

ON THE REMAINS OF A SELACHIAN FROM THE EDMONTON CRETACEOUS OF ALBERTA.*

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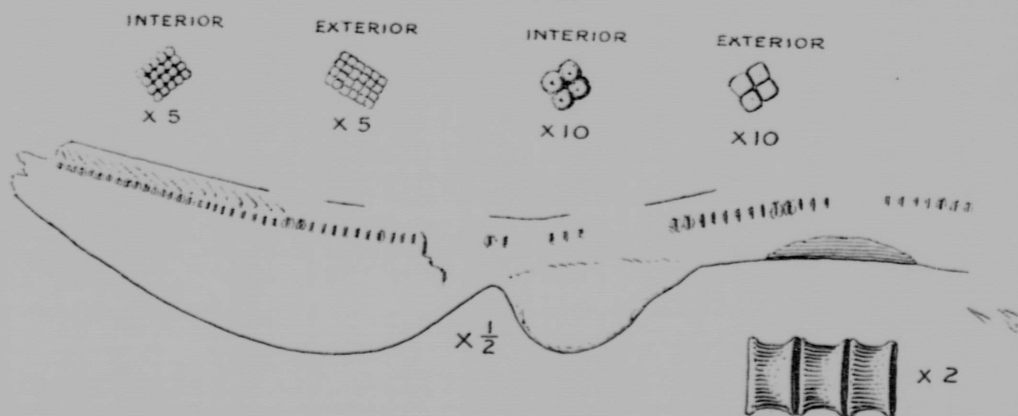
The subject of the following remarks consists of the caudal and hinder abdominal regions of a selachian tentatively referred to the genus *Palaeospinax* of the family *Cestraciontidae*.

The specimen (field No. 5) is included in the Geological Survey collection of 1915 from the Edmonton formation on Red Deer river, Alberta, and was obtained on the east side of the river, three miles north of Tolman, at about 350 feet above the river level. Its discovery was made by Mr. George F. Sternberg in charge of the Vertebrate Palæontological field party working in the beds of the above formation during the season of 1915.

These remains of a small shark occur on the

It continues forward to near the anterior end of the specimen where it is lost. Above it is clearly indicated at intervals in the caudal region and for some distance in advance of it, but is not seen farther forward.

The tail occupied about one-half the length of the specimen and was preceded closely by the anal fin of which the outline is clearly shown. At the extreme anterior end of the specimen inferiorly there are obscure indications of the pelvic fins and certain fragments that may be the remains of claspers, but they are too indefinite to allow of a satisfactory conclusion being reached as to their nature.



Central figure.—Outline of type of *Palaeospinax ejunctionus* from the Edmonton formation of Alberta. One-half natural size.
Upper figures.—Shagreen granules; interior and exterior surfaces. Five and ten times natural size.
Lower figure.—Restoration of three vertebrae from front half of specimen to shew general proportions only. Twice natural size.

weathered surface of a thick layer of hard grey sandstone. About half the length of a slender fish is represented, from the neighbourhood of the pelvic fins to near the end of the tail, the tip not being preserved. About 80 vertebrae had been present, following each other in natural sequence in a lengthened sigmoid curve, 245 mm. long, but only 30 of them now partially remain; many of the remainder are represented merely by their impressions, and of some no trace is left. The vertebrae extended throughout the length of the specimen. See text figures.

The outline is well preserved below, especially along the lobe of the tail where it is clear and sharp.

The body and fins were enveloped in shagreen of which the granules were minute. The shagreen is preserved throughout the tail except in its upper front portion. In advance of the tail its continuity is broken, but it is principally seen along the line of the vertebral column, and dorsally and ventrally defining the outline.

The specimen lies with its left side in the rock and it is the inner surface of the shagreen for the most part which is exposed to view, and on which the remains of vertebrae or vertebral impressions are left.

The vertebrae were apparently cyclospondylic in character. They were higher than long, cupped at either end, and constricted at the middle. The parts that have resisted erosion consist principally of the

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