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Publisher: Taylor & Francis

Informa Ltd Registered in England and Wales Registered Number:

1072954 Registered office: 5 Howick Place, London, SW1P 1WG



Annals and Magazine of Natural History: Series 1

Publication details, including instructions for authors and subscription information:

<http://www.tandfonline.com/loi/tnah07>

VIII.—Notice of what appears to be the Embryo of an Ichthyosaurus in the pelvic cavity of Ichthyosaurus (communis?)

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Published online: 21 Dec 2009.

To cite this article: J. Channing Pearce F.G.S. M.R.C.S. (1846) VIII.—Notice of what appears to be the Embryo of an Ichthyosaurus in the pelvic cavity of Ichthyosaurus (communis?), *Annals and Magazine of Natural History: Series 1*, 17:109, 44-46, DOI: [10.1080/037454809496438](https://doi.org/10.1080/037454809496438)

To link to this article: <http://dx.doi.org/10.1080/037454809496438>

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and margins having a tinge of red. Legs long, robust, provided with hairs and sessile spines; fourth pair the longest, then the first, third pair the shortest; they are of a reddish brown colour. Each tarsus is terminated by three claws; the two superior ones are curved and pectinated, and the inferior one is inflected near its base, on each side of which are two or three fine teeth. The palpi resemble the legs in colour. Abdomen oviform, thickly covered with hairs, convex above, projecting over the base of the cephalo-thorax; along the middle of the upper part extends a broad, dentated, yellowish brown band, on each side of which is a brownish black band; sides and under part yellowish brown; the former is spotted with brownish black, and a broad, dark brown band extends along the middle of the latter. Superior spinners long, slender, hairy, with the spinning-tubes disposed along the under side of the terminal joint. The sexual organs exhibit an orifice having a red-brown margin. Plates of the spiracles dull yellow. The body and limbs are supplied with numerous compound, sessile hairs.

The male is smaller than the female, but resembles her in colour and in the relative length of its legs. The cubital and radial joints of the palpi are short; the former is not provided with an apophysis, but the latter has a large, obtuse one at its anterior extremity, on the outer side; the digital joint is oval, but elongated, the extremity being slender and compact; it is convex and hairy externally, concave within, comprising the palpal organs, which are highly developed, complicated in structure, with a large, spiral spine, brownish black on the outer and pale yellow on the inner side, which is very prominent and recurved at its extremity, and a strong, dark reddish brown process at the outer side projecting beyond the margin of the digital joint.

I have named this handsome species in compliment to Richard Potter, Esq., M.A., Queen's College, Cambridge, and Professor of Natural Philosophy in University College, London, through whose friendly zeal in promoting my zoological researches I have been supplied not only with the spiders introduced to notice in these pages, but also with numerous specimens of British species.

[To be continued.]

VIII.—*Notice of what appears to be the Embryo of an Ichthyosaurus in the Pelvic cavity of Ichthyosaurus (communis?)*.
By J. CHANING PEARCE, F.G.S., M.R.C.S.

IN developing an *Ichthyosaurus* which I took up from the rock in the brown laminated lias clay of Somersetshire, and having reversed the animal so as to lay bare that surface which was

downwards in the quarry, I removed the clay with great care and exposed to view an *Ichthyosaurus communis*? about eight and a half feet long, lying on its back in the highest state of preservation, and with the exception of a slight dislocation in the middle of the tail and the deficiency of its point, every part is most perfectly preserved. In cautiously lifting the laminæ of clay between the two hinder paddles, my attention was first arrested by a series of small vertebræ lying on three or four of the posterior ribs; on removing another portion of the clay, ribs, the rami of the jaw, and the other parts of the head were visible. In carefully cleaning this delicate little skeleton, it was found to rest on black, finely corrugated integument, which is preserved around the small skeleton, and passes underneath the posterior ribs and some other parts of the large animal.

The little animal, somewhat dislocated, lies at full length in the cavity of the pelvis, with its head towards the tail of the large one, and rests on the internal surface of its integument, and on the internal surfaces of three of its posterior left ribs, and is about five and a half inches long. The rami of the jaw and one of the longest ribs (of which only five or six are discernible) are each about an inch long; and of the thirty vertebræ which can be counted, the largest is the eighth of an inch in its longest diameter. It is bounded on either side by the ilium, ischium and pubis, and by the right and left posterior paddles, and on the right side by the vertebral column and right ribs; and while the posterior two-thirds of the little animal is within the pelvis, the head appears to protrude beyond it, and apparently in the act of being expelled at the time of death.

So singular a circumstance as the embryo being found in the pelvis of its parent in a fossil state, should lead to the greatest care in arriving at such a conclusion; but when we consider that the large animal was developed on its under surface—consequently it is nothing that has fallen upon it—and the remarkably correct position of the little skeleton in the pelvis, between the right and left ribs, with its head protruding, and the little vertebræ so exactly corresponding in shape to the large ones, and the other bones resembling those of a Saurian, it appears fair to conclude that it cannot be anything else but a fetal *Ichthyosaurus*; and if it be suggested that it may have been swallowed by the animal, this involves a much greater difficulty; for so delicate a structure would have been dissolved by the gastric juice, and could not have reached its present position.

The Rev. Dr. Buckland and Professor Owen, who have kindly written me on the subject, state, that there is no reason why the *Ichthyosaurus* should not be viviparous, although “analogy of the

nearest existing reptiles would point to its oviparity as the more probable kind of generation ; but the genus *Zootoca* and the Viper show that analogy is no safe guide in such a question ;” “ and the European black and yellow Salamander of Bohemia once brought forth young ones half as long as the mother, either in the Doctor’s pocket or College rooms ;” therefore with such evidence it now appears fair to conclude that the *Ichthyosauri* were viviparous.

Montague House, Lambridge, Bath, Dec. 9th, 1845.

IX.—*Journey through Java, descriptive of its Topography and Natural History.* By Dr. FR. JUNGHUHN*.

[Continued from vol. xvi. p. 466.]

Journey to the Extinct Volcano of Tjermai.

THE author saw here large woods of *Tectonia*. The *Tectonia grandis* is one of the few tropical trees which occur in company, and expel all others. But it does not afford the cool shade, nor form such a beautiful vaulted foliage as other tropical trees ; no *Liane* climbs up its boughs ; its stems, destitute of bark, rise naked and barren, with only here and there a single leaf. The ground beneath it is covered only with dry grass ; no *Pothos*, no *Orchideæ* or *Scitamineæ* here raise their succulent stalks. Yet here also man appears to have contributed much to the barrenness of these woods ; for the Japanese, in order to drive away the tigers and to make the soil cultivable, yearly set fire to large districts of the grass Alang-alang (at the driest season), by which also the leaves of the *Tectonia* are at the same time singed. When the author had reached the coffee-plantations, he entered at the same time upon the lower limits of the forest tract, which is everywhere divided by sharp lines from the lower cultivated country. With the increase of cultivation the extent of the forests is more and more narrowed. The author saw thousands of trees felled in the coffee-plantations ; a few being left standing wide apart, to shade the young coffee-plants. “ We thus explain,” he observes, “ the sharply-defined limits by which the woods, almost on all the higher mountains in Java, are separated from the lower cultivated declivities,—a limit which is continually forced higher and higher by the advance of cultivation, which however on most of the mountains begins at a height of from 3000 to 4000 feet. At a distance, therefore, the upper half of such mountains appears of a dark bluish green, while the lower half has a bright greenish yellow aspect.

“ We are inclined to think that the forests in Java originally extended to the foot of the mountains, and indeed to the sea-coast, and that they have been extirpated up to their present elevation solely by cultivation. We frequently observe forests cease suddenly in abrupt, sharply-defined limits on the lower side, on soft acclivities, whose

* From the *Botanische Zeitung*, Sept. 19th, 1845.