39. *Appendix to "NOTE on a MODIFIED FORM of DINOSAURIAN ILIUM, hitherto reputed SCAPULA."* By J. W. HULKE, Esq., F.R.S., F.G.S. (Read June 9, 1875.)

A RECENT discovery of *Iguanodon*-remains in the Isle of Wight by the Rev. W. Fox has solved the riddle of the bone which, in the above note, I brought under the Society's notice towards the close of last Session*, and it has also completed our knowledge of the pelvic elements of Mantell's *Iguanodon*. It will be remembered that Mantell and, later, Owen had regarded the bone as a scapula, first of *Iguanodon*, and afterwards of some unknown reptile, that this decision seemed to be untenable, and that the balance of all the evidence I could up to that time collect respecting it favoured its being an ilium.

This fresh material, which Mr. Fox has courteously permitted me to examine, consists of a series of vertebræ, of fragments of large flat bones which cannot be any thing else than pieces of the ilia, of a pair of ischia, the former clavicles, and a pair of the bones in question.

The vertebræ comprise the sacrum and a few of the adjoining lumbar and caudal vertebræ. Their form, and also that of the ischia, agree so closely with those of the types of Mantell's *Iguanodon* in the British Museum as to leave no doubt of their generic identity. The third pair of bones in the pelvic girdle, which are neither ilia nor ischia, must be pubes (fig. 1, P). Their shape closely repeats that of the smaller of the two specimens illustrating my note (pl. xxxii. fig. 1, vol. xxx.). Inverting the bone there figured, its long slender process (*Spp'*) is easily identified with the thin elongated rod which, in the Mantell-Bowerbank specimen of the nearly allied *Hypsipodon*, Prof. Huxley recognized as the pubis (*Pb*, pl. ii. Quart. Journ. Geol. Soc. vol. xxvi.). This identification roughly gives the direction of the whole bone. Its long slender branch slanted downwards and backwards parallel to the ischium; and the little process detached from its posterior surface meeting a corresponding process observable in all well-preserved ischia, converted the upper end of a long narrow obturator-space into a foramen having the position of that which in birds (*Ostrich*) transmits the tendon of the *obturator internus* muscle (figs. 1 & 2, *obt*). The process marked *i* in the figure (pl. xxxii. vol. xxx.) joined the ilium, and that marked *p* the ischium; the smooth intermediate arc formed the lower and front part of the acetabulum, whilst the broad blade-like part sloped ventrally inwards and forwards (figs. 1-3, *p*). I am inclined to think that the free end of this part met the corresponding extremity of the *os pubis* of the other side in a median symphysis; but I have not yet any positive evidence of this in *Iguanodon*.

In respect of its large contribution to the acetabulum, the pubis of Mantell's *Iguanodon* resembles that of existing *Lacertilia*, as it

* Quart. Journ. Geol. Soc. vol. xxx. p. 521, pl. xxxii.

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- Fig. 1. Restoration of Iguanodon's pelvis, about one fourteenth natural size.
 „ 2. A corresponding view of pelvis of Ostrich.
 „ 3. A corresponding view of pelvis of an existing species of South-American Lizard, about twice natural size.
 „ 4. A corresponding view of pelvis of *Crocodilus niloticus*, about one fifth natural size.

The homologous parts in each figure are indicated by the same letters, viz. A, acetabulum; Il, ilium; pra, its præacetabular process; psa, its postacetabular part; Is, ischium; , os pubis; p, the part directed beneath the belly where in the Lizard it meets its fellow in a mesial symphysis; p', its postacetabular part directed backwards parallel with the schium, wanting in Lizards and Crocodiles; obf, obturator foramen; obt, foramen for the transmission of the tendon of the musculus obturator internus.

does also in respect of its broad ventral extension and probable median symphysis (compare figs. 1 & 3); whilst its long slender branch repeats the avian resemblance noticed by Prof. Huxley in *Hypsilophodon* (figs. 1 & 2).

My warmest thanks are due to the Rev. W. Fox for allowing me to study these very instructive fossils.

DISCUSSION.

Prof. SEELEY said he thought this paper was one of the most important contributions to the osteology of the Dinosauria that had been laid before the Geological Society within his memory. He entirely agreed with the interpretation which Mr. Hulke had given of the bones. He said that in the *Apteryx* the præpubic process of the pubis is more developed than in any other known bird, while the whole pelvis in other respects approximates closely to that of *Iguanodon*. It was of great interest to find the fossil showing that this process attained at least as great a development as in the Chelonia and Lacertilia, because it showed that the pelvis of Dinosaurs was not entirely Avian, but, like the remainder of the skeleton, showed a blending of Avian and Reptilian peculiarities.