brown colour, with thin veins of sand through it, and occasional pieces of structureless coal; but for these marks it might be taken for a piece of wood newly dug from a peat-moss. On detaching small chips with the point of a knife, and placing them under the microscope, I have been fortunate in finding some small pieces with a cellular structure showing areolation; these are semitransparent, of a light brown colour, probably from the presence of resinous matter. The trunk, of which the specimen is a part, was 30 feet in length, with a diameter of about 18 inches, and was got in sandstone forming the roof of slaty-hand ironstone, parish of Shotts, Lanarkshire.

III. *List of Fossils obtained from the Bathgate Limestone.* By JAMES LINN, The Schoolhouse, Livingstone.

The part of the Bathgate limestone which has been most extensively worked of late is at the north end of the range of workings called Petershill Quarries, and the upper 40 feet of the limestone. A great variety of corals and shells, and at least three species of palatal teeth of fish, occur in it. Besides many others, I obtained specimens of the following:—*Lithodendron junceum*, *Lithostrotion basaltiforme* (?), *Serpula parallela*, *Productus aculeatus*, *Productus giganteus*, *Productus scabriculus*, *Pinna flabelliformis*, *Pinna spatula*, *Cardiomorpha orbicularis*, *Edmondia sulcata*, *Dentalium ingens*, *Euomphalus Dionysii*, *Euomphalus pentangulatus*, *Euomphalus anguis*, *Naticopsis dubia*, *Natica elongata*, *Pleurotomaria Yvanii*, *Cochliodus magnus*, *Petalodus Hastingsiæ*.

IV. *On the Discovery of Spirorbis carbonarius in the Limestone of Burdiehouse, and of an Estheria in Camstone Quarry, Arthur's Seat.* By C. W. PEACH, A.L.S., Associate.

When with the members of the Edinburgh Naturalists' Field Club at Burdiehouse, on the 16th of April last, I found amongst the limestone taken from that famed quarry a stone containing specimens of *Spirorbis carbonarius* attached to a narrow ribbon-like plant, and on the same stone a portion of a very beautiful *Lepidodendron*, which I believe to be undescribed: I reserve more about it until better specimens turn up. My friend, Mr David Grieve, F.S.A. Scot., of Leith, has since shown me a fine slab of limestone, also from Burdiehouse, covered with the same *Spirorbis*, and I have during the summer found it again two or three times thus, showing it not to be very rare there.

On referring to the lists of carboniferous fossils in "The Geology of the Neighbourhood of Edinburgh," by A. Geikie, Esq., director of the Geological Survey of Scotland, I find this *Spirorbis* noted as found at Clubbiedean reservoir, and at Inchkeith, but

not at Burdiehouse. I am therefore desirous that it should be recorded as occurring there, not because it is an addition only, but that it adds also to the evidence, showing that with "the Cypris or Cythere, which is quite as likely to have been a marine crustacean, and the *Cypridina* (or *Daphnoidea*) *Hibberii*, which was in all probability marine also,"* that the limestone of Burdiehouse was, if not marine, undoubtedly deposited in "brackish water," and not in fresh water only, according to Hibbert in his Memoir, published in the Transactions of the Royal Society of Edinburgh, vol. xiii., and of Hutton in "The Fossil Flora of Great Britain," p. 27.

Although not connected with Burdiehouse, I think it right to call the attention of the members to another discovery. It will be in the recollection of some of them that I exhibited, by request, at their meeting of the 5th of April 1867, a collection of fossils from Camstone Quarry, Arthur's Seat, one of these, an *Estheria*, I thought to be new. I sent some to Mr T. Rupert Jones, who has confirmed my opinion, and named it after my son, *Estheria Peachi*: see the "Geological Magazine," vol. viii. p. 214, p. ix. fig. 17.

I think it right to state, that Mr David Grieve was the first to find this *Estheria* in loose stones in the quarry in Arthur's Seat; my son and self got them in place. Had I known what Mr Jones was going to do, I should have requested him to have given it the name of Mr Grieve, who really was the pilot who led to the discovery, by kindly placing his rolled stones in my hands to guide us in our search.

V. *On Sections made by the Drainage Operations in the Pleasance, Edinburgh, illustrative of the Physical Structure of Salisbury Crags.* By ANDREW TAYLOR, Associate.

In the course of the excavations for the new drain which extends from Pleasance through Rankellor Street to the Meadows, a section of strata has been laid bare in some cases to the depth of over 40 feet. New light has thus been thrown on the physical structure of the district encircled by St Leonard's Crag, Holyrood, the Castle, the Links, and Dick Place, as well as the strata covered by debris on Salisbury Crags.

Proceeding downwards, the strata cut were—first, a series of thin fissile sandstones and caulmy limestones interstratified with a loose-grained calcareous red earth, as in the section at Salisbury Crags; secondly, red clay in some cases loose, in others fissile, to the depth of fully forty feet; thirdly, this was succeeded by a limestone containing *Sphenopteri*, *Calamites*, &c., near which,

* Salter in the Appendix, p. 144, of "The Geology of Edinburgh."