XLI. *Note on the discovery of the teeth of Dithyrocaris.* By Mr. James Armstrong.

Read at Meeting, March 16, 1865.

Two species of *Dithyrocaris* are known to occur in the Carboniferous Limestone of the West of Scotland—*D.* (*Argas*) *testudineus*, Scouler, and *D. tenuistriatus*, M'Coy. Dr. Scouler's specimens of *D. testudineus*, now in the Andersonian Museum, were obtained upwards of thirty years ago, in a limestone excavated for the foundation of Paisley barracks. Mr. Young has found portions of the carapace in the shale at Robroyston, which contains the finely preserved *Lingula;* and we believe a specimen of the trilobed portion of the tail was found in the shale of Craigenglen, and is in the collection of Mr. James Macrae of Campsie. The only bed from which examples have been obtained in anything like abundance or perfection, is a shale in the "Lingula" limestone at Raes Gill, Carluke. Of *D. tenuistriatus* we are acquainted with but a single specimen, found by Mr. John Young in the "Lingula" shale, Robroyston.

Until lately, our acquaintance with *Dithyrocaris* was limited merely to the carapace and telson, but our researches, together with those of Mr. James Bennie, have resulted in the discovery of what has proved to be the teeth. This is of considerable interest, as we are now enabled to compare the teeth of *Dithyrocaris* with the same organs in the living crustacea.

Their appearance is that of small, blunt, crushing teeth, with cusps in groups of from five to seven, and they bear a striking resemblance to the molar teeth of certain mammals. On their being submitted to Professor Owen (through the kindness of Mr. Henry Woodward, F.G.S., British Museum), he remarked that they might easily have been taken for the teeth of some of the small implacental mammals, such as the kangaroo rat of Australia; and Dr. Günther, British Museum, to whom also they were shown, supposed them to be fish teeth of the family either of the *Sphæridæ* or *Labridæ*.

Detached specimens are common in the shale at Orchard Quarry near Thornliebank, and one or two specimens have been found in a black shale overlying the "Hosie" Limestone, South Hill, Campsie. They are generally found enclosed in ironstone nodules, which, when recently split by the action of the weather, afford the finest speci-

mens; their exposure, however, for a short time, renders them soft and chalky, and they soon moulder away. They occur at these localities, associated with the fossils common to the Carboniferous Limestone of the West of Scotland.

The only notice of these interesting remains is contained in the Report on the Geology of the Counties of Tyrone and Londonderry, where two are figured and described by the late General Portlock, as probably connected with the masticatory organs of *Dithyrocaris*, with the remains of which they are stated to have been found. As Portlock had shrewdly suspected, this has proved to be the case, and Mr. James Bennie, a zealous member of our Society, has been fortunate enough to find a carapace at Lickprivick Quarry, East Kilbride, containing two of the teeth *in situ* upon its under surface.

It is impossible at present to say to which species of *Dithyrocaris* we are to refer the detached teeth. The locality at Campsie and the shale at Orchard, both famous for the fine state of preservation in which the fossils from these localities are found, have hitherto yielded no trace of a carapace; and the bed at Carluke, so rich in specimens of this carboniferous crustacean, as to be known as the "*Dithyrocaris bed*," although searched for fossils by Dr. Rankin for upwards of thirty years, has not yielded any specimens of the teeth.

Owing to Mr. Bennie's specimen being somewhat imperfect, we have not been able to determine accurately to which species it belongs; but, judging from what remains of the external markings, it may possibly be the *D. Scouleri*, M'Coy.

Dithyrocaris ranges from the lower to the uppermost beds of the Carboniferous Limestone of Lanarkshire.

XLII. Description *of two new species of* Shells *from the* Carboniferous Limestone *of* Clydesdale. By Mr. James Armstrong.

Exhibited at Meeting, March 16, 1865.

Nautilus *(Discites)* nodiferus, Sp. nov. Pl. 1, Figs. 6, 7.

N. testâ discoidali; anfractibus tribus, contiguis, subquadratis, regulariter tuberculatis; umbilico aperto; dorso lato, in medio valde sulcato; superficie lineis undatis; septis multis, cum siphunculo in medio.

Shell discoidal, composed of about three gradually enlarging, contiguous, nearly subquadrate whorls, completely exposed in a