

or Uniformity as to time or place ; setting aside these, there was very little difference in the general face of affairs for 20 minutes ; neither had we much reason to hope for any, because the severity of the Cold was such, that it oblig'd us to remove to a better Climate, and by that means we unfortunately lost the ensuing *Phases* of our dying *Meteor*.

Dublin, June
28th. 1721.

I am, &c.
J. W.

VI. *A Description of an Aurora Borealis, seen on the same Day at Cruwys-Morehard, in Devonshire. By Samuel Cruwys, Esq; F.R.S.*

MOnday the 6th of Feb. 1720-21, a little before 7 in the Evening, there arose out of the North, or a little towards the East, a bright *Crepusculum*, which soon spread it self a great way through the Northern part of the Hemisphere. About 7 (when I first saw it) it began to leave behind it, at due North, or a few Degrees to the East, part of a very clear Sky (which look'd like a black Cloud, but the Stars shone in it clearly) being a Segment of a Circle, into which Figure, the *Crepusculum* (or expanded Body of lucid Vapour) had now formed its upper Limb also, making a kind of broad *Iris*, terminated at each end by the Horizon.

ALL

All this while the streaming Lights appear'd in great Variety as to Figure, Place, Magnitude and Colour, but for the most part of a redder Colour (especially towards the West) than the *Crepusculum* it self, out of which they seem'd to be formed, and tho' for the most part the greatest Appearances had been within 20 Degrees of the North on each side, yet at due N. W. there were very many considerable ones.

About 8, this *Crepusculum*, (which had been constantly, though slowly, carried further from the North) had, with the upper part of its outer Limb, reached to about 10 or 12 Degrees beyond the Pole-Star towards the Zenith, being now above 30 deg. broad, with a circular Segment of black clear Sky to the North, of about 25 deg. when the whole *Crepusculum* or Vapour was all suddenly formed into aggregate Bodies like Vapours, and gave one of the most pleasing Appearances, that perhaps has been seen of this kind. The *Bases* of the Cones seem'd to rest on the upper Limb of the Segment of clear Sky (which was extended near 60 deg. on each side the N.) and the Vertices of the Cones, pointing all towards the Zenith, approached within a few Degrees of it, and terminating there, formed the greatest part of a Semicircle inclosed, as it were, with Golden Pallifadoes, which shining all at once as bright almost as flame, and being of a prodigious Length and Number, exhibited a most agreeable Spectacle.

This last *Phænomenon* convinced us, that these Cones were Collections of the very same Particles, whereof the *Crepusculum* had consisted: because when it appeared every where alike and equal, the great Stars shined through it but very faintly; where-

as afterwards, those Stars, that remained between the Cones, suddenly appeared very bright, whilst those, that were covered by them, could hardly be perceived: and indeed all the streaming Lights this Evening seem'd to flow from this *Crepusculum* downwards, as from a Fountain or Store, and not to arise from the Horizon, few approaching it nearer than 10 Degrees, and many not within 20 or 30 deg.

After this fine Appearance had continued about 2 Minutes, the Matter seem'd to be exhausted, and the Scene almost at an end, the streaming shining Lights being mostly extinguished, and the remaining Parts of Vapour left, like broken Clouds; when the flashing Lights began to appear of a most prodigious Swiftnefs, both from N. E. and N. W. pointing to the Zenith, or a little more to the South. 'Twas observable, that over the Tracts, where these flashing Lights passed, the remaining parts of Vapour (which now lay scattered every where, like white broken Clouds) pointed, or seem'd to have a Tendency, conformable to the same Motion; whereas, towards the due North, where no Flashes appeared, these whitish Clouds lay confus'd and irregular as before.

This continued about 20 or 25 Minutes, when the Wind began to arise a little at N. E. and the Scene was quite at an end, dark Clouds succeeding all over the North, and by nine a Clock we had a severe Storm of Snow.

N. B. That all the time of these Appearances, many broken parts of the extinguished Vapours, like white Clouds, were carried beyond the Zenith, some 50 or 60 deg. and others, even to the Horizon it self, at S. S. W.

During

During the whole Continuance, there seemed to be a small, easy breath of Wind, scarce perceivable, at N. N. E. which the Motion of the Clouds above-mentioned also confirms, but as soon as it began to blow a little brisker, the remaining parts of the Vapour were all dissipated.

*An Account of the Weather both before and after this
Phænomenon.*

- January* 30. **H**ARD Snow in the Morning, and Frost all Night.
- Jan.* 31. and **P**leasant Sun-shine Days, very calm,
February 1, but the Snow still lying, and at Nights
2, 3 4. very hard Frosts.
5. Very violent Snow in the Morning, and some Thaw in the Afternoon, hard Frost at Night.
6. Hard Frost in the Morning, and the Wind exceeding cold and sharp, but not hard; the afternoon pleasant, Sun-shine and calm, but it froze all Day out of the Sun, and continued to do so all the Evening, and the Ground was still covered with Snow.
7. Very hard Frost in the Morning, and Frost and Storms of Snow all Day. Wind N. N. W.
- 8, 9, 10, 11. Pleasant calm Days, but hard Frost, and very hard Frost at Night.
12. Hard Frost. Exceeding cold Wind at S. E.

The

(190)

The 12th at Night these Lights are said to have appeared again, as also on *Saturday* the 18th, to a very great degree, but I saw them not; the Weather still frosty with little Snow.

Feb. 22. At
Night.
23, 27.

Hard Snow.

A Thaw and some Rain, and but little Frost afterwards, only dry cold Winds, till the 27th, when the Frost returned very sharp, with exceeding cold Winds, at N. E. and S. E. for a Fortnight or more, without any Snow, and did a great deal of hurt.

VII. *Observations on the Muscular Fibres of Fish.*
By Mr. Leeuwenhoeck, F. R. S.

Delft, April 11. 1721.

IN my Letter to this Honourable Society of the 24th of *January* last, I treated of the great Number of Vessels that I had observed in the Fibres of the Muscles. I now take the liberty of presenting you with the following Observations, hoping there may be something in them for your Entertainment.

It has been affirmed to me by several Persons, and in particular, by a certain very learned Foreigner, that Nature, in all her various Productions, constantly observes the same Course and Manner of Operation. To this Assertion my Observations do by no means agree; neither those, that I have made upon the Generation