With regard to the bead-like bodies, I may mention first of all a fact which has come under my own observation. A chalybeate spring emptied itself into a small stream which ran over a clayey bed into the marshes of North Kent. Many water weeds grew along this stream, striking their roots deep into the clay. Around these roots the iron formed concretions in the clay, especially when they were decomposing, and, when the root had perished, these concretions had the form of irregular cylindrical masses with a hole down the middle. Some of the perforated cylindrical bodies of the Crag may have had *mutatis mutandis* a similar origin. Again, sponges and other organisms are very apt to grow round stems of any kind, and when fossilized these would often preserve the cast only of the body around which they grew. A similar question has been raised before with regard to some remarkable forms derived originally from the Chalk, which are known to have been picked up and used as beads in later times.¹

To sum up. Those who would bring these perforated fossils forward as evidence of the existence of man in the Crag period must show—not only that they are like some objects known to have been the result of human agency—but also that Nature could not or was not at all likely to have produced similar forms.

On the contrary, however, it would appear that most of them are unlike human work, and that some of them were and all may have been produced by well-known natural agents.

IV.—ON THE DISCOVERY OF REPTILIAN FOOTPRINTS IN NOVA SCOTIA.

By ALFRED R. C. SELWYN, F.G.S.,

Director of the Geological Survey of Canada.

THE very fine series of fossil footprints which, at my request, Principal Dawson has kindly examined and described in the accompanying note, were discovered last summer, in Nova Scotia, under the following circumstances.

Mr. Scott Barlow, of the Canadian Geological Survey, was at the time engaged in geological explorations in the district of Spring Hill, Cumberland County, where he met Mr. Albert J. Hill, C.E., in charge of works at the bridge over River Philip, on Section viii. of the Intercolonial Railroad, and he informed Mr. Barlow that he had in his possession a slab of sandstone showing small footprints, which he wished to present to the Geological Museum in Montreal. Subsequently, on the 1st September, he informed Mr. Barlow that slabs with large and numerous footprints had been found, and were at the bridge. At the same time Mr. Hill informed Mr. Sandford Fleming, the chief engineer, of this highly interesting discovery, who at once took steps to have all the slabs with footprints preserved, and directed that they should be given to Mr. Barlow, for transmission to the Museum of the Geological Survey.

¹ James Wyatt and Rupert Jones, *Geologist*, vol. v., 1862, pp. 233, 236. See Lyell, *Antiquity of Man*, p. 119.

The quarry in which they were found is on the land of Mr. Asa Fillimore, about eight miles and a half east of where the thick Coal-seams crop out on the property of the General Mining Association, at Spring Hill, and three-quarters of a mile west of the railroad bridge over River Philip.

The beds, associated with that in which the tracks were found, are of a reddish-brown or chocolate coloured sandstone, from one to five feet thick, overlaid by purple, blue, and red shales. The tracks were at a depth of about twelve feet from the surface, in a thin stratum of dark shale, the dip being S. 10°, W. 42°.

The details of the geological structure of the district have not yet been worked out, and whether the beds containing the footprints are above or below the productive Coal-measures, is at present uncertain.

The accompanying photograph¹ is that alluded to by Dr. Dawson of the slab in Ottawa.

V.—NOTE ON FOOTPRINTS FROM THE CARBONIFEROUS OF NOVA SCOTIA, IN THE COLLECTION OF THE GEOLOGICAL SURVEY OF CANADA.

By J. W. DAWSON, LL.D., F.R.S.,
Principal of McGill's College, Montreal.

THE principal specimens are several large slabs of brownish sandstone, bearing series of footprints in relief. Of the largest and most distinct series 40 to 50 footprints have been preserved, and are arranged in two rows, about $5\frac{1}{2}$ inches apart. I may confine my attention in the first place to this series, as the most important of the whole.

They were probably produced by a large Labyrinthodont Batrachian walking on a muddy shore, near the edge of the water, and are not very dissimilar from those described by Sir C. Lyell as found by Dr. King in the Carboniferous of Pennsylvania. They also closely resemble, in size and form, the footprints found by Mr. R. Brown, F.G.S., in the coal-field of Sydney, Cape Breton, and described by me in the second edition of "Acadian Geology," p. 358, under the name of *Sauropus Sydnensis*, and still more closely those found by Mr. Jones, F.L.S., at Parrsboro', N.S., and noticed in the same work. With these they may, in the mean time, be included in the provisional genus *Sauropus*.

The dimensions of the footprints are as follows:—

Hind foot, breadth	...	...	...	...	...	2·71 inches.
" " length	...	...	...	...	...	4·24 "
Fore foot, breadth	...	...	...	...	...	2·63 "
" " length	...	...	...	...	...	2·77 "
Length of stride	...	...	...	...	...	11·53 "
Average distance between the rows of footprints made by right and left feet...	...	...	...	...	...	5·48 "

These measurements correspond very nearly with those of my *Sauropus Sydnensis* above referred to.

¹ Reproduced as a woodcut on p. 252, one-third less than the original photograph.