

Note on a Specimen of the Ganoid Fish,

Lepidotus elvensis (Blainville), from the
Upper Lias near Ilminster

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THE Somerset County Museum has lately received¹ a fine specimen of the ganoid fish, *Lepidotus elvensis* (Blainville), which was found about 1885 by William Swayne in the Upper Lias in a quarry in Shelway Lane, Barrington, about four miles from Ilminster. Like all the fossil fishes hitherto obtained from that formation in the Ilminster district, it is contained in a concretionary nodule; and it is now well displayed in the two halves of the nodule, which has been split along the plane in which it lies. One side of the fossil is shown in Plate XI, one-third scale linear.

The Ilminster fish is almost as large as the type specimen of *Lepidotus elvensis* from the Upper Lias of Elbes (Aveyron), France, which is now in the National Museum of Natural History, Paris.² It measures about 42 cm. in length to the base of the caudal fin, and its maximum depth in the crushed state is 14 cm. The corresponding measurements of the French

¹ This specimen formed part of a small collection of objects preserved by the Rev. Prebendary J. Hamlet, which came into the hands of the Som. Archæol. and Nat. Hist. Soc. at the time of his death (*Proc. Som. Arch. Soc.* lxxiii, p. lxxxii).

² F. Priem, 'Étude sur le Genre *Lepidotus*' in *Annales de Paléontologie*, Paris, iii (1908), 5, pl. II. See also A. S. Woodward, *Catalogue of Fossil Fishes in the British Museum*, pt. iii (1895), 84.

specimen are 47 cm. and 17 cm.—the latter evidently increased by the direction of the crushing. The head with operculum in both specimens is about 12 cm. in length, and the relative positions of the fins are the same.

In the skull the right parietal and frontal bones are well seen, with their characteristic proportions and smoothness, and many other head and opercular bones are partly shown. Among these, the smooth right maxilla is especially interesting, deepened and truncated behind as in the allied species *L. semiserratus*, Agassiz, from the Upper Lias of Whitby.¹

All the fins are fringed with the usual powerful fulcra, and the pectoral fin is remarkable for its large size. It measures 8 cm. in length, and when adressed to the trunk extends for two-thirds of the distance between its insertion and that of the pelvic fin. The latter fin is comparatively small, and is inserted well in advance of the origin of the dorsal fin. The dorsal and anal fins seem to have been nearly equal in size, each with about twelve rays, but their height is not shown. The anal fin arises opposite the hinder end of the dorsal fin.

The scales are preserved on the side of the fossil which retains most of the head (Plate XI), but nearly all are obscured by the breaking away of their ganoid surface. The dorsal ridge scales are clearly small. The whole squamation is better seen in impression on the opposite side of the fossil. About forty transverse series can be counted as far as the base of the short upper caudal lobe; there are nine complete transverse series in front of the pelvic fins; and there are twenty scales in the transverse series at the origin of the pelvic fins. The lateral line is marked only by a small pit in the alternate scales of the row it traverses, which is the twelfth row above the pelvic fins. Many of the flank scales in the abdominal region show distinctly the serration of the lower half of their hinder border.

Only two English specimens of *Lepidotus elvensis* have hitherto been figured, both from the Upper Lias of Northamptonshire, and these are comparatively imperfect.² The speci-

¹ A. S. Woodward, *Proc. Yorks. Geol. and Polyt. Soc.* xiii (1897), 331, pl. XLVI, fig. 3.

² G. Baker, *History of Northampton*, i (1830), 440, with plate; B. Thompson, *Journ. Northampton. Nat. Hist. Soc.* iv (1886), 27, with plate.



GANOID FISH, *LEPIDOTUS ELVENSIS* (Blainville), UPPER LIAS, BARRINGTON, SOM.
(Somerset County Museum, Taunton Castle)

From a Photograph by Mr. H. St. George Gray, F.S.A.

men from Somerset is in several respects more satisfactory for comparison with those of the same species from the Upper Lias of France and Germany, and is especially interesting as making known the relative proportions of the pectoral and pelvic fins. These proportions and the situation of the pelvic fins differ from those shown by Prof. Jaekel in his restoration of the species.¹

¹ O. Jaekel, *Die Wirbeltiere* (Berlin, 1911), p. 82, fig. 89.