

*An Extract*

*Of a Letter, lately written by Monsieur Louys de Bills to D. Tobias Andreæ Professor of Physick and Philosophy at Duysborgh on the Rhyn; touching the true Use of the Lymphatick-Vessels, &c.*

**T**He Vessels, commonly called *Lymphatick*, have two *Coates*, betwixt which there are innumerable very small and very fine vessels like *Filaments*, resembling the *Mosse* of Trees, without any *Valves*, containing a nutritious Juyce convey'd into all the parts of the Body by a motion thereof from the center to the circumference; but returning through the inner pipes (furnisht with *Valves*,) of the same Water-vessels; at which time they are no more to be call'd *Water* or *Dew*, but *Ferment*, the vessels deserving also the name of *Ferment-vessels*. This *Ferment* serves to keep the Blood, and to ferment the same, being convey'd into it by a motion contrary to the former, viz. from the circumference to the center; which I can prove by Ocular demonstration, having already shew'd it to Dr. *Stalparts Van der Wiele* and many others, in the *jugular Glanduls* taken out of a Dogg; wherein I shew'd them, that these *Lymphatick* vessels carry their dewy particles about the *Glanduls* between the two *Tunicles*, and that in the lowermost end of these *Glanduls* the *Ferment-vessel* takes its beginning, being inclosed in these *Dewy Vessels*, and so constituting the inner pipe together with the *Valves*, which are of another forme, than hath been known hitherto.

To your *Quære*, Whether the said *Ferment-vessels* discharge at last all their *Ferment* into the *Ductus Thoracicus*, thence to be carry'd directly to the Heart, there to increase and to ferment the Blood, or whether they communicate their *Ferment* to other parts also? I answer, that most of the Juyce of the *Milky vessels* is discharged between the *Tunicles* of the *Veines*, *Arteries*, *Lymphaticks*, *Membrans*, and the vessels in the *Mesentery*, to be convey'd into all the parts of the Body, both Internal and External. For even in *bearing Females* the Fruit is not nourish'd by any Blood, but by the nutritious Juyce, conveyed



to it; as also by the moisture contained in the *Amnion*, which is no Urine nor Sweat, as some imagine; we having yet lately seen in the House of the said Dr. *Stalpart* at the *Hague* in a new-born Child, that his *Urachus* had no cavity at all, through which the Urine could passe out of the Bladder into the *Amnion*. The remaining and least part of the liquor of the *Milky* vessels is transmitted through the *Ductus Thoracicus* by the *Jugular* vein into the Blood.

Besides these Vessels there are yet others, that do not exonerate themselves into the Blood, viz. the *Ductus Virsungianus*, which delivers it self into the *Duodenum*; and the *Ductus Salivales*, whereof the *Saliva* does no less, than the Juyce in the *Ductus Virsungianus*, serve for Ferment, to wit, the one in the *Stomach*, and the other in the *Intestins*. From whence you may easily conclude, not that I hold (as it seems I have been understood) that the least part in the *Ferment*-vessels concurs to the making of Blood, but that the least part of the Juyce in the *Milky* vessels is discharged into the Blood.

Concerning the other *Quere*, Whether also the distribution of this *Ferment* is made through the *Testicles*, *Kidneys*, *Breasts*, and *Salival Glanduls*, &c. I answer, that the *Salival Glanduls* carry their Spittle or Ferment into the Mouth, and that the rest which returns back through the *Testicles*, *Breasts*, and other *Glanduls*, is carried to the *Cistern*.

#### *An Extract*

*Of a Letter, written to the Publisher from the Bermudas by Mr. Richard Stafford; concerning the Tydes there, as also Whales, Sperma Ceti, strange Spiders-Webbs, some rare Vegetables, and the Longevity of the Inhabitants.*

Sir, Yours, Dated Feb. 10. 1667, came to the hands of my Honour'd Friend Mr. *Richard Norwood*, together with the *History of the R. Society* and the *Phil. Transactions*, which he hath received as a singular favour. But having at this present weighty business lying upon him, which hindred him from answering your desires by this Ship with his own hand, he solicited me



me to do it for him; which I am very willing to comply with him in, as far as I am able. But I shall come short in many things at present; but what is wanting now, may be supply'd hereafter. For, the season of the year will not afford many things, which you desir'd in your Letter.\* By the next opportunity there shall be Roots, Seeds, and Fruits provided for you. —

At present I shall informe you, that the Water about our Island does not flow, by any Mans Observation, above five Foot; and that but at one season of the year, between *Michaelmas* and *Christmas*; at other times not above three Foot. It is *High-water*, when the Moon is about an hour high; and the like after her going down. It flowes in from the *North-West* and runs to the *South-East* nearest, and in that part of the Land which lies most to the *North-West*, there it is *High-water* soonest. But the Tyde does not alwayes ebb and flow directly that course round about our Coast; but, I suppose, the reason is, that some points of Land, or Sholes, may turn its *North-West* and *South-East* course.

We have hereabout very many sorts of *Fishes*. There is amongst them great store of *Whales*, which in *March*, *April* and *May* use our Coast. I have my self killed many of them. Their Females have abundance of Milk, which their young ones suck out of the Teats, that grow by their Navell. They have no Teeth, but feed on Mosses, growing on the Rocks at the bottom during these three Moneths, and at no other season of the Year. When that is consumed and gone, the Whales go away also. These we kill for their Oyl. But here have been *Sperma-Ceti-Whales* driven upon the shore, which *Sperma* (as they

\* The things desired, as to *Vegetables*, were : 1. To gather the smaller Fruits, and dry them in the Air, and in the Shade, till they are as dry, as Raisins or Figs are usually made. 2. To open Fruits of a larger kind, and the Stones or Kernels being taken out, to dry them. 3. To send Seeds, or Berries, when they are ready to drop off, with as much husk or skins upon them, as may be. 4. To wrap up Roots in Moss or light Earth, and to keep them, as much as is possible, from any dashing of Sea-water in the Voyage. 5. To set Plants or young Trees in halfe Tubs of Earth, arched over with hoops, and cover'd with Mats to preserve them from the dashing of Sea-water; giving them Air by all means every day, the weather being fair, and watering them with fresh water once a day. 6. To send of all the sorts of Potatoes in Earth. 7. To send all sorts of Berries, Grasses, Grains and Herbes, wrapping up the Seeds very dry in paper.



they call it) lies all over the Body of those Whales. These have divers Teeth, which may be about as big as a Mans wrist; and I hope by the next opportunity to send you one of them. I have been at the *Bahama*-Islands, and there have been found of this same sort of Whales dead on the Shore, with *Sperma* all over their Bodies. My self with about 20 more have agreed to try, whether we can master and kill them, for I could never hear of any of that sort, that were kill'd by any man; such is their fierceness and swiftnes. One such Whale would be worth many hundred pounds. They are very strong, and inlay'd with sinews all over their Body, which may be drawn out thirty fathom long.

There is an Island among the *Bahama's*, which some of our People are settled upon, and more are going thither. 'Tis call'd *New-Providence*; where many rare things might be discover'd, if the People were but encouraged: And I am of opinion, there is not a more healthful place in the World. 'Tis stor'd with variety of Fish and Fowl, and with divers sorts of Trees and other Plants, whose qualities are not yet known.

As to the *Age* of our Inhabitants here, some do live to an hundred years and something upwards; many live till they are nigh a hundred, but few above: And when they dye, 'tis age and weakness, that is the cause, and not any disease that attends them. The general distemper that is yearly amongst us, is a *Cold*; and that is most gotten in the hottest weather. The Air here is very sweet and pleasant. Our Diet is but ordinary, and the People generally poor; and I observe, that poor People are most healthful.

You shall receive of Captain *Thomas Morly*, the Commander of our *Magazeen-Ship*, such things, as I could at present procure. \* Among which you shall find of

\* But these particulars could not be found in the Ship.

the Leaves and Berries of that Weed you inquire after, which we call *Poy-*

*son-weed*, growing like your Ivy. I have seen a Man, who was so poyson'd with it, that the skin peel'd off his Face, and yet the Man never touch'd it, onely look'd on it as he pass'd by: but I have chaw'd it in my mouth, and it did me no harm. It is not hurtful to all.

Here



Here are *Spiders*, that spin their Webbs betwixt Trees standing seven or 8 fathom asunder; and they do their Work by spinning their Webb into the Air, where the Wind carries it from Tree to Tree. This Webb, when finish'd, will snare a Bird as big as a Thrush. Your self may prove it, for I have sent you some.

As to the *Bark* of a Tree, with which we are said to cover our Houses, that is an error; for 'tis not the *Bark*, but the *Leaves* of a Tree, which we put to that use. And 'tis the *Palmetto*; without which Tree we could not live comfortably in this place. The Leaves of some of these Trees are eight or ten foot long, and nigh as broad. I know no Tree in the World, that can equal it in the number of Commodities it affords.

'Tis reported, that in *Virginia* and upon the Coast of *Florida* the *Indians* live to a very great age; and that some of the People are of a Gigantick Stature, and stronger by farr than others.

As for the *Eclipses of the Moon*, you would have observ'd here, and be inform'd about, I can say little of them: but, I suppose, my worthy Friend Mr. *Normood* will give you an account thereof to your content. If any thing should cause him to faile, it will be Age and weakness. He hath a great desire to serve the *R. Society* in every respect; which shall engage me also to serve both them and you to the utmost of my ability, remaining, &c.  
*Bermuda, July 16. 1668.*

*An Extract*

*Of a Letter from Paris, about the polishing of Telescopical Glasses by a Turn-lathe; as also the making of an extraordinary Burning-glass at Milan.*

**W**E have here an Artist, that polishes *Optick-Glasses* on a *Turn*. I have seen a Glass of his Workmanship, which is very good, though the first, that ever he made this way. It is very neat, and approaches the Object very much. He turns these Glasses, as he does Wood, that is, with the same facility.

Signor



Signor Settalla at Milan causeth to be made a *Burning-glass* of seven Foot in Diameter. He pretends to make it Burne at the distance of fifty *Palmes* ( which is about 33 Foot.)

### Observations

*Concerning Cochineel, accompanied with some suggestions for finding out and preparing such like substances out of other Vegetables.*

**I**T is generally believed, that the *Cochineel* comes out of a fruit called the *Prickle-pear*, bearing a leafe of a slimy nature, and a fruit bloud-red and full of Seeds, which give a Dye almost like to *Brasiletto* wood, that will perish in a few dayes by the Fire: But the *Insect* engendred of this fruit or leaves, gives a permanent Tincture, as is generally known.

There grows a Berry ( by report ) both in the *Bermudas* and *New-England*, call'd the *Summer-Island-Redweed*, which Berry is as red as the *Prickle-Pear*, giving much the like tincture; out of which Berry come out first Worms, which afterward turn into Flyes somewhat bigger then the *Cochineel-Flye*, feeding on the same Berry : In which we read, there hath been found a colour no whit inferior to that of the *Cochineel-Flye*, and as to Medicinal vertue much exceeding it.

'Tis hereupon offer'd to consideration and tryal, 1. Whether this *Bermuda-Berry* might not grow in *England*? 2. VVhether out of the Berry of *Brasiletto*-wood the like insect might not be obtained in respect of colour or tincture? 3. VVhether a fading colour, yielded by certain Vegetables, might not be fixed by causing such a Fermentation in the Concrete, as may engender Insects giving the tincture of its original, which will hold in Grain?

For the obtaining of the last we find the following directions. VVhereas Vegetables of Tincture are either Herbs, or VVoods, or Berries and other Fruits; to breed Insects out of *Herbes*, dry them, (for so they yield the best tincture;) otherwise stamp them, and let them dry, till they will suffer no more juyce to run from them, (this in the Sun or in a proportionable heat:) or if