

work, I wrote as follows in NATURE for February 17, 1870:—"Analogy is certainly far more appropriate to express what is merely a parallelism, and not a necessary or complementary relationship between light and sound." In the subsequent letter on this subject you adopted the word "analogy;" pardon, therefore, my pointing out an obviously accidental "reversion to the primitive type" which appeared in your paper Sept. 12.

Sept. 16

W. F. BARRETT

The Fringes on the Lighter Side of the Rainbow

At the place referred to by Mr. Thompson in NATURE (No. 150, p. 393) I merely followed Sir John Herschel; expressing myself, it is true, not very accurately, in my anxiety to save space in NATURE at the end of a letter already too long. If Mr. Thompson refers to Sir John's "Meteorology," sections 219 to 224, and still thinks the point requires fuller elucidation, he may possibly supply the deficiency by devising an experiment to prove that the width of the fringes does not vary inversely as the diameter of the drops.

In answer to Mr. Thompson's concluding question, perhaps somebody else will furnish the latest intelligence. I do not know what has happened in the last five years, and I do not know what you call violet; but I believe that in 1867 the extreme rate of vibration for visible rays was about 801 million millions a second.

C. J. MONRO

A Curious Phenomenon

A VERY curious phenomenon was witnessed here on Wednesday afternoon last, September 4, about three o'clock, in a westerly direction. A somewhat heavy thunderstorm, originating towards the south, had divided its fury before reaching this immediate neighbourhood, one branch passing N.E. towards the Pennine Hills, the other taking the N.W. course, that to the N.E., however, being more violent. As the storm was passing, a stream—apparently of water, and fully six inches in breadth—shot with considerable speed from the vicinity of a dark, fiery cumulus across a rain cloud of a very deep blue, murky tinge. Its passage, as witnessed by my boy from its commencement, was similar to that of a rocket, at first assuming a quivering motion, then darting suddenly forward, for some distance horizontally, afterwards obliquely. Its apparent length would be fully twenty yards, being of a very light slate colour. After I saw it the phenomenon remained about two minutes; but its total duration would be not less than five, vanishing gradually during its whole length.

Whatever the phenomenon itself—or its cause, its upward course was certainly very striking, and to me unprecedented—the impression on some people's minds being that it was water drawn up from Lake Ullswater into the clouds by the lightning!! A terrific storm of thunder and lightning occurred on the previous evening at 9 P.M., when several fatal accidents were reported.

T. F.

Blencowe School, Cumberland, Sept. 7

APPEAL FOR SKELETONS OF WILD SPECIMENS OF THE LARGER CARNIVORA FOR OUR MUSEUMS

NEITHER in the Museum of the Royal College of Surgeons nor in that of the University of Oxford is there a skeleton of a wild lion or a wild tiger, and it is probable that there is no such skeleton existing in England. The preparations in our Museums, illustrating the anatomy of the larger carnivora, are almost without exception derived from menagerie specimens.

Lions breed well in confinement, and hence an ordinary menagerie specimen may not only itself have been during its whole life confined in a cage, but its ancestors may have suffered a like fate. At all events it has been trapped whilst still young, and reared in confinement, as is usually the case with the menagerie tiger. Now an animal confined in a narrow space from its youth upwards never has free play for its muscles, and as its food is provided for it, is never called upon to exert them in a violent manner. The result is that the bony framework on which

the muscles act never attains in such specimens its full development, and the ridges and inequalities on the bones corresponding to the origin and insertion of the muscles are not well marked. Moreover, menagerie animals, as is well known, very frequently suffer from diseases of the bones, and the marks of these diseases may be seen on many of the skeletons in every anatomical museum. Now, it is of great importance to possess perfect skeletons of adult wild large carnivora, both for general study, and more especially for comparison with the remains of similar carnivora which are to be found in the more modern geological deposits in Great Britain. Considering the number of tigers and lions which are annually killed by English sportsmen, it is surprising that this desideratum has not yet been supplied. The reason probably is that sportsmen generally do not know that it exists, or do not understand how a skeleton should be prepared. The sportsman is usually content with preserving the skin of his tiger or lion; but no doubt there are many who would gladly aid the cause of science by preserving the skeleton as well, if they knew how much the result of their labours would be valued at home. I propose here to give a few simple directions for the rough preparation of skeletons for transmission to England, merely premising that I trust that if any sportsman may be induced by reading these notes to send home a skeleton, that he will send it to the Oxford Museum, in which I am especially interested, and I hope some old University man may help us in this matter. Any packages should be addressed to Prof. Rolleston, Museum, Oxford. Skeletons of other wild animals are, of course, of great value, and will be most gladly received; they also are too frequently only to be got from menageries.

Directions for Preparing Skeletons.—The skin having been removed from the animal, the abdomen should be slit open, and all the viscera extracted. The limbs should then be severed from the body, the scapula or blade bone being left attached to the fore limb, the hind limb being removed at the thigh joints, and care being taken that the articular surfaces are not injured in the process. The flesh should now be removed roughly from each of the limbs with knives; the several bones which go to form each limb should if possible be allowed to remain attached to one another. On no account should the small bones of the hind or fore foot be separated from their attachments. Mr. Flower, indeed, advises that the skin be not removed from the feet at all. The limbs being thus roughly cleaned, they should be placed in water for several hours to allow the blood to soak out, and they should then be placed in the sun till dry. The head should be disjoined from the neck, and the flesh cut off it. It is most convenient to commence with the strong muscles of the jaw. After these have been cut through, the ligaments which hold the lower jaw in place may be divided, and it may be separated from the skull. The tongue may now be removed, and search must be made in its base for several small bones constituting the hyoid apparatus, which should be carefully taken out, and tied at once to the lower jaw for fear of loss. A considerable quantity of the brain may be removed by means of a spoon-shaped stick through the aperture at the back of the skull where it joins the neck. The rest may be removed by means of large shot put in at the hole, and shaken up with water. The neck may be cut off close to the trunk, and the tail close to the rump, and the flesh removed with the knife. The chest cavity should be left entire, the flesh being removed as well as circumstances will permit. The whole of the pieces should be treated with water, and then dried, as in the case of the limbs. The skull, limbs, tail, and neck may be conveniently placed inside the chest cavity for packing, and if it be necessary to get the skeleton into a short packing case the back bone may be divided behind the chest cavity, and the hinder vertebræ and hip bones laid along side of