
P H I L O S O P H I C A L
T R A N S A C T I O N S.

I. *An Account of the Pholas Conoides, by*
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Read Jan. 10, 1765. I DO myself the honor of laying before this learned Society a species of Pholas, very little known, and but seldom seen among the naturalists, being the first of them that has come to my hands. [Vid. TAB. I.]

This shell is pictured by *Rumphius*, and called by the name of *Pholas lignorum*; in Dutch, *Hout-Moffel*, Wood Muscle, because it is found burrowed in timber. The specimen before you is one of infinite numbers that were thus bedded in the keel of a Spanish ship, which was brought from the West-Indies, a piece of which accompanies the shell, to shew how they lie in wood, stone, or any other hard bodies, that entertain them. But this name is altogether too vague and uncertain, unless it could be asserted that this is the only kind that inhabits pieces of wood: for every species of

VOL. LV.

B

Pholas

Pholas penetrates that and other solid substances likewise, and so do various other shell-fish. Therefore, as all subjects, in natural history, should have some precision in the appellations which distinguish them from each other, the best and most clear method of giving names to them, is certainly to call them after some striking character proper to them specifically: and, therefore, I have ventured to give this species the above title, viz. *Pholas Conoides*, being very different in its form, from the oblong, the broad, the pointed, the cylindrical, and every other *Pholas* I have seen. And as the figure given by *Rumphius* is so imperfect, and this name so general, it was necessary to give an accurate account, as well as an exact representation of so curious a species; and, therefore, I drew it in four views, and shall describe it as follows:

If we observe this specimen, as it is intire, it will appear to consist of two great valves, an anterior long piece, a posterior long piece, and an orbicular detach'd piece at the end of this, at that extremity which may be called the base of the *Cone*. These make but five pieces to compleat the whole, unless the white smooth parts, at the broad ends of the great valves; are accounted separate pieces, which they really are not, but absolute portions of the same valves; and, as to the circular piece on the back, it appears to me to be intire, and not divided into two; if it may be counted two, then the whole would consist of six pieces, according to *Monf. de la Faille's* opinion, who seems fond of that number in the *Pholades*.

It is an inch and half long, and three quarters of an inch thick at the base; and this appears to be its
utmost

utmost size, because the others, which are in this piece of wood, seem nearly of the same magnitude.

The great valves are of a dusky white, inclining, towards the base end, to a purplish cast; where the *striæ* are very fine and minute, running upwards to meet those which are larger on the main body, in a weavy curve direction; and the smooth parts of these, as well as the other pieces, are perfectly white, and without any *striæ* at all. The base end of this fish seems covered with three plates that are white and smooth; but these are only the two smooth pieces of the great valves, and the circular posterior plate, mentioned before: and where these meet, there are two depressions, which terminate in two holes in the bases of the great valves, which are half covered by the posterior circular piece. The apex is round and flatish, and forms almost a sharp edge by the concurrence of the two great valves; and the fore and back edges are united by the long pieces spoken of already.

The wood in which they lie was said to be cedar; but it rather seems to be of fir, having a fissile grain like common deal wood, and is as easily split as that; it is also extremely light, and its fibres are very loose, nor has it the least smell like cedar; they have the same colour, which is of a yellowish cast; but the cedar has a close smooth grain, though it is a light wood, and soft in itself: whereas this does not seem to be as hard as what we call white deal, which is esteemed the lightest and tenderest of all the class of firs.

The texture of the shell is very thin and brittle; and therefore it is wonderful to see the holes they lie in so smooth and uniform, as if bored with a hard sharp instrument. The base end is always inward, and the hole which opens from them outwards very small; and this is the case of every kind which are thus lodged whether in wood or stone; so that one must conclude that they are deposited there in a very minute state, and not in a state of maturity; for then they must bore their way inwards, and the hole would be as wide outwards as inwards, and consequently be of equal diameter. But how these animals maintain and increase the cavity, as they grow larger, is a question which it will be very difficult to resolve, and has puzzled several ingenious naturalists in the enquiry.

It is said they have a power of turning themselves about with a swift motion, and so make themselves gradual room; but this will be hard to conceive, if we consider that a fish closely shut up within its valves, and compressed on all sides, can have no power of motion. We cannot imagine any animal can move itself, when thus confined, without some *fulcrum* or point of effort, from which to begin such motion; and if they had such *tentacula* as were capable of seizing upon the wood, in order to exert themselves, there can be no room for it, for it is in close contact with themselves in every point. That this is the case, is very clear, from considering the state of toads, frogs, and other animals, inclosed in blocks of marble, trunks of trees, &c. which have no communication with the atmosphere at all. These are soft animals, and their shape not at all fit for turning about and boring

boring their cavities; and they are found in moulds as exactly fitted to their bodies, as those are to melted matter cast into them by a founder. It may, however, be supposed that the stone and wood does actually give way to the growth of the animal within, because the facts are well attested; but how this comes to pass, in these Pholades and cylindrical Muscles, and by what means, toads, &c. can receive aliment to cause their growth, without any external communication, must yet remain among those secrets of nature, which we cannot but admire, without knowing how they are brought about.

Explanation of the Table.

Fig. I. Is a view of the surface of one of the great valves, with the edges of the two longitudinal pieces, and with portions of the smooth parts at the round extremity or base.

II. Shews the anterior edge of the *Pholas* covered by the long smooth white piece, and, at the base, having part of the smooth portions of the great valves in view.

III. Represents the posterior edge of the *Pholas*, with the round white piece upon the base end, and the long ditto, which is larger than that of the fore edge, running towards the apex.

IV. Is

IV. Is a view of the base extremity, which is round like a hemisphere, shewing the two holes, one at the end of each great valve, just where the processes of their smooth portions, and the edge of the round piece, meet.

The apices of some of these conoïde Pholades are a little curved; but that of this subject described is strait.

We must also observe that, besides these, there were great numbers of *Coffi*, or worms, in the bottom of the Spanish ship; the vestige of one or two of them, if visible in this piece of wood, and the channels they make, which are in all directions, are lined with a thin white incrustation, and are of equal dimensions all along.

II. *An Account of the Case of a young Lady who drank Sea Water for an Inflammation and Tumour in the Upper Lip. Communicated by Dr. Lavington of Tavistock, in Devon, to John Huxham, M. D. and F. R. S.*

Read Jan. 17,
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A Young lady of Launceston, aged about sixteen, very tall of her age, and of a thin delicate constitution, very weak and sickly when a child, enjoyed for some years past a tolerable state of health. However being incommoded

Pholas conoides.

