

fly, but one fly being not enough to bring the young one to its full growth, they feed it with more: Their *Ibeca's* are at last all covered over with the wings, legs, and other fragments of flies.

A Letter of Mr. Martin Lister, written at York August 25 1671. confirming the Observation in N^o 74. about Musk-scented Insects; adding some Notes upon D. Swammerdam's book of Insects, and on that of M. Steno concerning Petrify'd Shells.

SIR,

I Have observed the two Insects, which Mr. Ray saith, smell of Musk, which indeed they do in an high degree. The *small Bees* are very frequent in the *Wooles* in *Lincoln-shire*, and about the latter end of *April* are to be found in pastures and meadows, upon the early-blown flowers of a sort of *Ranunculus*, as You have been rightly inform'd; but it is something improper to say Bees feed on flowers: And likewise the same Bees are no less frequent on the flowers of *Dens Leonis*, &c. The *sweet Beetle*, is a very large Insect, and well known about *Cambridge*. All the trials I have made to preserve them with their smell, have proved ineffectual: For, both sorts of these Insects will of themselves in a very few weeks become almost quite sent-less. To these I shall add another sweet-smelling Insect, which is a *Hexapode-worm* feeding on *Gallium luteum*.

The Observation of the *Vespa Ichneumones*, as it hath relation to Spiders, I willingly reserve for other Papers: yet I may tell you in general, that this kind of Insect is one of the greatest puzzles in nature; there being few Excrescences of Plants, and very many births of Insects, wherein these slender Wasps after divers strange ways are concerned.

Though I be at present from my Books, yet I well remember the passage, which Mr. *Willoughby* refers you to in *Muffet* *. And he is well able to judge, whether the Observation be made upon the same sort of Insect. I conceive it a fault not consistent with Ingenious Spirits, to pass by in silence the Industry

* See *Numb.*
74. p. 222.

of Moderns as well as of Ancient Writers ; according to that of *C. Celsus*: *Oportet neque recentiores viros in his fraudare, quæ vel repererunt, vel rectè secuti sunt ; & tamenea, quæ ab antiquioribus posita sunt, authoribus suis reddere.* You can best inform me, what *D. Swammerdam* does in a matter of this nature : when I read in the Account given us by you of his Book, *Numb. 64*; that Snails are both Male and Female ; that Caterpillars may teach us, by their feeding, the correspondence of the virtues of Plants, &c ; I am desirous to know, whether he quote *Mr. Ray* for the *former*, as having publish'd the Observation ten years ago at least ; and for the *latter*, the Learned and Noble *D. Columna*, who did propose the way of essaying the virtues of Plants by the palats of Insects in the beginning of this Age.

But I leave this, and proceed to a remark of my own ; and it shall be, if you please, concerning *Petrified Shells* ; I mean such Shells, as I have observed in our English Stone-Quarries, But Sir, let me premise thus much, that I am confident, that you at least will acquit me, and not believe me one of a litigious nature. This I say in reference to what I have lately read in *Steno's Prodromus*, that, if my sentiments on this particular are somewhat different from his, it proceeds not from a spirit of contradiction, but from a different view of Nature. First then, we will easily believe, that in some Countries, and particularly along the shores of the Mediterranean Sea, there may all manner of Sea shells be found *promiscuously* included in Rocks or Earth, and at good distances too from the Sea. But, for our English-inland Quarries, which also abound with infinite number and great varieties of shells, I am apt to think, there is no such matter, as Petrifying of Shells in the business (or, as *Steno* explains himself p. 84. in the English Version, & *alibi*, that the substance of those shells, formerly belonging to animals, hath been dissolved or wasted by the penetrating force of juices, and that a stony substance is come in the place thereof,) but that these Cockle-like stones ever were, as they are at present, *Lapides sui generis*, and never any part of an Animal. That they are so at present, is in effect confessed by *Steno* in the above cited page ; and it is most certain, that

that our English Quarry-shells (to continue that abusive name) have no parts of a different Texture from the rock or quarry they are taken, that is, that there is no such thing as *shell* in these resemblances of shells, but that Iron-stone Cockles are all Iron-stone; Lime or marble all Lime-stone and Marble; Sparre or ChrySTALLINE-shells all Sparre, &c. and that they never were any part of an Animal. My reason is: That Quarries of different stone yeild us quite different sorts or species of shells, not only one from another (as those Cockle stones of the Iron-stone Quarries of *Adderton* in *York-shire* differ from those found in the Lead-mines of the neighbouring mountains, and both these from that Cockle-Quarrie of *Wansford-bridge* in *Northampton-shire*, and all three from those to be found in the Quarries about *Guntbrop* and *Beavour-Castle*, &c;) but, I dare boldly say, from any thing in nature besides, that either the land, salt, or fresh water doth yeild us. 'Tis true, that I have picked out of that one Quarry of *Wansford* very resemblances of *Murices*, *Telinae*, *Turbines*, *Cochleae*, &c. and yet I am not convinced, when I particularly examined some of our English shores for shells, also the fresh waters and the fields, that I did ever meet with (N. B.) any one of those species of shells any where else, but in their respective Quarries, whence I conclude them *Lapides sui generis*, and that they were not cast in any *Animal-mold*, whose species or race is yet to be found in being at this day.

This argument perhaps will not so readily take place with those persons, that think it not worth the while exactly and minutely to distinguish the several species of the things of nature, but are content to acquiesce in *figure*, *resemblance*, *kind*, and such general notions; but when they shall please to condescend to heedful and accurate discriptions, they will, I doubt not, be of that opinion, which an attentive view of these things led me into some years ago. Though I make no doubt, but the Repository of the *R. Society* is amply furnished with things of this nature; yet if you shall command them, I will send you up two or three for s of our English Cockle-stones of different Quarries, nearly resembling one the other and all of them very like a common sort of Sea-shell, and yet

if there shall not be enough specifically to distinguish them, and hinder them from being sampled by any thing of the spoils of the Sea or fresh waters or the land-snails; my argument will fall, and I shall be happily convinced of an Error.

Another Letter, written of the same Gentleman, from York Sept. 13. 1671. enlarging his former Communications in Numb. 75. about Vegetable Excrefcencies, and Ichneumon-Worms.

SIR,

IN my last Paper about *Vegetable Excrefcencies*, I was wholly silent of the opinion, which Mr. *Willoughby* is pleased to favour; and because that worthy Gentleman hath so far made it probable, that now it seems only to depend upon the good fortune of some lucky Observer, I am willing to reassume my former thoughts, that all those odd Observations, we have made of the *Births* of *Ichneumons*, do but beget in me a strong belief, that they have a way yet unheeded, whereby they do as boldly, as subtly, convey their Eggs within the Bodies of Insects and parts of Vegetables.

A fifth and last proposition of that Paper * was, that the *substance of many Vegetable Excrefcencies seemed not to be the food of the worms to be found in them*. My meaning was, that the substance of the Vegetable Excrefcencies in which those *Ichneumon* worms were to be found, was rather augmented, than diminished or worm-eaten. And the like conformity of their feeding within Insects is well observed by Mr. *Willoughby* *, that the imprægnated Caterpillars seem not to be concerned, though their bodies are full of Insects of a quite different kind, but go on as far as they may towards the achievement of the perfection of their own species. Thus I have seen a *Poppy-head* swoln to a monstrous bulk, and yet all the Cells were not receptacles of *Ichneumons*, but some had good and ripe seed in them. I shall not refuse Mr. *Willoughby* (though you know upon what grounds

* See Numb. 75. p. 2254.

* See above in this very Tract.