

The Observer, M. *Estienne*, notes, that, when he made this Observation, the River of *Chartres*, which runs very near from *South* to *North*, was betwixt him and the Rainbow; and that he stood Level with this River, whence he was distant not above 150 paces: which he adds, that the Curious may the better judge of this Observation.

A Relation of an Accident by Thunder and Lightning, at Oxford.

This was imparted by Dr. *Wallis* in a Letter, written at *Oxford*, May 12. 1666. to the *Publisher*, as follows:

I should scarce have given you so soon the trouble of another Letter, were it not for an Accident which hapn'd here May 10. I had that afternoon, about 4 of the clock heard it thunder at some distance. About 5 of the clock the Thunder coming nearer to us, it began to rain, and soon after (the rain withal increasing) the Thunder grew very loud, and frequent, and with long ratling Claps (though not altogether so great, as I have some other times heard:) and the Lightning with flashes very bright (notwithstanding the clear day-light) and very frequent, (when at the fastest, scarce a full minute between one flash and another; many times not so much, but a second flash before the Thunder of the former was heard:) The Thunder for the most part began to be heard about 8 or 10 second minutes after the flash; as I observ'd for a great part of the time by my Minute-Watch: but once or twice I observ'd it to follow (in a manner) immediately upon it, as it were in the same moment; and the lightning extream red and fiery. I do not use to be much apprehensive of Thunder and Lightning, but I was at this time (I know not well, why?) very apprehensive, more than ordinary, of mischief to be done by it, for it seem'd to me to be very low and near us (which made me so particular, as to observe the distance of the flash by the noise) and very frequent, and bright, so that, had it been by night as it was by day, it would have been very terrible. And, though I kept within doors, yet I sensibly discover'd a stinking sulphureous smell in the Air. About 7 of the clock it ended, before which time I had news brought me of a Sad Accident upon the water

water at *Medley* about a Mile or somewhat more distant from hence. Two Schollars of *Wadham-Colledge*, being alone in a Boat (without a Water-man) having newly thrust off from shore, at *Medley*, to come homewards, standing near the Head of the Boat, were presently with a stroke of Thunder or Lightning, both struck off out of the Boat into the Water, the one of them stark dead, in whom, though presently taken out of the Water (having been by relation, scarce a minute in it) there was not discerned any appearance of life, sense, or motion: the other was stuck fast in the Mud (with his Feet downwards, and his upper parts above water) like a post not able to help himself out; but, besides a present stonying or numness, had no other hurt; but was for the present so disturb'd in his senses, as that he knew not, how he came there out of the Boat, nor could remember either Thunder or Lightning, that did effect it: and was very feeble and faint upon it; which (though presently put into a warm Bed) he had not thoroughly recover'd by the next Night; and whether since he have or no, I know not.

Others in another Boat, about 10 or 20 yards from these (as by their description I estimate) felt a disturbance and shaking in their Boat, and one of them had his Chair struck from under him, and thrown upon him; but had no hurt. Those immediately made up to the others, and (some leaping into the Water to them) presently drew them either into the Boat or on Shore; yet none of them saw these two fall into the Water (not looking that way) but heard one of them cry out for help presently upon the stroke, and smelt a very strange stinking smell in the Air; which, when I asked him, that told it me, what kind of stink? he said, like such a smell, as is perceived upon the striking of Flints together.

He that was dead (when by putting into a warm Bed, and rubbing, and putting strong waters into his Mouth, &c. no life could be brought into him) was the next morning brought to town; where, among multitudes of others, who came to see, Dr. *Willis*, Dr. *Mellington*, Dr. *Lowwer*, and my self, with some others, went to view the Corps: where we found no wound at all in the skin, the face and neck swart and black, but not more, than might be ordinary, by the settling of the blood: On the right side of the neck was a little blackish spot about an inch long, and

about a quarter of an inch broad at the broadest, and was, as if it had been sear'd with a hot iron; and, as I remember, one somewhat bigger on the left side of the neck, below the Ear. Streight down the breast, but towards the left side of it, was a large place about three quarters of a Foot in length, and about two inches in breadth, in some places more, in some less, which was burnt and hard, like Leather burnt with the fire, of a deep blackish red Colour, not much unlike the scorch'd skin of a roasted Pig: And on the fore-part of the left Shoulder such another spot about as big as a Shilling; but that in the neck was blacker and seem'd more sear'd. From the top of the right shoulder, sloping downwards towards that place in his Breast, was a narrow Line of the like scorched skin; as if somewhat had come in there at the neck, and had run down to the breast, and there spread broader.

The buttons of his *Doublet* were most of them off; which, some thought might have been torn off with the blast, getting in at the neck, and then bursting its way out: for which the greatest presumption was (to me) that, besides 4 or 5 buttons wanting towards the bottom of the Breast, there were about half a dozen together clear off from the bottom of the collar downwards, and I do not remember, that the rest of the buttons did seem to be near worn out, but almost new. The collar of his doublet just over the fore-part of the left shoulder was quit broken asunder, cloth and stiffening, streight downwards, as if cut or chop'd asunder, but with a *Blunt* tool; only the inward linnen or fustian lining of it was whole, by which, and by the view of the ragged Edges, it seem'd manifest to me, that it was by a stroak inward (from without) not outwards from within.

His *Hat* was strangely torn, not just on the Crown, but on the side of the hat, and on the brim. On the side of it was a great hole, more than to put in ones fist through it: some part of it being quite struck away, and from thence divers gashes every way, as if torn, or cut with a *Dull* tool, and some of them of a good length, almost quite to the edges of the brim. And, beside these, one or two gashes more, which did not communicate with that hole in the side. This also I judged by a stroke inwards; not so much from the view of the edges of those gashes (from which there was scarce any judgment to be made either way) but because

cause the lining was not torn, only ript off from the edge of the hat (where it was sow'd on) on that side, where the hole was made. But his hat not being found upon his head, but at some distance from him, it did not appear, against what part of the head that hole was made.

Upon the rest of his Cloaths, I do not know of any further effect, nor did we smell any sulphurous scent about them: which might be, *Partly* because it was now a good while after the time, and *Partly* by reason of their being presently drenched in the water into which he fell.

The night following, the three *Doctors* above mentioned, and my self, with some Chirurgions (besides a multitude of others) were present at the opening of the head, to see if any thing could be there discover'd; but there appear'd no sign of contusion; the brain full and in good order; the nerves whole and sound, the vessels of the brain pretty full of Blood. But nothing was by any of them discern'd to be at all amiss. But it was by candle-light, and they had not time to make very nice Observations of it (the Body being to be buried by and by) and the croud of People was a further hindrance. But if any thing had been considerably out of order to the view, it would surely have been by some of them discover'd. Some of them thought, they discern'd a small fissure or crack in the skull; and some who held it, while it was sawing off, said, they felt it Jarring in their hands, and there seem'd to the eye something like it, but it was so small, as that by candle-light we could not agree it certainly so to be.

Some of the *Hair* on the right Temple was manifestly singed, or burnt; and the lower part of that Ear blacker, than the parts about it, but soft; and it might be only the settling of the Blood. The upper part of the left shoulder, and that side of the neck, were also somewhat blacker than the rest of the Body, but whether it were by the blow, which broke the collar, and scorch'd the round red spot thereupon, or only by settling of the Blood, I cannot say; yet I think, it might very well be, that both on the head, and on this side of the neck, there might be a very great blow, and a contusion upon it (and seems to have been so, by the tearing of the hat, and breaking the collar, if not also cracking of the skull) and yet no sign of such contusion, because dying so immediately, there was not time for the Blood to gather

to the part and stagnate there (which in bruises is the cause of blackness) and it was but as if such a blow had been given on a Body newly dead; which does not use to cause such a symptom of a bruise, after the Blood ceases to circulate.

Having done with the Head, they open'd the *Breast*, and found that burning to reach quite through the skin, which was in those scorch'd places hard and horney, and shrunk up, so as it was not so thick as the soft skin about it: but no appearance of any thing deeper than the skin; the Muscles not at all disorder'd or discolour'd (perhaps, upon the reason, that was but now said of the Head, Neck and Shoulder). Having then taken off the *Sternum*, the Lungs and Heart appear'd all well, and well-colour'd without any disorder.

This is the sum of what was observ'd; only that the whole Body was, by night, very much swell'd, more than in the morning; and smelt very strong and offensively: Which might be by the hotness of the weather, and by the heat of the place occasion'd by the multitude of People.

An Experiment

To examine, what Figure, and Celerity of Motion begetteth, or increaseth Light and Flame.

This was communicated by Dr. *Beale*, as follows;

May 5. 1665. fresh Mackrels were boyl'd in Water, with salt and sweet herbs; and, when the Water was perfectly cold; the next morning, the Mackrels were left in the Water for pickle.

May 6. more fresh Mackrels were boyl'd in like Water; and
May 7. both Water and Mackrels were put into the former Water, together with the former Mackrels. (Which circumstances I do particularize, because, whether, the mixture of the pickle of several ages, and a certain space of time, or whatever else was necessary, and wanting, the trial did not succeed with like effect at other times).

But now on the next *Munday* (*May 8*). evening, the Cook stirring the Water, to take out some of the Mackrels, found the Water at the first motion become very luminous, and the Fish shining through the Water, as adding much to the Light, which the water yielded. The water by the mixture of Salt and Herbs,