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THE

MAGAZINE OF NATURAL HISTORY,

AND

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OF

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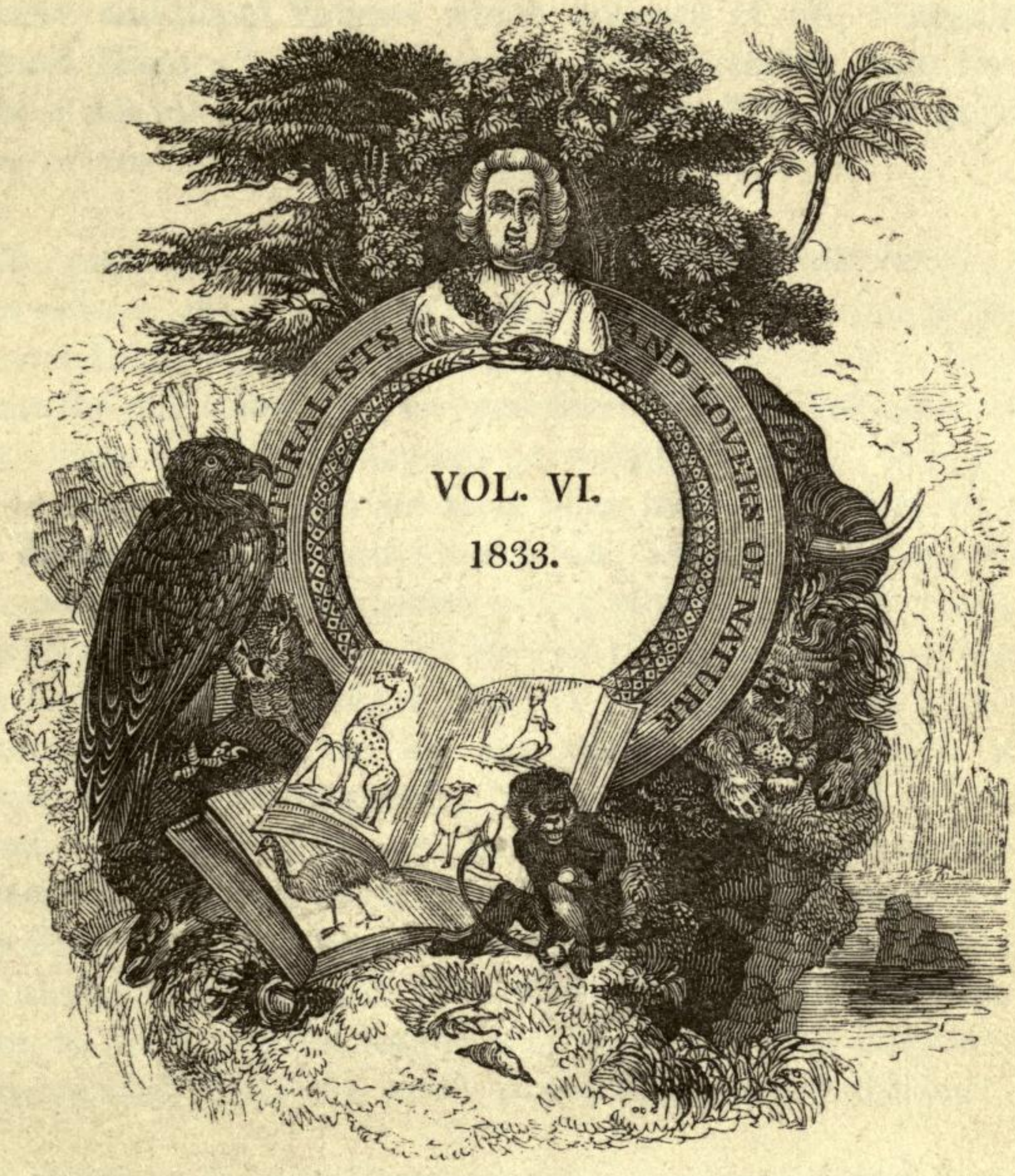


CONDUCTED

By J. C. LOUDON, F.L. G. & Z.S.

MEMBER OF VARIOUS NATURAL HISTORY SOCIETIES ON THE CONTINENT.

LONDON:

PRINTED FOR

LONGMAN, REES, ORME, BROWN, GREEN, AND LONGMAN,

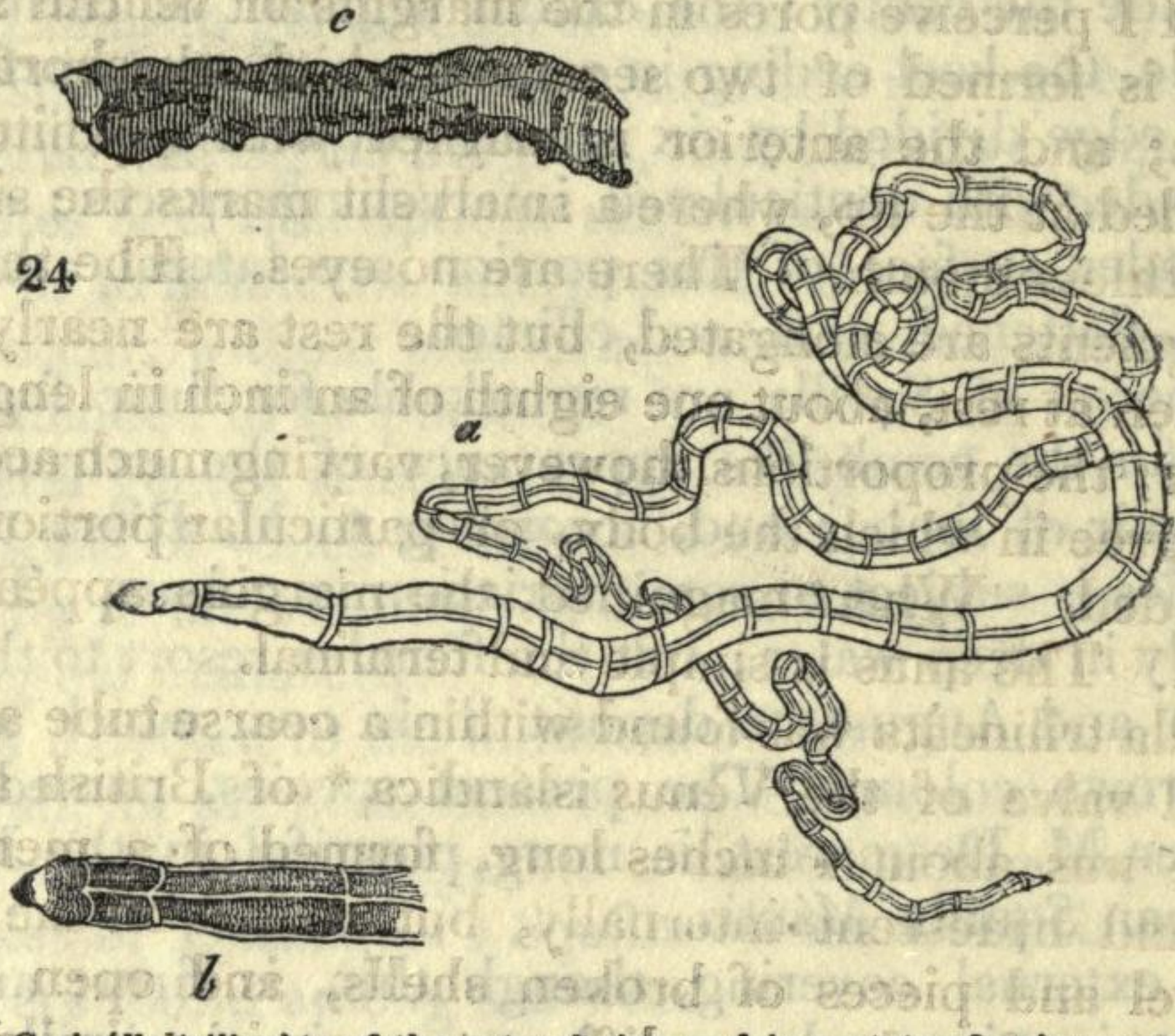
PATERNOSTER-ROW.

1833.

BRITISH MUSEUM
NATURAL HISTORY BRANCH

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

10. CARINE'LLA TRILINEA'TA. (*fig.* 24.)



a, Represents Carinélla trilineàta of the natural size, and in a state of quiescence; *b*, the head slightly magnified, and shaded, to show the lateral pale lines; *c*, a small portion of the tube.

THE subject of the present illustration has no very obvious relation to any annelide with which I am acquainted, so that I feel myself under the necessity of coining for it a new name; and I trust the one adopted will be found sufficiently euphonical, although the scholar may in vain puzzle himself from what, and whence, it is derived. "Indeed," says Mr. Lindley, and there is much sense in the saying, "so impossible is it to construct generic names that will express the peculiarities of the species they represent, that I quite agree with those who think a good, well-sounding, *unmeaning* name, by far the best that can be contrived."

Carinélla trilineàta has, among worms, considerable pretensions to superior beauty. It is of a hyacinth-red colour, marked with three very distinct pure white longitudinal lines, one running down the middle, and one along each side; and crossed with numerous lines, of the same colour, which encircle the body, and mark the number of its segments. Besides these more obvious lines, a fainter one is usually observable across the middle of the segments; and the greater portion of the worm is speckled on the sides with white dots, too small to be seen unless with a magnifier. The ventral surface is of the same red colour as the dorsal, but wants the white line down the middle. The body is soft, vermiform,

flattened, gradually narrowed, posteriorly distinctly annulose, about a foot in length, and one eighth of an inch in breadth, when at rest; but capable of being drawn out to three times this length, when, of course, it becomes proportionally attenuated. It has neither tentacula, nor bristles, nor feet of any sort; neither could I perceive pores in the margins or ventral surface. The head is formed of two segments which are shorter than the others; and the anterior is marked with a white band, and rounded at the tip, where a small slit marks the situation of its toothless mouth. There are no eyes. The third and fourth segments are elongated, but the rest are nearly equal, being, when at rest, about one eighth of an inch in length, and in breadth; the proportions, however, varying much according to the degree in which the body, or particular portions of it, are extended. When magnified, the margins appear finely crenulate. The anus is simple and terminal.

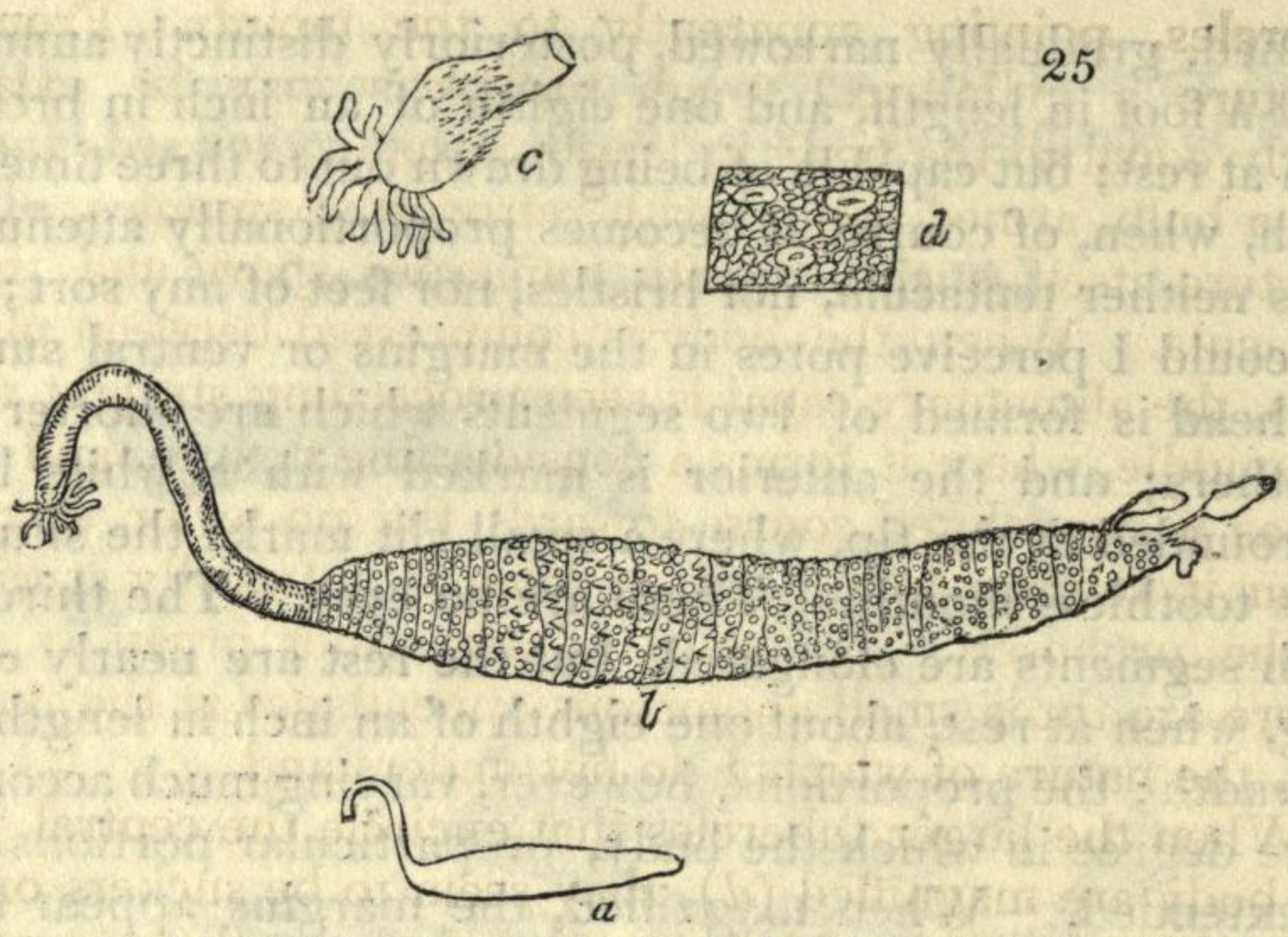
Carinélla trilineàta was found within a coarse tube attached to an old valve of the Vènus islándica * of British authors. The tube was about 4 inches long, formed of a membrane, smooth, and iridescent internally, but coated on the outside with gravel and pieces of broken shells, and open at both ends. I have found a very different worm in a similar tube; so that a doubt may, perhaps, be entertained, whether the Carinélla fabricates it of himself, or is merely a tenant at will. From the body being distinctly annular, the worm is brought in contact with the Annélides; but its softness, the want of feet or bristles, the apparent simplicity of its structure, and its resemblance to the tapeworms, and more especially to the Líneus longíssimus of Sowerby, favour its claim to be placed among the *V*érmes. Indeed, at the end of the first order of intestinal worms in the *Règne Animal* of Cuvier, I find two genera indicated; the Tubulaires of Renieri, and the Ophiocéphales of Quoy and Gaimard, to which our worm is evidently nearly allied, and to the latter of which I might have referred it, had any notice been taken of the annulations of the body.

11. Siphu'nculus Denta'lii *Gray*. (*fig.* 25.)

(*Spicilegia Zoologica*, part i. p. 8.)

After his description of the Dentàlium entàlis, the Rev. Dr. Fleming adds: — "The shell, inhabited by a Siphúnculus, the characters of which have not been determined, is frequently found entangled in the skate lines in the estuary of the Forth." (*Edinburgh Philosophical Journal*, vol. xii. p. 239. 1825.) The worm here so cursorily alluded to has

* Cýpri*na* islándica *Fleming*, Cýpri*na* vulgàris *Sowerby*.



a, Outline figure of S. Dentàlii, removed from the shell, and the proboscis extruded; natural size. *b*, The same, magnified. *c*, The apex of the proboscis, more highly magnified, to show the retroverted prickles, and its globular shape. *d*, A minute portion of the skin, magnified, to show the form of the suckers.

been since fully described, from specimens communicated by Mr. Clift, from Yorkshire, in the *Spicilegia Zoologica* of Mr. Gray; a naturalist, for the extent and accuracy of his knowledge in zoology, second to none; and whose kind and encouraging attentions I, as a learner, have so often experienced, that I willingly avail myself of this opportunity to acknowledge them.

Although I can add nothing of value to Mr. Gray's description, yet I may render it more clear and impressive to your readers by the aid of a figure, which the worm seems to merit, not so much on account of rarity or beauty, as from certain peculiarities in its habits. It is found, and I believe only found, in old shells of Dentàlium entàlis which it enters, and afterwards seals up with a strong and immovable plug of cemented sand, leaving a small circular hole on one side through which to protrude the long proboscis in search of prey, and yet doubtless too narrow to permit the entrance of a foe. Is it not to be admired that a helpless worm should find prepared for it a residence and stronghold adapted to its wants, yet fabricated by another creature of very different structure and habits?

Siphúnculus Dentàlii is of frequent occurrence in Berwick Bay. When the proboscis is retracted, the body is about three quarters of an inch long, subcylindrical, white, opaque, obtuse at both ends; and to the unaided eye little further is apparent. The magnifier shows it to be slightly wrinkled, or annulated, covered all over with minute close-set tubercles, and furnished towards the middle with a broad belt of larger

tubercles, pointing apparently to the mouth. From this aperture a cylindrical tough proboscis may be extruded, nearly equal to the body in length, swelling towards the apex into a bulb, armed behind with retroverted spinules, and the aperture itself encircled with numerous short and thickish tentacula. When the body is compressed between plates of glass, the alimentary canal is seen proceeding straight to near the middle, where it forms a considerable flexure, and thence it has a convoluted course towards the posterior extremity, when it returns upon itself, and opens outwardly at the base of the proboscis. No trace of any other organ is visible. There are three small anomalous appendages at the posterior end, the nature of which I do not understand.

When the larger tubercles that encircle the central part of the body are magnified (*d*), they seem to be suckers or cups, not unlike the cups which are placed along the arms of the cuttlefish, but the shape is probably somewhat altered by the pressure to which they were subjected between the glasses.

The greater number of systematic authors have placed the Siphúnculus amongst the radiated animals near the genus Holothùria; but De Blainville has removed it from that class, to place it among the true worms. The propriety of this, if I may be permitted to give an opinion, is very doubtful, for the existence of the tentacular circle at the oral aperture seems to indicate some kindred to the radiated tribes; and its affinity to the Holothùria will be made still more apparent, if my observation, that the seeming tubercles are in reality suckers, is confirmed.

Berwick upon Tweed, February 23. 1833.

Art. XIII. *An Introduction to the Natural History of Molluscous Animals.* In a Series of Letters. By G. J.

Letter 11. *On their Organs of Respiration.*

The respiratory organs of the Mollúsca have peculiar claims to the attention of the conchologist, not solely because of their function, which, indeed, is one of chief importance, but because they have furnished the principal characters on which modern systematists have proceeded to subdivide the class into orders and families. Cuvier, of whom, among recent naturalists, it may most truly be said that he was

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[Begin Page: Page 232]

232 Illustrations in British Zoology : —

Art. XII. Illustrations in British Zoology. By George Johnston, M.D., Fellow of the Royal College of Surgeons of Edinburgh.

10. Carine'lla trilineaVa. (/g.24.)

c

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a, Outline figure of S. Dentalii, removed from the shell, and the proboscis extruded; natural size, b, The same, magnified, c, The apex of the proboscis, more highly magnified, to show the retroverted prickles, and its globular shape, d, A minute portion of the skin, magnified, to show the form of the suckers.

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