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**Magazine of natural history and journal of zoology,
botany, mineralogy, geology and meteorology.**

London :printed for Longman, Rees, Orme, Brown, and Green,1829-1837.

<https://www.biodiversitylibrary.org/bibliography/39136>

v. 9 (1836): <https://www.biodiversitylibrary.org/item/19501>

Article/Chapter Title: Illustrations in British Zoology

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Page(s): Page 79, Page 80, Page 81, Page 82, Page 83

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there forming a place for incubation, or for a nocturnal residence. Mice and rats will also find their way into these diseased parts of trees. I know of a crab-tree in which a mouse lives. Its hole is about 5 ft. from the ground.

I have written this paper, first, to show the true habits of the titmouse and the woodpecker relative to their choice of a place for their incubation; and, secondly, to catch the eye of the proprietor of the *American Quarterly Review*, who, I am informed, has thought fit to heap anonymous abuse upon me, with an unsparing hand. Let this sage discerner of ornithological merit turn to pages 200. and 343. of the *Biography of Birds*, and then blush for American ignorance.

Walton Hall [, near Wakefield, Yorkshire], Dec. 21. 1835.

[In the *Architectural Magazine*, the number for August, 1835 (ii. 361, 362.), are printed remarks by Mr. Waterton "on what is commonly called dry rot," and on a method of preventing it. In the communication above, he has treated on decay in trees; in that communication, on decay in timber, by what is commonly called dry rot. Mr. Waterton considers that "Dry rot is a misnomer. This disease in timber ought to be designated, a decomposition of wood by its own internal juices, which have become vitiated for want of a free circulation of air."]

ART. IV. *Illustrations in British Zoology.* By GEORGE JOHNSTON, M.D., Fellow of the Royal College of Surgeons of Edinburgh.

LIMAPO'NTIA NI'GRA. (*fig. 14.*)

Description.—Body limaciform; when extended, two lines in length; the back convex, protuberant; very black, smooth, naked: head rounded or truncate in front, depressed, light-coloured, the mouth terminal, subinferior: eyes two, lateral, black, sessile: foot linear-oblong, tapered behind and extended beyond the body, so as to form a small tail, whitish, with a few obscure yellowish specks.



a, *Limapontia nigra* of the natural size; *b*, the same magnified; *c*, the same in a state of semi-contraction; *d*, the animal seen swimming in a reversed position.

My friend, Mr. W. Baird, discovered this little snail when he was examining some marine *Confervæ* which had been gathered in Berwick Bay. It has a close resemblance to the black slug, and its motions are similar, creeping along the bottom, or swimming on the surface, reversed, with equal ease, although at a slow rate. When disturbed it withdraws the head under the cloak, just as the slug does, and assumes a nearly circular form, which it preserves for some time. It was fond of leaving the water, and crawling a short way up the edge of the saucer, as most littoral *Mollúsca* are. The quantity of gelatinous secretion which oozed from the skin seemed to be unusually great. When it was immersed in fresh water, the wrinkled state of its skin proved that the creature was pained, and it died shortly after, without excreting any coloured liquid; but after death it exhaled a very perceptible odour, which was peculiar and not disagreeable.

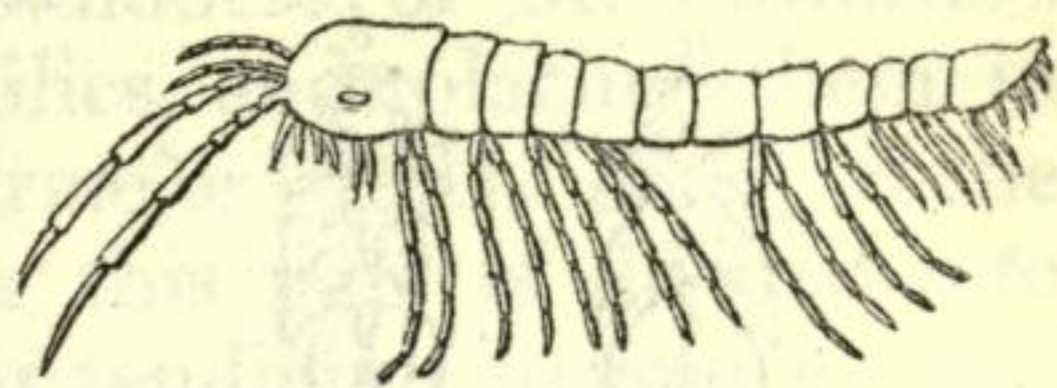
That *Limapóntia nígra* belongs to the gasteropodous *Mollúsca*, I entertain scarce a doubt. The consistence and form of the foot, its distinctness from the skin of the back or cloak, the opacity of the body, and the mode of progression, convince me of this; and an attempt to examine the internal structure showed that there were various distinct viscera, although I could not ascertain their relations and nature: a stomach and intestine, however, were obvious; but I detected no trace of any structure like a lung or gills, so that the order in which the animal ought to be placed is uncertain. My impression at first was, that I had before me the mollusc of some of our minute internal shells, which seemed to be indicated by the protuberance of the back; but no shell of any kind could be detected. *Limapóntia* appears to me to have a close relationship to the *Aplýsia víridis* of Montagu; and perhaps these, and some other analogous beings, might be collected together to form a separate order of their class, distinguished by the want of gills, whose office the cutaneous envelope probably performs.

ASTACILLA LONGICORNIS, in the young state. (*fig.* 15.)

I have given (in VIII. 494—496.) a description and figure of this singular crustacean, and I return to it, for recent observations enable me to add one or two particulars to its history. The animal creeps by means of the three pairs of posterior legs, aided by the long antennæ, which are made to touch the ground so as to support it in front, and drag it in some degree forwards. Its motions in this way are slow, but, on the contrary, it swims rapidly; the principal organs of natation being the lamellar plates under the tail, for the anterior ciliated feet did not appear to be called much into action.

When at rest, the *Astacilla* clasps hold of any object in the water by its creeping legs; and, when alarmed, it bends itself at the tail and erects all the body anterior to this, having the antennæ folded under the belly more or less. In this rather grotesque attitude it resembles many caterpillars.

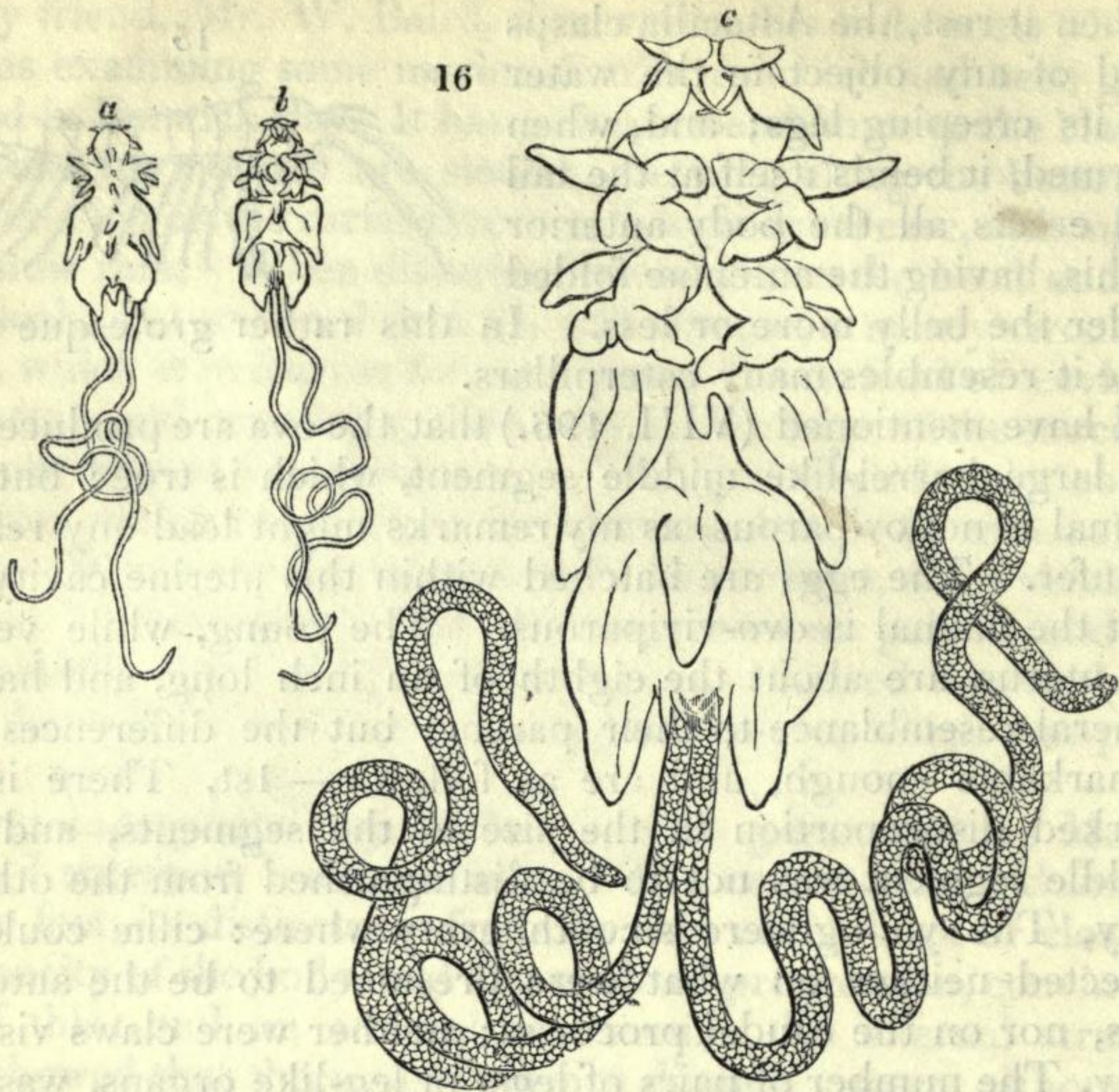
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I have mentioned (VIII. 496.) that the ova are produced in the large barrel-like middle segment, which is true; but the animal is not oviparous, as my remarks might lead any reader to infer. The eggs are hatched within this uterine cavity, so that the animal is ovo-viviparous. The young, while yet in the uterus, are about the eighth of an inch long, and have a general resemblance to their parent; but the differences are remarkable enough, and are as follow:—1st, There is no marked disproportion in the size of the segments, and the middle segment was not to be distinguished from the others. 2dly, The young were smooth every where: ciliæ could be detected neither on what were presumed to be the anterior legs, nor on the caudal processes; neither were claws visible. 3dly, The number of pairs of legs, or leg-like organs, was extraordinary. Besides what were conjectured to be the rudiments of the anterior legs, there were four pairs of long filaments, jointed like legs; and behind these, separated by a short space, were other two pairs of similar ones: these were followed by three pairs of shorter legs, and at the tail there were numerous appendages, apparently of two kinds, but their number and shape could not be well made out. 4thly, The head and superior antennæ were larger in proportion than they are in the adult; but, in the general contour of the body, there was no great dissimilitude between the young and mature individuals. The figure appended to this notice was drawn with care, but the softness of the specimens, which were dead and had been macerated in fresh water for a few hours, prevented them being displayed in such a manner as would have allowed the details to be given more fully and accurately. Such as it is, your readers will see, by a comparison of it with the figures in VIII. 495., the nature of the metamorphosis which the animal undergoes in its progress to maturity.

CHONDRACA'NTHUS LO'PHII. (*fig. 16.*)

Animal milkwhite, soft, opaque, the body half an inch long, two tenths broad, the caudal filaments rather more than 2 in. long. *Head* tolerably distinct, convex dorsally, with two round eminences on the crown, and a narrow mesial groove running forwards to a small marginal sinus, semicircular in



a, *Chondracanthus Lophii*, natural size, back view; *b*, the same on the ventral side; *c*, the same magnified.

front, narrowed behind to form a sort of short neck. Antennæ two pairs, the first pair placed on each side of the frontal sinus, small, cylindrical, with a bulging basis; the second pair lateral, pointing backwards, larger, but, otherwise similar to the first. Mouth inferior, placed at the base of the first pair of antennæ, furnished with a pair of sharp curved mandibles. *Body* oblong, divided into three portions by deep sinuations. The back convex, with a row of soft spines down the middle. There are two similar spines at each sinuation, and the posterior angles are terminated by one spine thicker than the others; the spines of the dorsal line are always six in number, exclusive of a small tubercle behind the first. Ventral surface with two pairs of unequal, unjointed, forked, rather nodulous, feet; the forks unequal, obtuse, and a single soft spine near the middle behind these, and another towards the tail. *Filaments* originating in the ventral side, near the margin, and between the lateral processes, filiform, tortuous, and compactly filled with egg-like bodies.

I found several specimens of this species, which is not described in any work to which I have access, in the pouches under the fins of the *Lophius piscatorius*. They were all alike, and adhered to the skin very closely. Its strong resem-

blance to the crustacean Caligi cannot be overlooked, and affords additional proof of the soundness of M. Edwards's views in approximating these families, and placing them in one order. It differs from the Lernææ [VIII. 565.] in the bilateral symmetry of the body, for this part is divided into two halves, exactly alike, by a clear tendinous structure; and the sides are mottled with the convolutions of an intestinal tube, which, however, we have not attempted to exhibit in the figure. — *Berwick upon Tweed.* [Received Dec. 23. 1835.]

ART. V. *An Instance, perhaps Two Instances, of Symphysis in Plants described.* By B. D. WALSH, Esq.

IN that part of the Black Dog Wood which adjoins Chapmanslade, a village about four miles from Frome, there grows a remarkable beech tree (*Fagus sylvatica*), of parts of which I transmit sketches. (*fig.* 17.) At a distance of several feet from the ground, there shoots out from the trunk a small limb (*a b*), which, after rising 13 in., enters again into the trunk, without any appearance of a scar or seam in any part of it. The larger figure (A) represents the lower part of the tree, in a side view of the limb. The next larger figure (B) represents a front view of the limb, as connected with the contiguous part of the trunk. At *c*, and for some inches above and below, the bark of this small limb is perfectly smooth all the way round, and the only vestige of a juncture having taken place at *a* is a slight wrinkling and chipping of the parent stem, which makes its appearance here and there in an irregular semicircle above *a*. Supposing a horizontal section to be made at *c* (as in *fig.* c), there is a longitudinal groove both at *e* and *d*; the smaller branch being very much flattened, as shown in the figure, throughout the whole of its course. *Fig.* d represents a section at *a*.

Has this phenomenon been caused by the pressure of another branch, as appears to be indicated by the flatness of *a b*? and if so, what branch could have produced that effect? The tree has been a good deal lopped, but none of the stumps appear to have thrown out a limb in that direction. Or must we regard it as a *lusus naturæ*? which, after all, means nothing more than that we know nothing at all about the matter.

While on this subject, I may as well mention another tree remarkable for the same peculiarity, growing between Spring Gardens and Selwood Cottage, near Frome. This is an old