



Philosophical Transactions

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*The Profile and Ground-Plot of the Concave in Pen Park,
before described.*

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|---|-------------------------------|---|--|
| A | The Superficies of the Earth. | G | Two small Rocks that appear above the water. |
| B | The old Lead-Oar Pit. | H | The upper part of the Water. |
| C | The Tunnel or Passage down. | I | The bottom of the water. |
| D | The long Gallery. | K | The highest mark of the water. |
| E | The Concave or Cell. | L | Two Rocks. |
| F | The upper edge of the Mud. | | |

An Extract of a Letter, relating an Experiment made for altering the Colour of the Chyle in the Lacteal Veins, by Martin Lister Esq;.

THe passage of the Chyle through the Intestines into the Lacteal Veins, is a thing hitherto demonstrated to the Eye by none. Dr. Lower ingeniously confesseth the ill success he had in trying with Aer, or with tinged Spirit of Wine; by neither of which he was able to force a passage. And J. Valaus (*Epist. de motu Chyli*) is very positive, that however the Chyle in the Intestines may be diversly coloured; yet it is still white in the Lacteal Veins. And Diemerbroeck in his late Anatomy Published 1672. (p. 37.) affirms, *Chylum semper album inveniri in Vasis Lacteis Mesentericis & Thoracicis -- viridem vero rubrum alteriusve coloris, in iis a nemine habitum esse*.

Notwithstanding which, and my own former unsuccessful Tryals (*Phil. Trans. Numb. 95.*) I did not doubt but that some happy Experiment would shew the contrary; and a purposely coloured Chyle might find admittance into the Lacteal Veins though not by force, yet by the Consent and Introduction of Nature her self. The success of some late Experiments I made to this purpose, I shall here acquaint you with.

Ex-

Experiment I.

I caused a Dog to be fed, and after four hours, or thereabout; and having ready by me a clear Tincture of *Indigo*, dissolved in fair Water and filtered, I opened the *Abdomen*, and making a small Incision in the *Jejunum*, I injected an ounce or two. This done, we stich'd up the Gut, and all, again, and the Dog turned upon his Leggs. After one hour and a quarter, we cut the stiches; and then beheld a copious Distribution of *Chyle* and turgid *Lacteal Veins*; but as white as ever. And yet carefully searching the Guts, we perceived none of the Injected Liquor any where.

Exper. II.

Another Dog, which was kept fasting 40 hours, had a very little flesh, without water, given him, about 5 hours before the Injection of the Tincture of *Indigo*; which was performed after the same manner, as before: only it was now well warmed, and about Twelve Ounces thrown up the *Duodenum*, and down the *Ileon*. Here were empty Guts, and not the least appearance of any *Lacteal Veins* in the *Mesentery*. After full 3 hours, the Stiches were cut again (some business hindring me from doing of it sooner) and carefully examining the *Mesentery*, we found many *Lacteal Veins* of an Azure Colour; and cutting some of the biggest of them asunder, we plainly saw a thick blewish *Chyle* to issue forth, and to spread it self over the transparent *Membranes* of the *Mesentery*. This is a very truth, which the Chirurgeon I employed to assist me, in the Experiment, can well witness, whose Eyes I used, as well as my own, in carefully examining these matters.

Whence, although it hath been doubted of by some, yet is it most evident, That the *Lacteal Veins* receive, what they carry, from within the Cavity of the *Intestines*.