

III. *A Letter from Mr. David Erskin Baker to Martin Folkes Esq; Pr. R. S. containing Considerations on two extraordinary Belemnitæ.*

S I R,

Read Nov. 24. 1748. **V**ARIOUS have been the Opinions of Authors concerning the Origin of the *Belemnitæ*, and as various the Systems and Hypotheses advanced by them in Support of their Opinions; some having imagined them vegetable Productions; others have taken them for the different Parts of Animals, as Teeth, Horns, Bones, &c. in which even these again have differed, as to the referring them to land or marine Animals; and they have been by others supposed of mineral Origin, or *Lapides sui generis*. What they really are, will, I doubt, be still very difficult to determine; but, as one principal Objection to their being originally marine Bodies (which Supposition seems to carry the greatest Colour of Probability) has been, that no marine Bodies have been found adhering to them, that Objection will be obviated by no less than two Specimens, from the same Place, of *Belemnitæ*, whereto undoubted marine Substances are found firmly affixed; by which Instances, as some further Light may be thrown on this Subject, that Consideration will, I hope, stand as an Excuse for my troubling you with this Paper.

These curious Fossils, which, together with the Drawings of them, I humbly submit to your Examination,

mination, were found in a Chalk-Pit in *Norfolk*, from whence they were sent not long since to my Father Mr. *Henry Baker* F. R. S.

See TAB. IV.

Fig. 1. Is a *Belemnites*, whose *Apex* is perfect; the conic Cavity, and the longitudinal Seam, evidently distinguishable; which, as well as the Contexture of the Substance whereof it is composed, shew it to be a true *Belemnites*; but on its Surface are placed, in their natural Condition, by which I mean not at all seemingly petrify'd, or otherwise alter'd, two of those *Vermiculi* that are so frequently found sticking to Oysters, Scallops, and many other kinds of Shells, when taken out of the Sea.

Fig. 2. A *Frustum* of another *Belemnites*, the *Apex* whereof is broken, but the conic Cavity is still remaining, and shewn at *a*. To this *Belemnites* adheres a Shell of the Oyster-kind, which is fasten'd thereto so strongly, that they are not to be separated without breaking: Which Shell, as well as the before-mention'd *Vermiculi*, seems not altered in its Substance, but appears like a recent one, of which many are to be met with in the Cabinets of the Curious.

Fig. 3. Shews the other Side of the said Shell, wherein the *Cardo* or Hinge at *b* is plainly discernible; at *c* appears the broken End of the *Belemnites*, where the radiated Contexture (well known to belong to their Bodies) is represented, as also the longitudinal Seam at *d*.

As

As these Specimens are undeniable Proofs of marine Bodies adhering to *Belemnitæ*, several of the Curious who have seen them, are of Opinion, that they tend likewise to prove the *Belemnitæ* to be marine Productions. It may probably be objected, that these Shells might have been brought and deposited near the *Belemnitæ* whereto they are affixed, by whatever mighty Change it came to pass that Productions of the Sea are discover'd in most Countries at great Depths in the Earth, and in the Bowels of Mountains at great Distances from the Sea (even supposing the *Belemnitæ* to be *Lapides sui generis*, and produced in the Earth) and that these Shells might be cemented to them afterwards by some mineral, stony, or other Matter. But the following Observations will render this improbable; for,

1. The *Vermiculi* of *Fig. 1.* are not any Species of the *Tubuli marini*, found sometimes recent, and sometimes fossil, detach'd intirely from every other Body; but are of that sort, which is perhaps never seen separate, or in any other Manner, when recent, than attach'd and fasten'd to other Shells or Stones; and they are placed on this *Belemnites* exactly in the same Manner as they are commonly found on other marine Bodies; *viz.* lying on their broadest Side, with their Ridge upwards, and glued as it were thereto by a shelly Substance.

2. In *Fig. 3.* at *e*, is plainly to be distinguished, that the Shell has been fashion'd thus by the convex Surface of the *Belemnites*, in the same manner as these Shells commonly receive a Form from whatever Substance they adhere to; which plainly implies, that this Shell was fasten'd to the *Belemnites* when
itself

itself was very small, and in a growing State; and that the Shell in its Growth was formed according to the Figure of the Body on which it was affixed: But such Growth could not possibly have proceeded any-where but in the Sea; and therefore these two Bodies must necessarily have been in the Sea at one and the same time.

There is now but one Way more, whereby these Shells (supposing the *Belemnitæ* to be Stones *sui generis*) could possibly become affixed to them; which is, that the *Belemnitæ* might have been by some Accident thrown on the Sea-shore; and that there the Shells might fasten themselves to them, as well as to any other Stone. But as this must imply some former Convulsion in Nature, whereby they were cast out of their natural Beds upon the Sea-shore; and again a second Convulsion to carry them to the Chalk-pit where they were found; so far-fetch'd an Objection will, I believe, carry but little Weight.

To conclude, I submit to your Opinion, whether the Sides of the conic Cavity, whereto the Oyster-shell is affix'd, has most the Appearance of a Stone or of a Shell; and remain, with the utmost Respect,

S I R,

Strand, Dec. 15.
1748.

Your most obedient and

obliged humble Servant,

D. E. Baker.

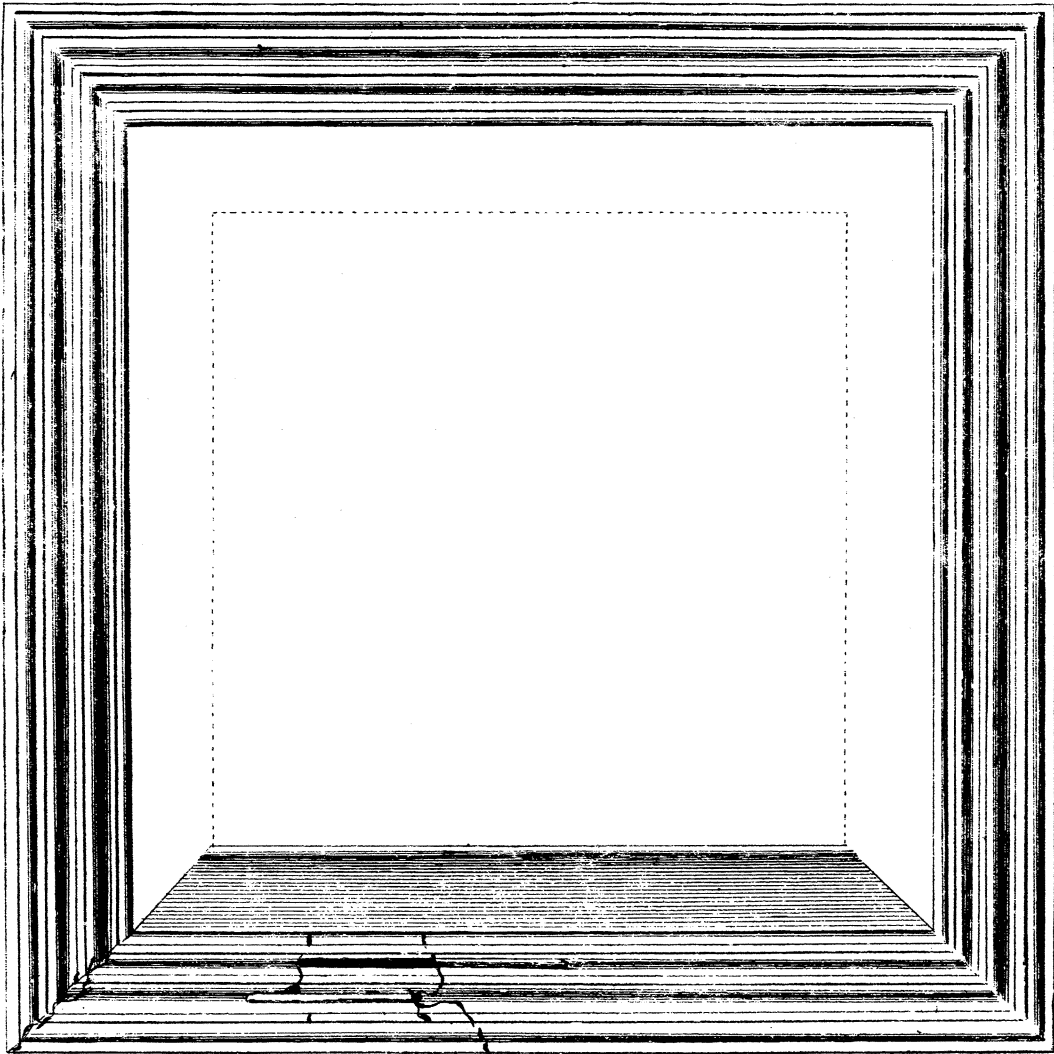


Fig. 4. p. 609.

Fig 1
p. 599.



Fig. 2.
p. 599.

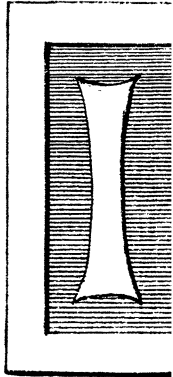




Fig. 5.



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Fig. 2.
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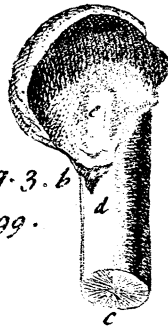


Fig. 3. b
p. 599.

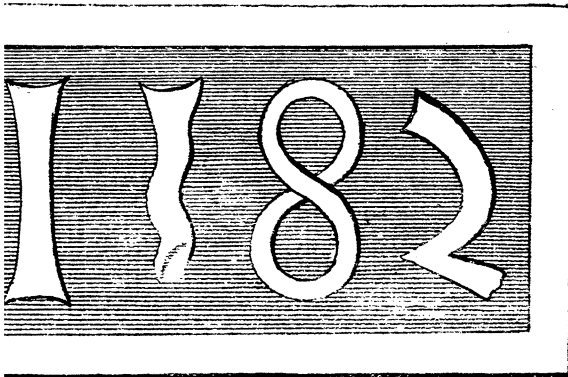


Fig. 6. p. 613.

J. Wynne sc.