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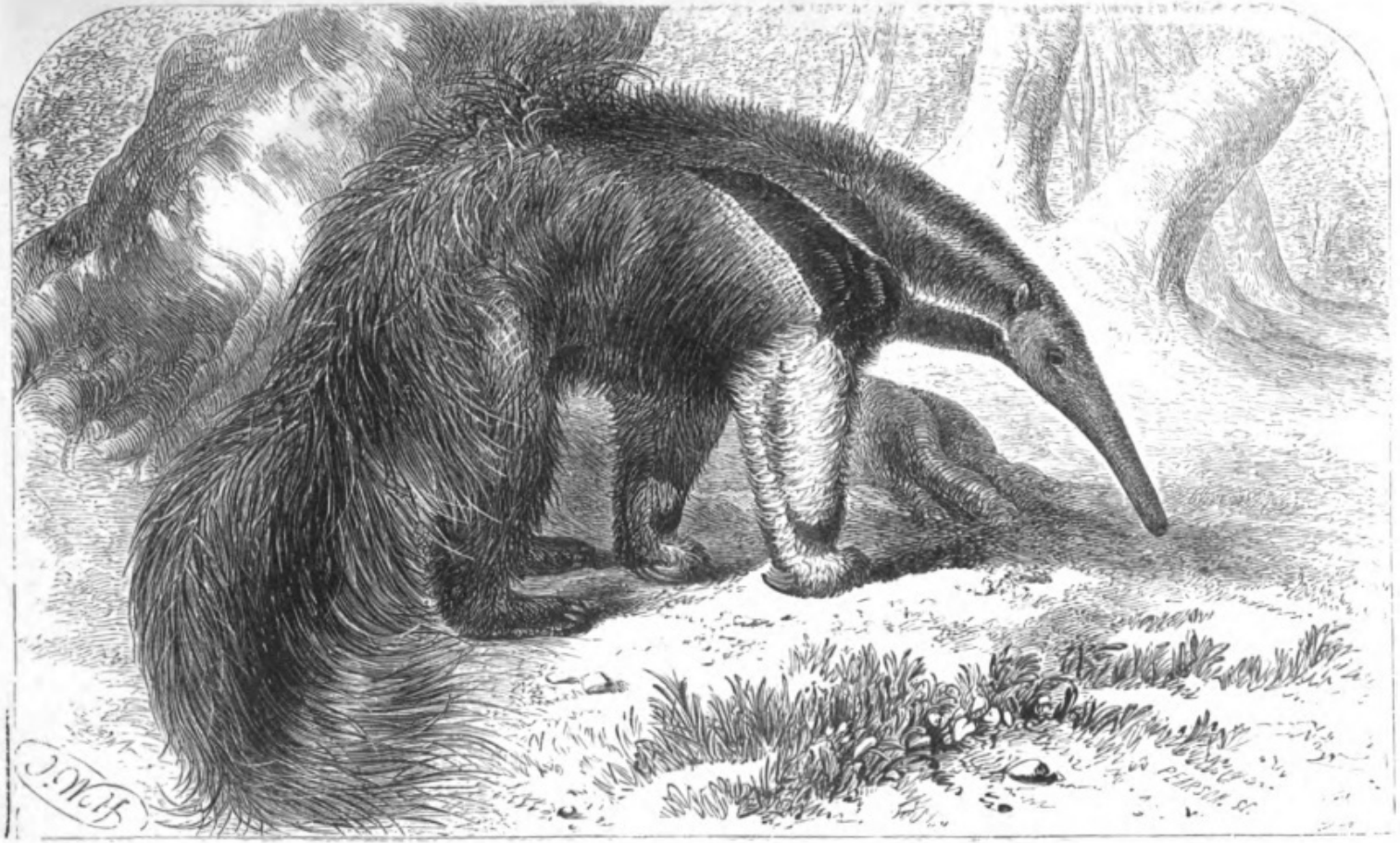

The Great Ant-Eater. (Myrmecophaga jubata.) FRONTISPIECE.

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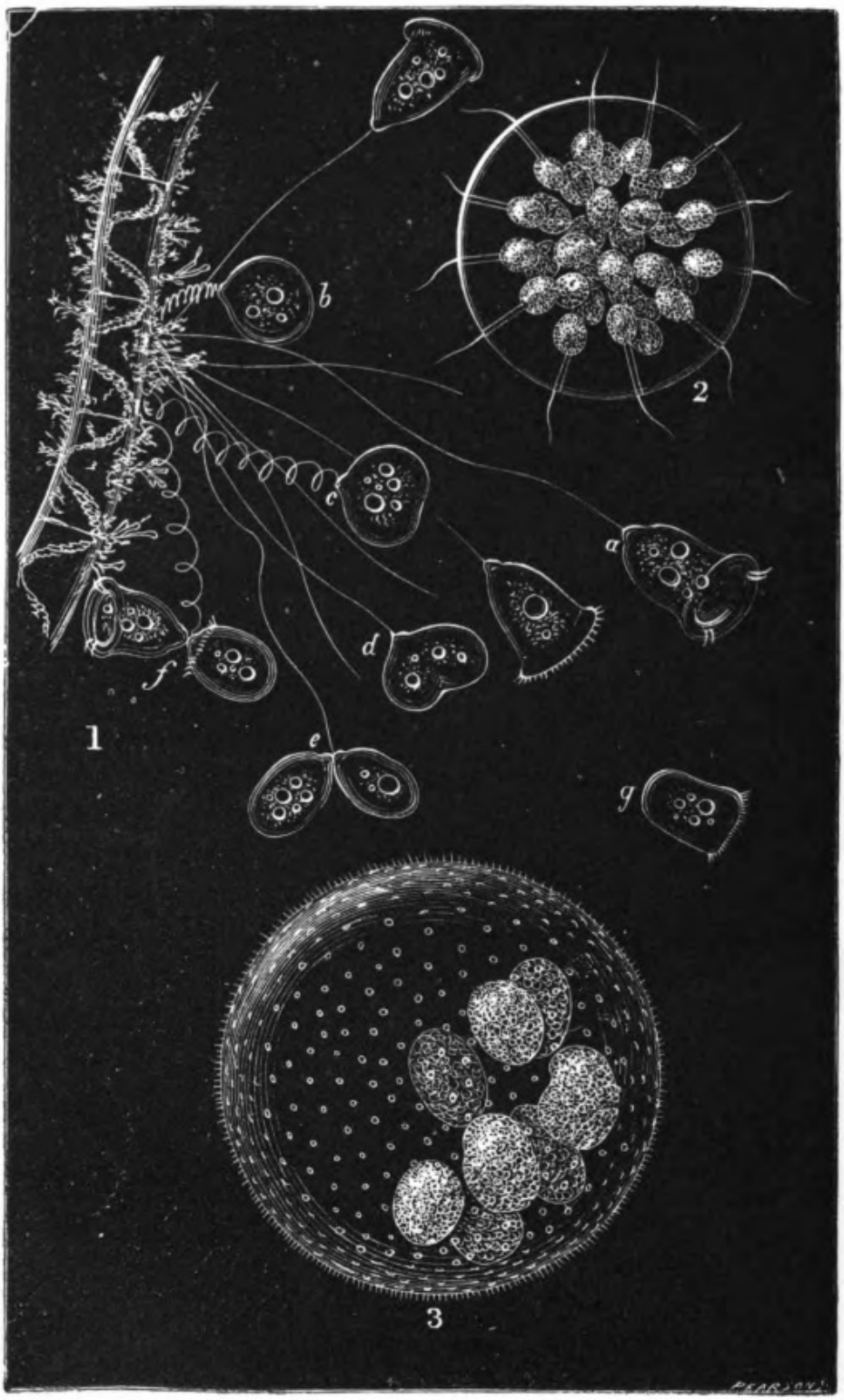

Infusoria p 9.

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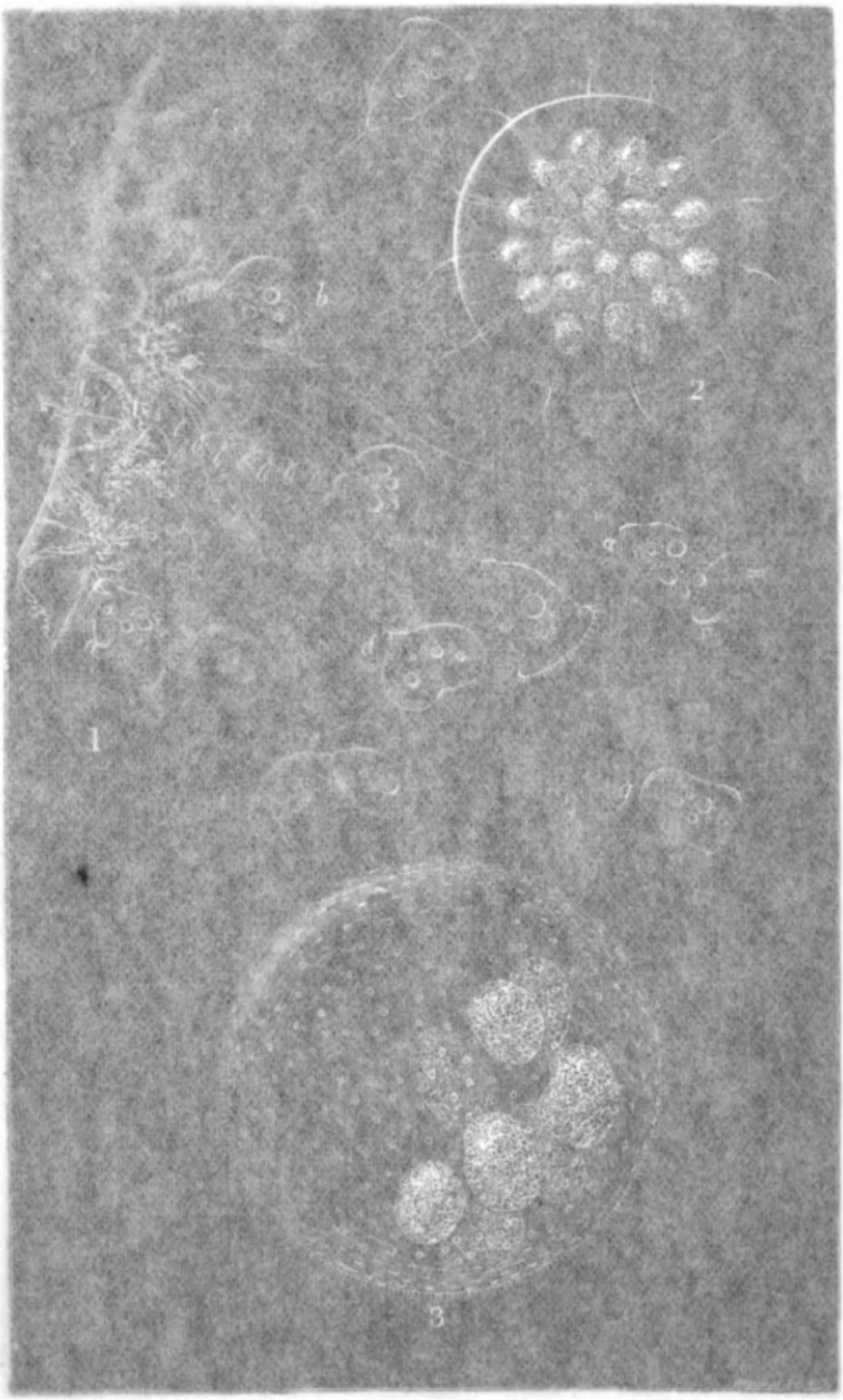

Infusoria p. 9

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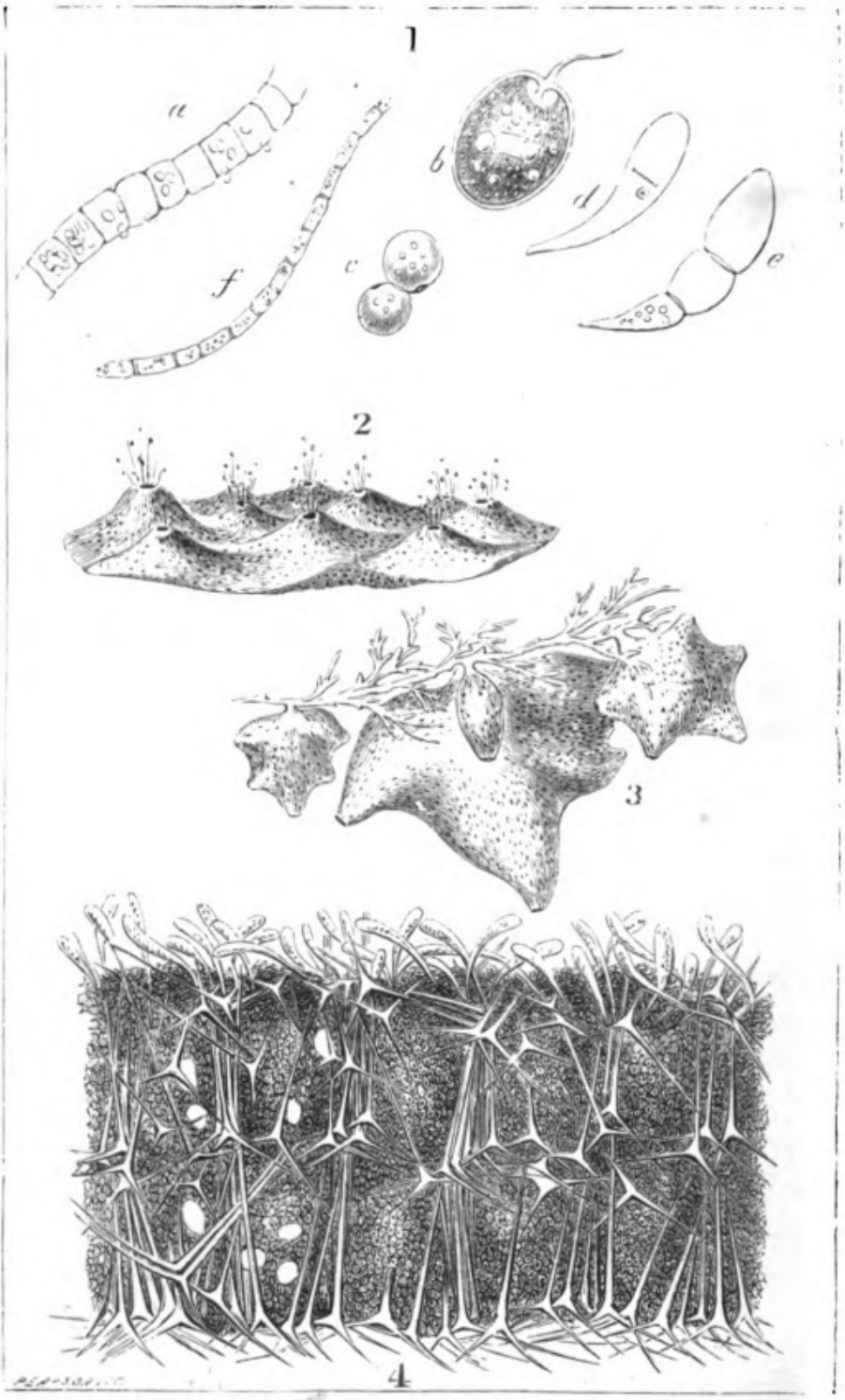

Porifera. (Sponges.) p. 25.

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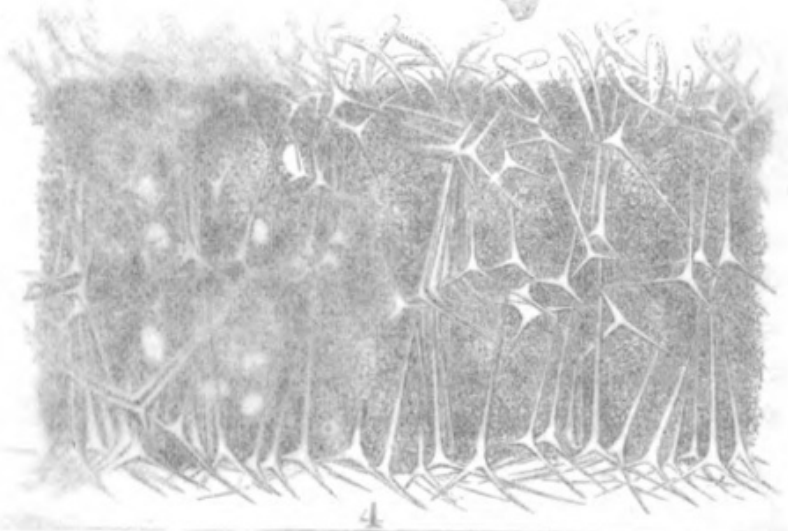

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Porifera. (Sponges.)

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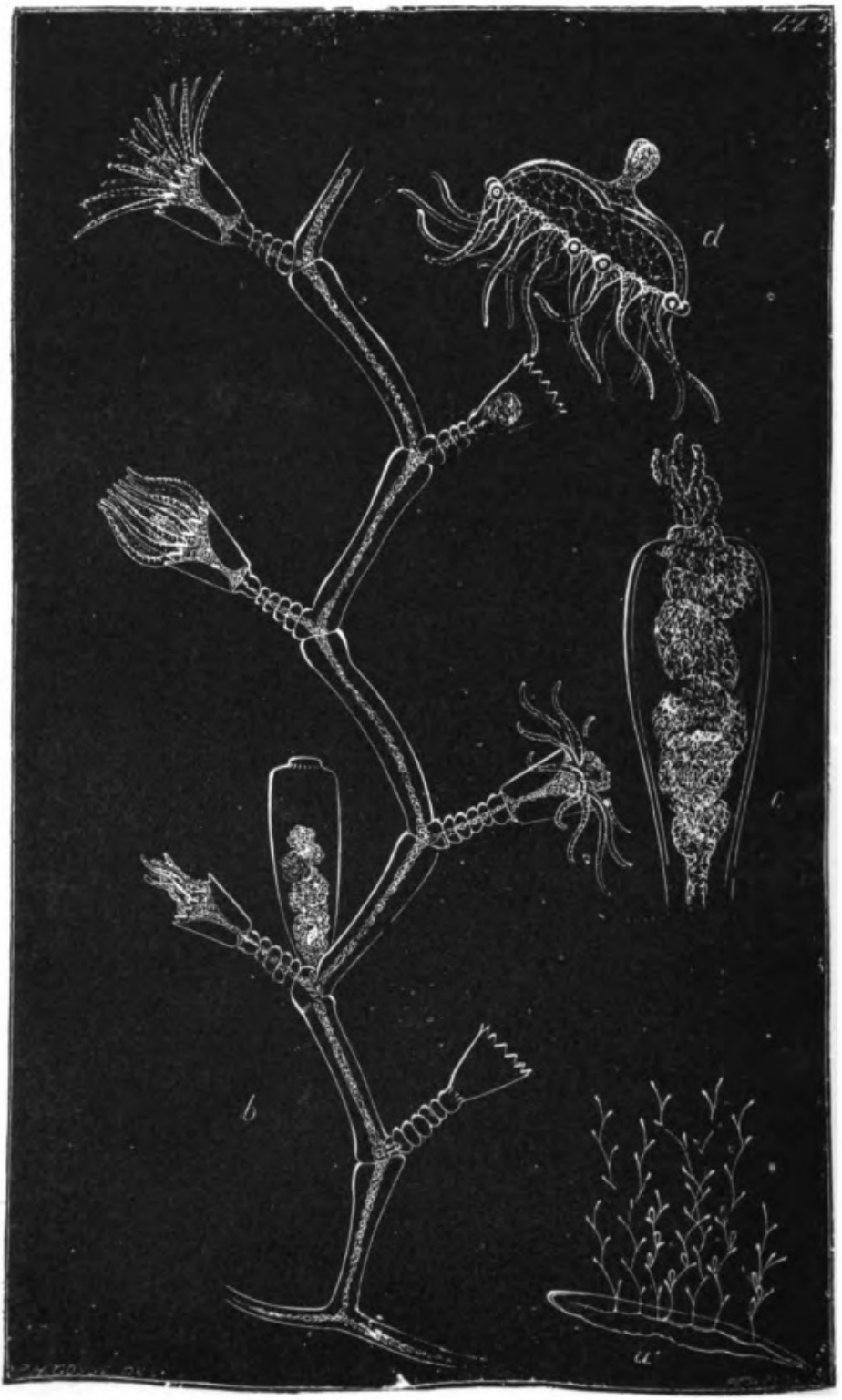

Polypifera. p. 49.

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CHAPTER V.

POLYPIFERA (*Polypes*).

Continued.

If any of our wonder-loving readers will put a small phial [illegible] and stroll through some hedge-rowed lane at [illegible] as the sweetest season of the year, he may find [illegible] meditation in the results of his walk. Let him direct his steps to the side of the first ditch or pool in which the water is not fetid, where the surface is already mantled over with the verdant duck-weed, and where [illegible] aquatic plants, springing from the bottom, wave their [illegible] in the limpid element. Stooping down on the brink, let him lift with his fingers a little of the coating of duck-weed, disturbing the water as slightly as possible, and then, peeping through the opening he has made, examine slowly and carefully the bottom thus revealed. On the mud he will probably see a good many round knobs of jelly, from the size of a turnip-seed to that of a pea, of a transparent green hue, and others of the same kind adhering to the stalks and under surface of the leaves of the aquatic plants:—let him select a few of

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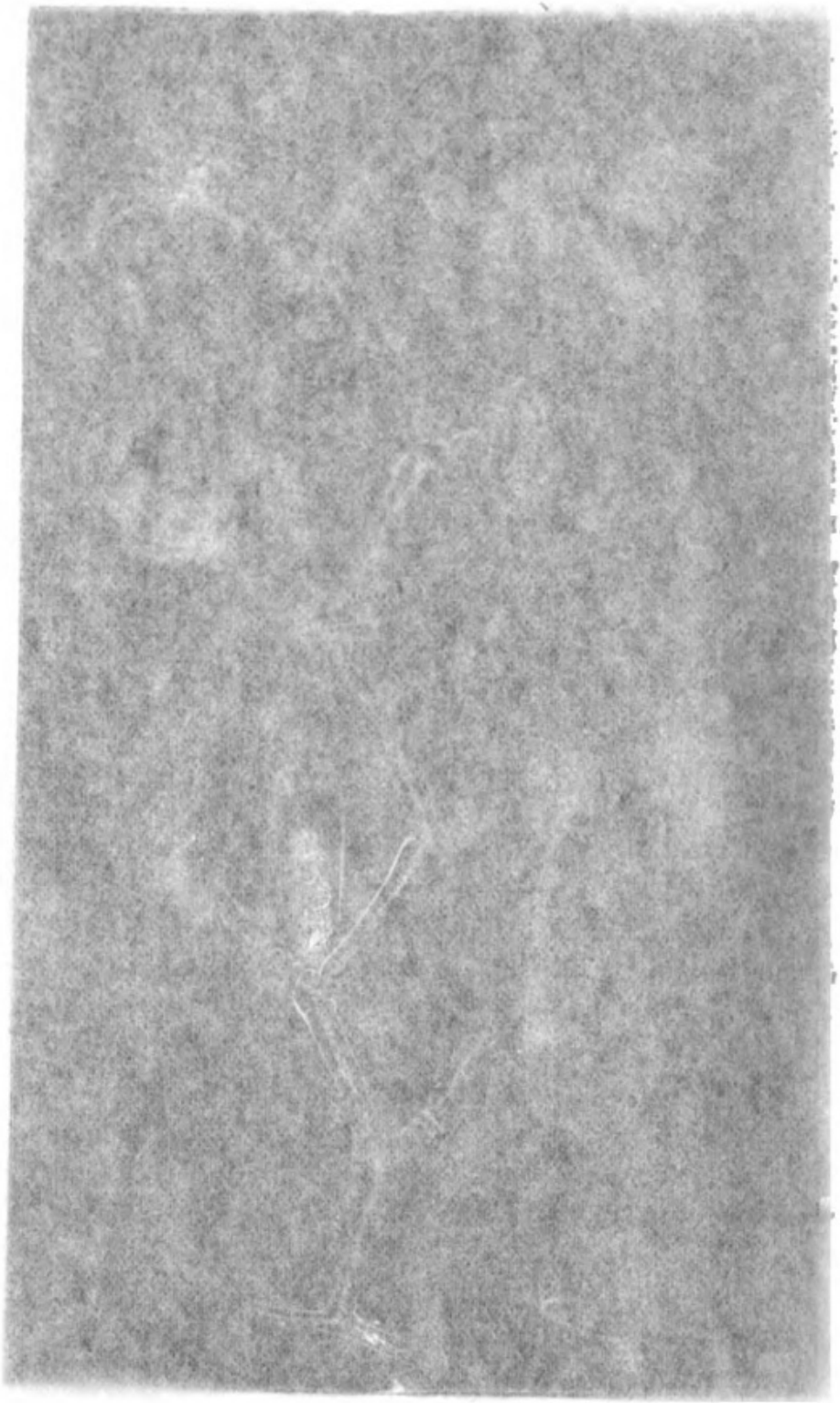

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these, place them, with some clear water and a fragment of some plant, in his phial, and hasten home. He will have obtained a creature which, about a century ago, electrified the scientific world, and opened up a new and most marvellous chapter in the history of Life. It is the Fresh-water Polype (*Hydra viridis*).

The invention of the microscope had given an immense impetus to natural science; and a galaxy of illustrious men had by its means been announcing wondrous facts, the records of which fill the pages of the Philosophical Transactions of our own Royal Society, as well as many works of great merit specially devoted to microscopy. But yet, when, in 1744, Abraham Trembley of Geneva declared what he had seen of this little fresh-water animal, this living ball of green jelly, it was regarded as a thing incredible, and even impossible. The facts "were so contrary to all former experience, and so repugnant to every established notion of animal life, that the scientific world were amazed; and while the more cautious among naturalists set themselves to verify what it was difficult to believe, there were many who looked upon the alleged facts as impossible fancies. The discoveries of Trembley were, however, speedily con-

Hydra viridis—(*nat. size magnified.*)

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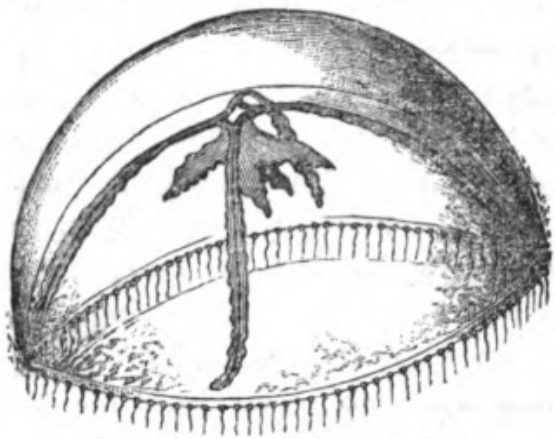
phorescent light. *Thaumantias pilosella*, occasionally so abundant on our western shores, is a hemisphere of hyaline jelly, as large as a shilling, the edge of which is studded with black or rather dark purple eye-specks. If we irritate one of these creatures in the dark, by touching it with a stick, for instance, instantly a circle of bright tiny lamps is lighted up, every eye-speck becoming a spark, like a coronet of glittering diamonds, or like a circular figure of gas-jets, lighted at a public illumination, and seen from a distance; more especially as some of the constituent sparks appear to go out and revive again, just as do the gas-flames if the night be windy. And the beautiful *Æquorea Forbesiana*, a flat species resembling in form and size a cake or bun, on being disturbed gives out its light in a marginal ring, which suddenly becomes vividly luminous, like those circles of glory with which the Italian painters delight to crown their saints and sacred personages.



Thaumantias pilosella—(*magnified.*)

But these examples yield to some of those that swim at large in the boundless ocean; where the mariner, in his lonely watch, occasionally sees, far below the keel of his ship, what look like swimming globes of fire, or cannon-balls heated to incandescence: these are believed to be some globose species of Medusæ of large dimensions.

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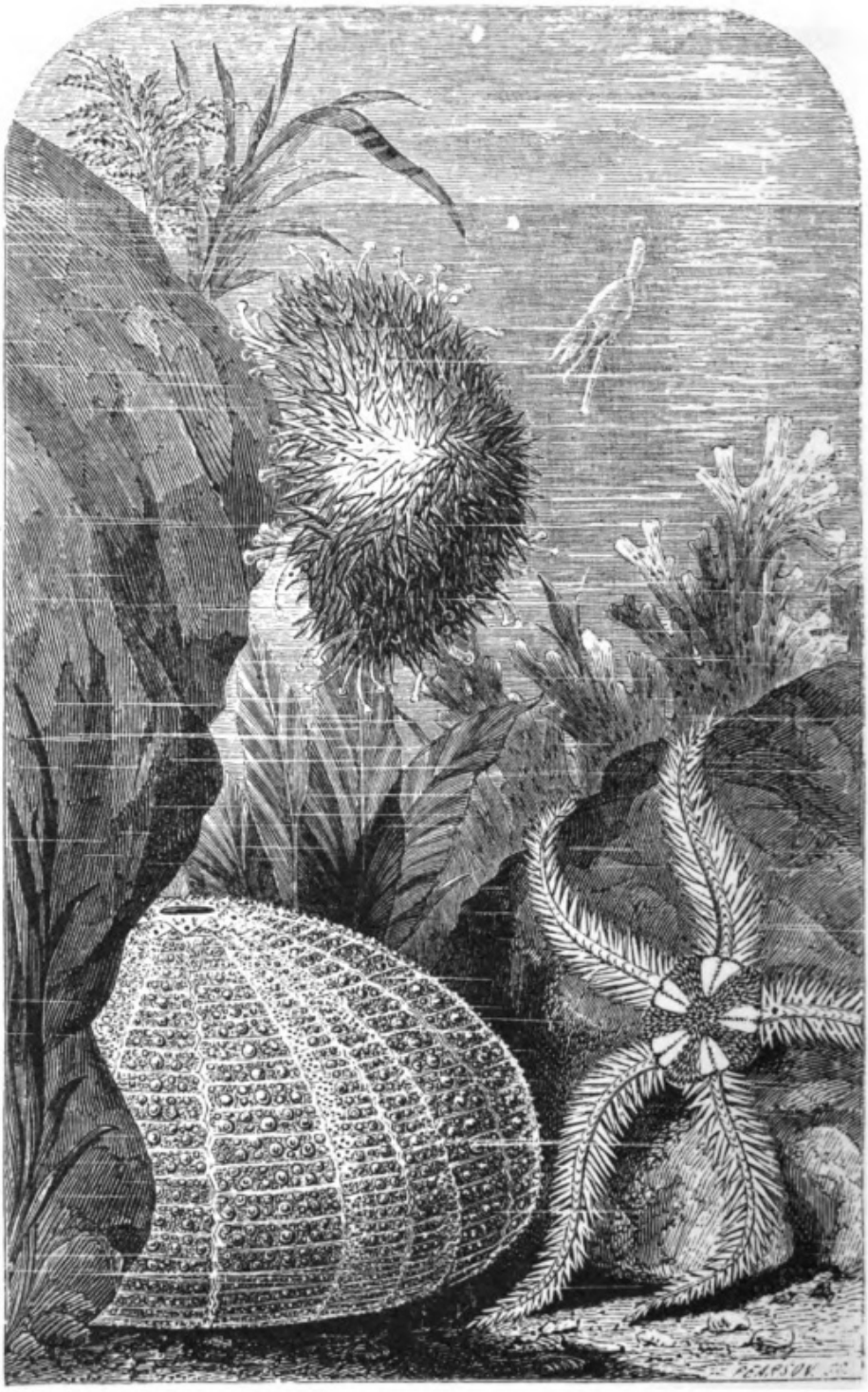

Echinodermata (Star-fishes.) p. 91.

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CHAPTER X.

Encrinite Beads (*Star-Coral*).

On many a shingly beach where the limestone formation occurs there may be found small perforated pebbles, which, rounded and polished by the action of the waves, resemble beads of stone. In the days of Popish superstition, these were supposed to be fashioned by an imaginary "Saint Cuthbert" for the rosaries with which prayers and invocations were meted out by tale. One of the rocky islets that speckle the tempestuous sea of Northumberland, was assigned to the special manufacture of these useful articles :—

> "—— On a rock by Lindisfarn
> Saint Cuthbert sits, and toils to frame
> The sea-born beads that bear his name."—*Marmion.*

In the same districts where these occur, the wondering peasantry have often admired what they call Lily-stones, a class of fossils to which modern geologists apply the equivalent term *Encrinites*; the stony stem, and a crown of rays bending in sigmoid curves, resembling the stalk and elegant bell-shaped blossom of a liliaceous flower.

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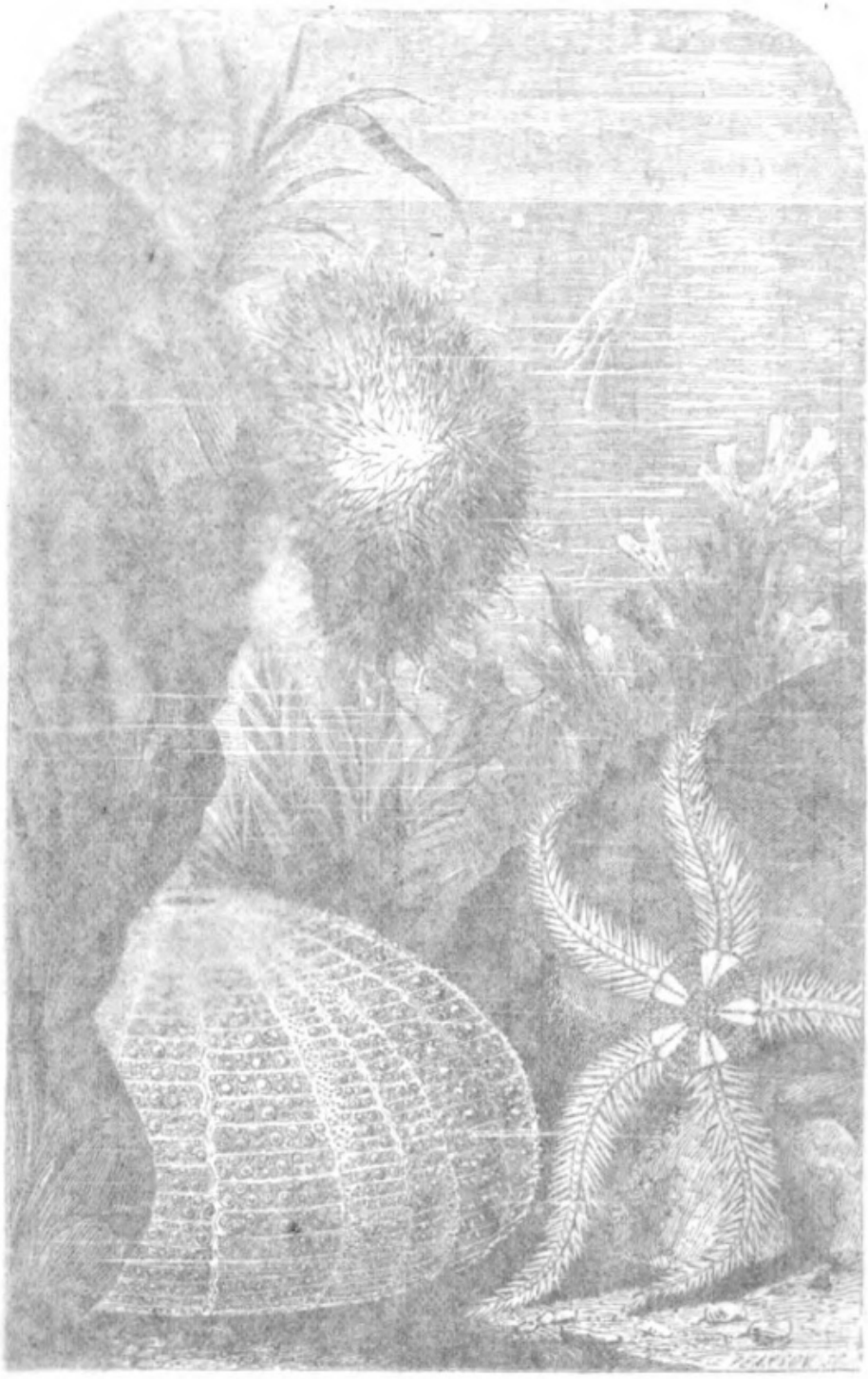

Echinodermata (Starfish, &c.) 91

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