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Notes

ON THE OCCURRENCE OF STREPSODUS SULCIDENS, HANDCOCK AND
ATHEY, IN THE YORKSHIRE COAL MEASURES.

BY EDGAR D. WELLBURN, F.G.S.

INTRODUCTION.

Whilst looking through some fish-remains in the Museum, Brighouse, Yorkshire, I found a fine mandibular ramus which was labelled *Megalichthys*, but which on examination proved to belong to the fish *Strepsodus sulcidens*. As it is the first time this fish has been found in the Yorkshire Coal Measures, and as the specimen shows some points of great interest, I judged it worthy of a brief description.

DESCRIPTION OF THE SPECIMEN.

The specimen is that of a mandibular ramus—imperfect posteriorly—with three fine laniary teeth, seen from the inner side. In order to understand aright the points shown in the specimen as figured on Plate XVIII., the author considers it advisable to give a brief description of the structure of the mandible of the Rhizodontidæ. In that family the mandible is of a very complex structure, and as shown by Dr. Traquair, F.R.S., is built up in the following manner, viz.:—There is first a dentary bone which is deep and thick at the symphysis, from which point it tapers backwards, and bears a series of small teeth, with one large laniary tooth in front. Below this bone there is a series of three or four plate-like lenticular bones, the hindermost of which corresponds to the angular bone, whilst the others are termed the infradentaries. A thin, splenial lamina forms the inner wall, and between these and the dentary are a series of three or four stout lenticular bones, the laniaries, each of which bears a strong laniary tooth.

On again turning to the specimen, it is at once apparent that the inner wall of the jaw, or splenial, is absent, but the outer and inner segments are present.

Of the outer wall, or segment, the inner side of the first and part of the second infradentaries are shown, the dividing

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Edgar D. Walburn del.

Geo. West & Sons lith.

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line between the two being indicated by a sutural line which runs downwards and backwards from a point immediately behind the first laniary tooth to cut the inferior edge of the jaw at an acute angle. Above these runs the dentary bone, which—with the exception of a portion of the deep fore-end or symphysis—is mostly covered by the strong, thick laniary bones, which appear to be firmly anchylosed to it, although there is plain evidence at the posterior end—where the bone is broken across—that the bones were originally developed in separate centres of ossification. Three of these laniary bones are shown, that at the symphysis being the largest; in position they run in a line, from before backwards, a short distance below the dentary edge of the dentary bone, and each bears a strong laniary tooth, of which the second and third show the usual characters, viz.:—They are robust, elongated, somewhat flattened, apex straight, fine striæ on inner surface, base broad and showing vertically elongated depressions extending a short distance beyond the basal furrows. The anterior laniary at the symphysis is a larger and more powerful tooth than the others, it shows characters similar to those of the other teeth with the exception that they (the characters) are more strongly marked, especially the vertically-elongated depressions at the base, and the apex, instead of being straight, is strongly and evenly bent backwards and slightly inwards, this being a point of interest, as in the specific diagnosis the apex of the teeth are given as being straight.

Form and locality: Better Bed Coal Shale, Lower Coal Measures, Low Moor; and Barnsley Thick Bed Coal Shale, Middle Coal Measures, Barnsley; both in Yorkshire.

EXPLANATION OF PLATE XVIII.

Strepsodus sulcidens Handcock and Atthey. Mandible seen from inner side. S.Mn.—Symphysis of dentary bone. S.L.—Symphysical laniary tooth. L.T. 2 and L.T. 3.—Second and third laniary teeth. L.B. 1 and L.B. 2.—Laniary bones. ID.—Infradentaries. Specimen in the Brighouse Museum, Yorkshire.