



## LXII.—On the presence of ossa transversa in a Chelonian

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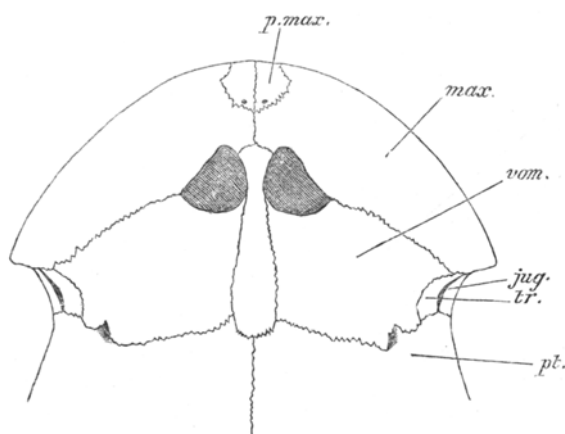
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dition, and from the prevalent opinions as to the value of the three reagents employed we must unanimously declare against the spirit-specimen and the intercellular spaces. Others also appear to have made similar observations. In a recent French memoir upon the histology of the Lamellibranchs \* we find the epithelium everywhere represented as closed, only one figure shows, exactly like my spirit-specimen of *Tridacna*, the epithelium traversed by numerous "intercellular spaces."

LXII.—*On the Presence of Ossa transversa in a Chelonian.*

By G. A. BOULENGER.

THE object of this note is to record the presence of transverse bones in the skull of *Hydraspis Hilairii*, Schw. The absence of that element had hitherto been regarded as characteristic of the order Chelononia.



Lower view of anterior part of skull.

As may be seen from the above figure, the bone (*tr.*) is intercalated between the pterygoid, the palatine, the maxillary, and the jugal; it is suturally united with the latter only anteriorly and posteriorly, its outer border being free.

\* L. Roule, "Recherches histologiques sur les Mollusques lamellibranches," in Journ. Anat. et Physiol. tome xxiii. (1887), p. 31. The figure referred to is pl. v. fig. 8.

This discovery again shortens the gap between the Chelonians and the typical Reptilia. The group to which *Hydraspis* belongs is characterized by distinct nasals, separate dentary bones, and strong transverse processes to the cervical vertebræ, and is in those respects altogether of a more generalized type than the other Testudinata; however, as regards the shell and pelvis it stands apparently a step in advance, and the Pleurodira have for that reason been regarded, perhaps erroneously, as the most specialized type. Geologically, so far as the record goes and if Dr. Baur's recent views on certain Triassic Chelonians be correct, they are the oldest. The Wealden *Peltochelys Duchastelii*, the type specimen of which I was permitted to examine by my friend M. Dollo, is unquestionably closely related to *Hydraspis* and *Chelodina*. I have a suspicion that it will prove to be the young of *Plesiochelys*.

It is undeniable that all the discoveries that have been made of late give support to the view first expressed by Cope, nearly twenty years ago, on the affinities of those two groups, the *Chelonina* and the *Rhynchocephalia*, the systematic position of which has given rise to so much controversy.

## BIBLIOGRAPHICAL NOTICES.

*A Textbook of Biology.* By J. R. AINSWORTH DAVIS.  
London: Charles Griffin & Co., 1888.

MR. DAVIS has designed this textbook in order to meet the requirements of the Intermediate Science and Preliminary Scientific Examinations of the London University. Such a work can never be one of a high class, for it must be limited by the conditions of the syllabus of a given body; in this case the body is not a teaching, but only an examining one.

Mr. Davis's book must therefore be tested solely by the syllabus to which it professes to afford an aid. The exposition of the simple facts of anatomy and physiology is generally accurate, but we do not think it is better done than in a number of other works, such as those of Huxley and Martin, or Marshall and Hurst. So far as the work is, as it claims to be, an introduction to theoretical biology, it is clear from the conditions imposed that it must be more or less unsatisfactory in correspondence with the powers and characteristics of the writer. For us the whole has too much the air of a cram-book to justify us in recommending it from this point of view; we believe that the following explanation is the worst in the book, but the mental calibre of the writer may perhaps be judged from it. We find in the glossary, "Apodeme (*αποδημος*, absent from home), in the Crayfish.—One of the elements of the endophragmal system." Mr. Davis not only should have learnt that in Greek there is *ε* and *η*, but he should have learnt too that explanations should explain before he set to work on a glossary. The figures are partly original