II. Account of a singular instance of atmospheric refraction

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II. *Account of a singular Instance of Atmospheric Refraction.*

In a Letter from WILLIAM LATHAM, Esq. F.R.S. and A.S. to the Rev. HENRY WHITFIELD, D.D. F.R.S. and A.S. From the Philosophical Transactions of the Royal Society of London, 1798.

DEAR SIR,

Hastings, August 1, 1797.

ON Wednesday July 26, about five o'clock in the afternoon, while I was sitting in my dining-room at this place, which is situated upon the Parade, close to the sea-shore, nearly fronting the south, my attention was excited by a number of people running down to the sea-side. Upon inquiring the reason, I was informed that the coast of France was plainly to be distinguished by the naked eye. I immediately went down to the shore, and was surprised to find that, even without the assistance of a telescope, I could very plainly see the cliffs on the opposite coast; which, at the nearest part, are between 40 and 50 miles distant, and are not to be discerned, from that low situation, by the aid of the best glasses. They appeared to be only a few miles off, and seemed to extend for some leagues along the coast. I pursued my walk along the shore eastward, close to the water's edge, conversing with the sailors and fishermen upon the subject. They, at first, could not be persuaded of the reality of the appearance; but they soon became so thoroughly convinced, by the cliffs gradually appearing more elevated, and approaching nearer, as it were, that they pointed out and named to me the different places they had been accustomed to visit; such as the Bay, the Old Head or Man, the Windmill, &c. at Boulogne; St. Vallery, and other places on the coast of Picardy; which they afterwards confirmed when they viewed them through their telescopes. Their observations were, that the places appeared as near as if they were sailing, at a small distance, into the harbours.

Having

Having indulged my curiosity upon the shore for near an hour, during which the cliffs appeared to be at some times more bright and near, at others more faint and a greater distance, but never out of sight, I went upon the eastern cliff or hill, which is of a very considerable height, when a most beautiful scene presented itself to my view ; for I could at once see Dengeness*, Dover cliffs, and the French coast, all along from Calais, Boulogne, &c. to St. Vallery ; and, as some of the fishermen affirmed, as far to the westward even as Dieppe. By the telescope, the French fishing-boats were plainly to be seen at anchor ; and the different colours of the land upon the heights, together with the buildings, were perfectly discernible. This curious phenomenon continued in the highest splendour till past 8 o'clock, (although a black cloud totally obscured the face of the sun for some time,) when it gradually vanished.

Now, Sir, as I was assured, from every inquiry I could possibly make, that so remarkable an instance of atmospherical refraction had never been witnessed by the oldest inhabitant of Hastings, nor by any of the numerous visitors (it happened to be the day of the great annual fair, called Rock-fair, which always attracts multitudes from the neighbouring places), I thought an account of it, however trifling, would be gratifying to you.

The day was extremely hot (68° at 10 A. M. 76° at 5 P. M.). I had no barometer with me, but suppose the mercury must have been high, as that and the three preceding days were remarkably fine and clear. To the best of my recollection it was high water at Hastings about two o'clock P. M. Not a breath of wind was stirring the whole

* The cape of land called Dengeness, which extends nearly two miles into the sea, and is about sixteen miles distant from Hastings, in a right line, appeared as if quite close to it ; as did the fishing-boats and other vessels which were sailing between the two places : they were likewise magnified to a great degree. L.

of the day ; but the small pennons at the mast-heads of the fishing-boats in the harbour were in the morning at all points of the compass.

I was a few days afterwards at Winchelsea, and at several places along the coast ; where I was informed the above phenomenon had been equally visible.

III. *Description of the Equus Hemionus or Dshiggetai of the Eastern Deserts of Middle Asia. By Professor PALLAS. From Neue Nordische Beytrage, Vol. II.*

[Concluded from page 121.]

THE covering season of the dshiggetai falls towards the middle or end of August ; and about this period Messerschmidt observed in a female, which he dissected, a fœtus not larger than a mouse. They cast their young in the spring, and generally have one foal at a time. When the young attain to the age of three, they are equal in size to the old ones, and are fit for procreation, as I was assured by the inhabitants of those countries, who often had an opportunity of killing and examining these animals.

The males when they fight bite each other, like the common wild horses. The dshiggetai fights also with its heels, as was observed in a foal which had been caught, and which, a few years before my arrival in Dauria, was kept there by one of the Cossacks ; but it continued alive only a short time. The hair of the dshiggetai in winter is almost of a pale isabella yellow colour, about an inch and a half long ; a little rough on the back, as was the case in the foal of a wild horse, which I have already described*, and equally soft and tender. Skins covered with winter hair of this kind I have found among the Tungusians. The female, however, which I procured in Dauria, at the end of the month

* See *Pallas Reise*, vol. iii. p. 509, Plate VIII.