

ones and coarse coniferous the section ks can be leral aspect the coal-section.

better, and nd shales, ils, except upy about sh conglo- having an es contain i, *Spirifer* d the lime- limestones ed, reddish ants in bad in appear, grey colour carbonate of er sides are es are also e. At this ist section; ring brook, mentioned.

is occupied few beds of S. W., but hey contain *Centaculites*, *Productus* and ly Silurian, of the slates d fossils of and, to the

limestones, entatives of East River, f the coal-

re enter on Pieton from e, the shore

displays hard brownish-red quartzose and jaspery rocks, with thick beds of hard grey shales, red conglomerates, and coarse purplish grits. Associated with these, are beds of amygdaloid, which are evidently interstratified with the accompanying rocks, and are probably, like those of McCarn's brook, of contemporaneous origin. The whole of these beds are vertical, and are, without doubt, lower carboniferous rocks (perhaps a little lower in the series than those last seen at McCarn's brook), but in a much altered condition. Beyond Malignant Cove, syenitic greenstone is seen on the shore, and, is said to appear in different places as far as Cape St. George. Eastward and southward of Malignant Cove, the hills, in many places, show masses of compact felspar and other igneous rocks, accompanied by altered and disturbed grits. After passing this disturbed region, we enter on the Gypsiferous rocks of the northern side of Antigonish harbour, having a general dip to the southward. Of these rocks, I examined two interesting sections.

Antigonish.

SECTION IV.

RIGHT'S RIVER, ANTIGONISH.



d. Gypsiferous beds—gypsum, limestone, and sandstone.

c. Limestone.

b. Red conglomerate and coarse red sandstone, dark sandstone and shale.

a. Dark and grey sandstones and shales, reddish sandstone: —plants.

The first of these sections is that represented above, and is seen extending about five miles. Near the mouth of this river, at the head of Antigonish harbour, is a thick bed of white gypsum, dipping to the south-west. Succeeding this, in descending order, after a small interval (which appears to have been occupied by sandstones, now nearly removed by denudation), is a bed of dark-coloured limestone, in which, at different points where it appears, I found *Productus Martini* with other shells also occurring on the East River; and *Productus Lyelli*, a shell not yet met with in the East River limestones, but very characteristic of the gypsiferous formation in other parts of the province. Below this limestone there is another break, also showing traces of sandstones and a bed of gypsum, and then a thick bed of dark limestone, partly laminated and partly brecciated without fossils, and containing in its fissures thin plates of copper ore. Beneath this limestone is a great thickness of reddish conglomerate, composed of pebbles of igneous and metamorphic rocks, and varying in texture from a very coarse conglomerate to a coarse-grained sandstone. In one place it contains a few beds of dark sandstones and shales. These are succeeded by red, grey, and dark sandstone and dark shales, in a disturbed condition, but probably underlying