

NO. V.—BURROWS, TRAILS, AND TRACKS IN SANDSTONE,
CHARLESTON, FIFE.

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THE most familiar markings known to the Scottish geologists may be said to be the Spirophyton, *Cauda-galli*, which is supposed to be the impression of a marine Alga, and which always indicates a position near the Main Limestone and the Hosie. The impressions here exhibited were found very near the same position, and I have found similar impressions on the shores at St. Monans; Kirkcaldy; North Berwick; and Charleston, all occupying practically the same geological position.

The rocks at Charleston are well adapted for the preservation of impressions of this kind, composed as the exposure is of layers of mudstone and sandstone alternating. Worms crawling on the mud left the track of their bodies, and the sand coming on top has taken sharp casts of the tracks. Worms that bored through the mud to sand lying below have left well-defined burrows due to the fine parting of mud carried down on their bodies.

In these impressions there are represented at least two sub-kingdoms, the *worms* and the *gasteropods*, besides the *algæ*: what the others represent it would be difficult to say.

In a paper by Sir J. William Dawson, of Montreal, read to the Geological Society of London, 1890, some impressions are described very similar to those at Charleston, but Dawson's specimens are Silurian, while mine are Carboniferous.

Mr. John Smith, in a privately printed paper in 1909, described in his Upland Fauna of the Carrick Old Red Sandstone many trails and tracks of unknown creatures, and, now that we have so many specialists working at the invertebrates, more light should soon be shed on the subject.