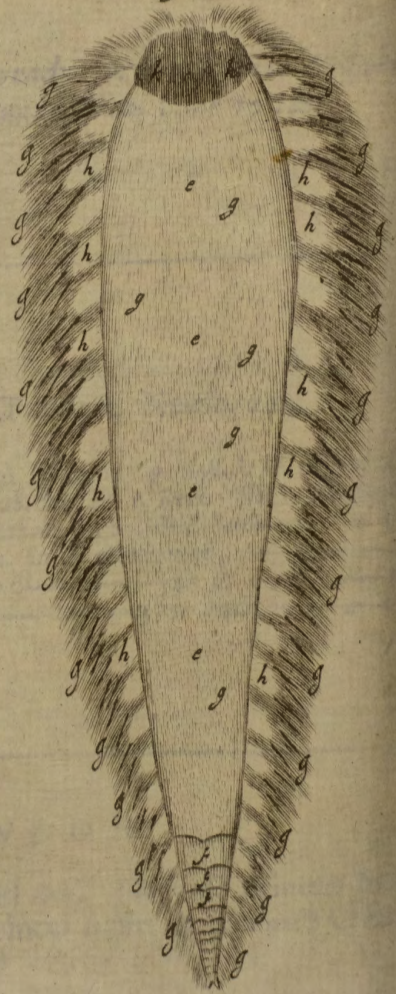


*Scolopendræ Marinae Species.
ð Mare Hibernico.*

Fig. 1.



Fig. 2.



II. *Account of a not yet Described Scolopendra Marina, by Thomas Molyneux, M. D. S. R. S. Communicated by Mr. Locke.*

I Have lately met with a remarkable Marine Animal, which I take to be one of the many *Non-Descripts*, that the Sea, by reason of its vast Extent and profound Depth, has hitherto Reserved undiscovered, notwithstanding the diligent Searches that have been made by Laborious Naturalists, after these kinds of Productions.

This December, 1696. Two of them were found in the Stomach of the *Asellus major vulgaris*, or common Cod-fish; a very voracious Creature, as one may judge, by its wide Mouth, its large Swallow and Stomach. I have often found young Crabs, Lobsters, Herrings, and such like small Fish, some half digested, others perfectly entire in their Stomachs.

The Cod must have been taken somewhere on the Sea-Coast near *Dublin*, for 'twas Fresh, and Sold here in our Fish-Market; and I judge it had found this its Prey not very far from the Place, where it-
 self was Caught; because one of the Two Fishes that were in its Stomach, was Compleat in all its Parts, and had received no manner of Alteration, save 'twas Dead: The other, by lying longer in the Stomach, was much mangled and broken: But though it was partly Digested, yet one might plainly see, 'twas another of the same sort of Fish, which I am now going to Describe.

The Place
where
'twas
caught.

It was bigger at one end, and went Taper or gradually lessening towards the other.

The Shape.

The Dimensions.

It was Four Inches, and Six Tenths of an Inch long, and where largest, as it was an Inch and Six Tenths broad, so it was about Three Inches and a half in Circumference ; at the smaller end, not above Four Tenths of an Inch broad.

The Covering.

It had neither Shell, Crust, Scales, or Bone for its Covering, but was soft ; yet not flabby or fleshy, as the *μαλακία* or *Mollia*, described by the Naturalists, but rather Membranous.

The Back.

The Back or upper Side was shaped roundish, especially towards the Sides ; in the middle 'twas something flatten'd, the Belly was perfectly plain ; along the middle of the Back ran a large Stripe from one extrem to 'tother, about Eight Tenths of an Inch broad, towards the upper end, but still narrower, as it came towards the Tail. This Stripe was all covered with a short soft sort of Down ; not unlike in Texture, Colour and Substance, to that which grows on the back of the Leaf of *Tussilago*, or *Colts-foot*.

The Sides.

Joining to the edge of this Stripe, ran from one end to 'tother, a List about Two Tenths of an Inch broad, that covered both sides of the Animal, and part of his Back. This List or Verge was thickly shag'd, with a fine soft Hair that grew very thick, and about a quarter of an Inch long, of a most delicate Changeable Red and Green Colour ; and of so sparkling a vivid Lustre, that nothing of this kind could shew more Beautiful.

The Prickles.

Among this soft Hair were thickly interspersed, without Order, an abundance (some Hundreds I believe) of black sharp hard Prickles, about the same length of the Hair, and the thickness of a Hogs Bristle, but much harder, and very sharp at the Points.

The

The Tail, or smaller End Terminated in the Back, ^{The Tail.} with Two Triangular pellucid soft Scales, that covered the Orifice of the Anus, at which its Excrement was discharged, as I found when I opened it; for the Extremity of the Intestine was closely inserted into this Passage.

The bigger end (tho' it had nothing of that pe- ^{The Head.} culiar shape that is common to the *Head* in most Creatures, and distinguishes it from the rest of the Body; nor had any Horns, Eyes, Ears, Nose, or Gills; yet because 'twas opposite to the Tail, and here was the Mouth) we may properly enough call it the Head.

The Mouth was a very large patulous opening, ^{The} for the bulk of the Animal; not placed at the end, ^{Mouth.} but somewhat underneath, as part of the Belly, and could not be seen when the Back was turned uppermost.

The Belly was flat, and no ways protuberant, covered with a smooth naked Skin, of a much lighter Colour than the Back, irregularly Spotted, with little dark Brownish Spots, some larger, some smaller; 'twas broader towards the Head, and grew narrower still towards the Tail; where, for about the space of an Inch, 'twas curiously pinched with little Indentures, resembling the small Joints in the Tails of some Insects; these Divisions or Joints were still shorter and closer to one another, the nigher they were to the extremity of the Tail.

Beginning close at each corner of the Mouth, and ^{The Feet} so along both sides of the Belly, was ranged a row ^{72 in} of *Feet*, in a close continued Series down to the ^{Number.} utmost tip of the Tail; the largest were placed towards the Mouth, and upper part of the Body, where they were about a quarter of an Inch long,

but downwards they grew less and shorter, still gradually diminishing, the nearer they approached the end of the Tail; where they were so minute, that they were insensibly lost, and not easily to be distinguished by the Eye. I distinctly counted from the Mouth to the Tail, on one side Thirty Six, so that on both Sides, the Number of Feet amounted in all to Seventy Two, and I could not be positive but there might be still more: Yet those Feet which I plainly distinguished were a vast Number for so short a Reptile. From within the Body, through the middle of each Foot, past Four, Five or Six of the same sort of sharp hard Prickles, that were interspers'd among the soft Hair; these were larger or smaller, and more or less in Number, according to the Size of the Foot, and gave it strength and firmness instead of Bones; and likewise, issuing forth beyond the end of the Foot, served in lieu of Toes or Claws, for the Defence of the Creature, or to take hold by as it walked.

The Fins
72 in
Number.

Joining to this row of Feet, towards the Back, was ranged along each side in a direct Line, a Series of small, thin, soft, flat Fins, face to face, in such an order, that each Foot was exactly answered by its correspondent Fin, so that their Number was precisely the same with that of the Feet, and they kept the same rule of proportion in their Size, still gradually diminishing, the nearer they approached towards the Tail. I distinctly counted of these as of the Feet, Thirty Six of a Side; each Fin was curiously fringed at the edge, with the same beautifully coloured Hair, I before-mentioned to have covered the Sides and part of the Back. By help of these Fins it performed progressive Motion through the Water as a Fish, and by means

Its Motion.

of the Feet could creep along the bottom of the Sea, as a Reptile.

After I had well observed its outward shape, I opened it to see what I could discover within, but I found here little variety of Parts; that which first offered, was a thin Membranous *Gullet*, that led from the Mouth to the Stomach, about an Inch long: From this was continued straight downwards the *Stomach*, not lying *Transverse*, as is its most usual Posture, but *length ways*; 'twas of a whitish Colour, and of a rough thick Texture, consisting of an outward and inward Membrane, with a sort of Carneous Substance between, resembling somewhat in Make, tho' not in figure, the *Gizzard* in some Fowl; 'twas as large as the upper Joint of a Mans little Finger; to this was next the *Intestine*, of a very differing Colour and Substance from the Stomach, for 'twas reddish, soft, and tender, and of a much smaller Cavity; 'twas continued almost directly, or with little Circumvolution to the Anus; and besides, these parts serving for Nutrition, I could not distinguish any other Viscera.

The Gullet.

The Stomach.

The Gut.

But that it had no *Brain*, *Heart*, *Gills*, *Liver*, or *Parts* for *Generation*, or something Analogous to these I dare not affirm; yet this is certain, that Nature has carefully supplied some imperfect Animals, such as the *Leech*, a Water Reptile as this, with large and conspicuous Organs for Nutrition, whilst other principal Parts (if they have any) are hardly, if at all, to be distinguished.

But what was most remarkable in its inward Structure, was the curious Contrivance of the Muscular Parts, for the Performance of its several Motions; these were very apparent, by reason they were both large and distinct; one long continued Stripe of red
fleshy

The Muscles and their Use.

fleshy Fibres, about the Sixth part of an Inch broad, ran directly along the middle of the Back, from the Head down to the Tail: This fleshy Stripe sent out from each side, like so many Rays, Thirty six several pair of smaller lateral Muscles, which, by the considerable Interstice between, I could easily distinguish from each other, making so regular a Figure altogether, that they might very aptly be resembled to the Spine, or back Bone of the *Passer Marinus*, or common *Plaist-fish*, when it is intire with all its Ribs or Transverse Processes, issuing by pairs from both sides of each *Vertebra*, from the Head down to the Tail; in this manner every particular Foot and Fin were supplied with their Correspondent Muscles, to give them Motion, either together or apart, as the Necessity or Design of the Animal required. And moreover, considering this sort of Muscular Mechanism, with the Taper shape of the Body, and likewise the Posture and Use of the many Prickles interspersed among the Hairy Shag that covered the sides; it seems very evident to me, that, besides its progressive Motion, it had also the Power (as have most of the many footed Land-Reptiles, and some Water Insects I have observed) of Contracting its Body in such a way, that bending its Head inwards, it roul'd the rest of the Body round it as a Center, making a Figure like a Rope coiled into a Helix, and in this posture guarded it self from Violences that might annoy it. For such was the shape of its Body, that so roul'd up it made a sort of Globose Figure, beset almost quite round with sharp Prickles; so we may often see the large Hairy Caterpillers, that have not a little resemblance to this Creature, when molested by any offensive Object, strait secure themselves from the Violence, by gathering up their Body in this manner, and

and making their Hairy Bristles start out directly forward.

And this puts me in mind to reduce this Animal to some certain Tribe of Creatures, already known and described; and I think on many Accounts it cannot be more properly Ranged than with the *Scolopendræ Marinæ*, because it pertakes of so many general Properties in common with them, as its being a long Hairy Insect, with a vast Number of Feet, and an Inhabitant of the Sea; I know the *Scolopendræ Marinæ* as Figured, and described by *Rondoletius*, and out of him by *Gesner*, *Grevinus*, *Aldrovandus*, and *Johnstonus*, are all more slender, and longer, and sharp at both ends; but these are but *Specifick Differences*, and not so Essential as to constitute a new Genus. 'Twill be easie therefore to distinguish in *Natural History* those *Scolopendræ Marinæ* from this, by calling it *Scolopendra Marina à Capite latiori versus caudam sensim gracilescens, Limbo pulcherime hirsuto spinulisque crebris interstincto è mare Hibernico*. The whole Description will be more plainly conceiv'd, by comparing it with the following Figures as truly Drawn (by a Ladies Hand) the first Figure representing the Back of the Animal, the other its Belly.

An Explanation of the Figures, Drawn as big as the Life.

Figure the 1st, a a a a The Downy List that runs
along the Back.

b b The Two Triangular Scales that covers the
Anus.

cccccccc

cccccccc The Verge of fine Changeable Green and Red Hair that covered the Sides and part of the Back.

ddddddd The hard sharp Prickles interspersed among the Hair.

Figure the 2d. eeeee The Skin of the Belly.

FFFF Several Incisures resembling Joints towards the Tail.

g g g g g Darker Spots in the Skin of the Belly.

h h h h h The Feet of each side the Belly.

I I I I I The Fins with their hairy Fringe behind the Feet.

k k The large Mouth opened wide.

III. Part of Two Letters wrote some time since to Oxford, by Dr. Martin Lister, Fell. of Coll. of Phys. & R. S. concerning several Plants may be usefully Cultivated for Producing Grass or Hay.

FOR the improvement of Sandy light Ground, or any clay well Sanded, I recommend upon Experience *Vicia multiflora nemorensis perennis sive Dumetorum*, J. B. It hath these Qualifications beside those mentioned in the Title of J. Bauhine, (*viz.* of its being Perennial, thriving even in Woods and among Bushes, and being of the Pulse or Pea-kind) that it shoots One Thousand Roots far and wide, and spreads it self under Ground like Quick Grass; above Ground it is Rampant, that it will Climb a Fathom and half upon measure