

Two Digits remain eclipsed	-	-	-	-	22 <sup>h</sup> 55' 37'
One Digit exactly	-	-	-	-	23 3 42
End of the Eclipse	-	-	-	-	23 11 32

The Observation was made with a 7 Foot Tube, 2610 Parts of the Micrometer just clasping the Sun's Diameter.

I am, with all possible Respect,

Honoured Sir,

Rome, Jan. 14. 1750.

*Your most Obedient  
Humble Servant*

CHRISTOPHER MAIRE.

VI. *Some Observations on the Dragon-Fly or Libella of Pensilvania, collected from Mr. John Bartram's Letters, communicated by Peter Collinson, F. R. S.*

Read Feb. 1.  
1749-50.

**A**Bout the Beginning of *May* I observed many deformed Water-Insects, by Naturalists called *Hexipodes*, creep up out of the Water, and fix themselves on the Shrubs and Rushes; in this Situation they continue but a few Hours before their Back splits open; and from this deformed Case creeps out a beautiful Fly, with shining transparent Wings:

Wings: At its first Appearance there is only what one may call the Rudiments of Wings; but it is a most enrèrraining Sight to observe how they shoot out, and expand themselves: Thus, in less than an Hour, they have attained their complete Dimensions. During all this Operation the Creatures are immoveable, and so continue, until their Wings are dry; and then they fly swiftly away, roving about the Sides of Ponds and Rivers, seeking their Food, being Insects of Prey, are very voracious, and, like the Hawks among Birds, are very swift of Flight, and nimbly secure their Prey, which is mostly Flies, and small green Grasshoppers: They delight in Sunshine; in cloudy Weather they are rarely to be seen; but seek Protection under the Leaves and Boughs of Trees.

Towards the End of *May* the Female is ready to deposit her Eggs: She then seeks the warm quiet Sides of Ponds and Water-courses, continuing in a hovering Posture, dodging up and down in the Water: In this Action the Male seizes her, and with the End of his Tail catcherh fast hold by the Back of her Head, and flieth away with her. It is uncertain how long they continue in this Position before the Female bends the End of her Body, so as to penetrate the Part between the Belly and Breast of the Male. — In this singular and surprising manner she is impregnated; then she repairs again to those still shallow Waters, whose Bottoms are covered with Moss, Sticks, and Weeds, which may be a Security to the little Grubs. — Here she in a hovering Posture deposits her Eggs in the Water, which immediately sink, and find a proper *Nidus*  
in

in the aquatic Moss, &c. The Eggs are soon hatch'd; the young Reptiles creep amongst the Stones and Weeds, &c. and so continue Water - Animals the greatest Part of the Year, until the Season comes round for their Appearance in that beautiful Fly before you, which is different from our *European*; but their Process I think well agrees with ours, as it is curiously described and delineated by that Excellent Naturalist Mr. *Reaumur*. They have a great Variety of this Tribe of Insects in *America*, as well as we have in *Europe*.

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VII. Alberti Halleri *Archiatri* & *Consil.*  
*Sul. Reg. Medic. in Acad. Gottingenf.*  
*Prof. & Reg. Soc. Lond. Sodal. Expe-*  
*rimenta aliqua ad Respirationem perti-*  
*nentia.*

*Read Feb. 1.* **C**ONTROVERSIA de respirationis modo nu-  
 1749-50. per exorta est, cujus historiam hic re-  
 censere nihil adinet. Sufficiat contraxisse experi-  
 menta in duo capita, quæ ad rem perficiendam spec-  
 tant.

Dubium primum fuit, num muscoli intercostales interni elevent costas, ut primus vester *Mayovius* invenit; an deprimant, ut olim *Galenus*, tum *Franciscus Bayle*, et alii.

Dubium alterum fuit, an aer elasticus reperiatur