinoliæ, favosites, several species of terebratulæ, a trochus, a turritella, and an orthoceratite.

On the upper parts of the hills around Port Bowen, generally on the surface of a brick-red limestone, mentioned by Dr. Neill in the Narrative, were found masses of fibrous brown iron ore, or brown hematite. These, in all probability, were derived from veins or imbedded masses in the limestone. In the cliffs, caves are of frequent occurrence, and these often of very considerable magnitude.

This, which may be called Port Bowen Limestone, extends onwards to Cape York, and, according to the observations made during the second voyage, even to Admiralty Inlet and Bossession Bay, and was met with as far south in Prince Regent's Inlet as the Expedition explored.