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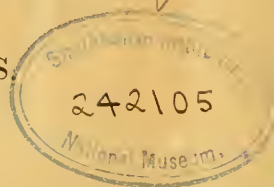
CONDUCTED BY

P. J. SELBY, Esq., F.L.S., GEORGE JOHNSTON, M.D.,  
CHARLES C. BABINGTON, Esq., M.A., F.L.S., F.G.S.,  
J. H. BALFOUR, M.D., Prof. Bot. Edinburgh,

AND

RICHARD TAYLOR, F.L.S., F.G.S.

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fluence of the great diversity of geographical position, or is there, besides, a difference of epoch of formation between these rocks? The only character which tends to approximate the last two floras, is the relation which both possess to that of the coal formations, of which they appear to be a kind of extract, and of the more recent strata of which they especially remind us.

As to the plants of the bituminous schists of the Mansfeld country, they are so few in number and appear to have been deposited under conditions so different, that it is difficult to compare them with the other two floras. However, the species of *Sphenopteris* are extremely alike in these three formations, and perhaps an accurate comparison would establish the identity of several of them: the *Pecopteris crenulatus* of Ilmenau is perhaps only an imperfect state of the *Pecopteris abbreviata* of Lodève; finally, the species of *Callipteris* of the Permian rocks and of Lodève have very intimate relations with each other and with the *Callipterides* of the coal formation.

We will add, relatively to the bituminous schists of Thuringia, that several of their fossils appear to be marine plants, the number of which would become far more considerable did we not suppress all the imperfect impressions which have been described as such, and which are merely altered fragments of Ferns or Coniferæ.

[To be continued.]

### VIII.—*Description of Lerneonema Bairdii.*

By Dr. JAMES SALTER.

[With a Plate.]

*To the Editors of the Annals of Natural History.*

GENTLEMEN,

British Museum, June 1st, 1850.

THE accompanying sketch and description of a remarkable animal belonging to the order Lerneadæ has been lately sent me by Dr. Salter of Poole. It evidently belongs to the genus *Lerneonema* of M. Edwards, but presents some peculiarities which distinguish it from the only two species of that genus hitherto found in this country. The want of an apparent head and the possession of only one horn-shaped appendage caused me to fear that that part of the animal, in the specimen from which the drawing was made, was imperfect, a portion of the head having perhaps been torn off in removing it from the herring to which it was attached. In reply however to my inquiries upon that subject, Dr. Salter assures me that there could be no mistake as to the state of the head, as he had examined it very carefully.

“ I could discover,” he says, “ no fracture or injury to either of the specimens, so I have no doubt of their integrity, and they appeared both exactly alike. Besides the drawing I sent you, I made a figure at another time, and both drawings, made from the animal itself, are exactly alike.” Unfortunately the specimens were lost, having been, along with the herring to which they had been attached, thrown away by Dr. Salter’s servant in mistake. As I know Dr. Salter to be an accurate observer, I think the accompanying sketch and description are worthy of a place in your Journal, and I therefore willingly comply with Dr. Salter’s request to forward them to you for insertion.

I remain, yours truly,  
W. BAIRD, M.D.

The animal, to which I have applied the name *Lerneonema Bairdii*, was presented to me by my friend Mr. Jordan of Teignmouth, who obtained it from the coast of Devonshire. It was found adhering to the eye of a herring, and by its side, attached to the same cornea, was a smaller one, similar to it in every respect but its size. The colours were, at the time it was fresh, remarkably bright, flesh-coloured and green.

It appears, from its general form, to belong to the genus *Lerneonema*, though it does not strictly come within the definition of it given by Dr. Baird, who says that the head is “ furnished with two or three simple curved horn-shaped appendages;” whereas in this individual there is but one simple hook. In every other respect it falls within the generic description, and here the discrepancy is probably from the definition not being sufficiently comprehensive.

This *Lerneonema* differs little from *L. spratta*, excepting in the form of the head.

The head of *L. Bairdii* consists of one simple hook (Pl. VII. B. fig. 3 a) composed of a little horny cylindrical thread bent upon itself in the form of a hook, pointed at its free extremity and attenuated where it joins the neck, the intermediate portion being somewhat, though slightly, swollen out. This hook, if extended, would measure about one line and a half.

The neck, which measures about three-sixteenths of an inch, is flattened laterally, so that, when viewed in front or behind, it appears a mere line (fig. 2 b), but when seen on one side its dimensions are more considerable (fig. 3 b). Its edges are serrated, and present about nine or ten serrations on each edge. At the point where the neck joins the head the structures are greatly attenuated, so that the head can move freely in any direction.

The body is a little more than five-eighths of an inch long,

and of a flesh colour. It is laterally compressed in its upper third, and becomes quite flat where it joins the neck (fig. 2 *c*); its lower two-thirds are rotund (fig. 2 *d*): it terminates inferiorly by a little process which projects in front and beyond the attachment of the ovarian tubes (fig. 3 *e*). Viewed on its side, it forms a long narrow ellipsis (fig. 3 *d*).

The ovaries are an inch and four lines long; cylindrical and uniform in size throughout their entire length. Their colour is the brightest emerald-green. The ovaries are a little constricted at their attachment to the body, which itself bulges out, and at the junction there is a small scale, which overlaps the point of union (fig. 4). When the animal was quite fresh, there were indications of several articulations or divisions along the ovarian tubes; but these, as well as their very brilliant colour, have been lost by immersion in spirit. Magnified about twenty diameters, small tubercles are seen on the surface of the ovarian cylinders, especially near their extremities (fig. 5).

*Hab.* Attached to the cornea of the eye of a herring (*Clupea harengus*) from the Devonshire coast, near Teignmouth.

Poole, Dorsetshire, May 25, 1850.

#### EXPLANATION OF PLATE VII. B.

##### *Lerneonema Bairdii*.

*Fig. 1.* Natural length.

*Fig. 2.* Enlarged about two diameters, and viewed from behind: *a*, the hook; *b*, neck; *c*, compressed part of body; *d*, rotund part of body; *f, f*, ovaries.

*Fig. 3.* Lateral view: *a, b, c, d, f*, as above; *e*, depending process from body.

*Fig. 4.* The extremity of the body, showing the attachment of the ovaries (magnified 20 diameters).

*Fig. 5.* Extremity of ovary, showing small tubercles on its surface (magnified about 20 diameters).

IX.—*Observations on Furcellaria fastigiata, Huds., and Polyides rotundus, Gmel.* By Dr. ROBERT CASPARY.

[With three Plates.]

As Harvey, in his 'Manual of the British Marine Algæ' of 1849, still observes, p. 146, that *Furcellaria fastigiata*, Huds., and *Polyides rotundus*, Gmel., "can scarcely be distinguished, when out of fruit, except by the root and the rounded axils of the branches," it is by no means idle work to show, by an accurate examination of the internal structure of these two plants, that in reality there exist characteristic differences in the formation of their cells, and that those differences are so striking, that every

