

than in Europe, but the diurnal range much greater; the maximum mean temperature occurring in April and May, and gradually declining until December and January; and the observed mean temperature of places on the continent of India being much higher than the calculated mean temperature according to Meyer's formula. 8. The mean annual dew-point being higher at half-past nine o'clock than either at sunrise or at four in the afternoon; the dew-point being highest during the monsoons, and lowest during the cold months, and varying considerably within very short distances; being, for example, remarkably contrasted in Bombay and Dukhun; and the frequent occurrence of dew quite locally and under anomalous circumstances. 9. The amount of rain in Dukhun being only 20 per cent. of that falling in Bombay, 90 or 100 miles to the westward. 10. The wind being principally from the west and east, and rarely from the opposite quarters. 11. The great abundance of electricity under certain circumstances. 12. The rare occurrence of fogs. 13. The great amount of solar radiation; and lastly, the singular opacity of the atmosphere during hot weather, giving rise occasionally to the mirage. A variety of tables containing the records of meteorological observations, with instruments, accompany the paper.

10. "On the Ova of the *Ornithorhynchus paradoxus*." By Richard Owen, Esq. Communicated by W. Clift, Esq., F.R.S.

The author, in this paper, has prosecuted more immediately and more minutely than in his former communication, the inquiry into the structure of the ovary of the *Ornithorhynchus*, with a view to determine its exact relations with that of the normal Mammalia, and of the oviparous Vertebrata. He has obtained from this investigation the full confirmation of the truth of the opinion he had previously formed, that lactation might coexist with a mode of generation essentially similar to that of the Viper and Salamander; and this fact has been further established by the subsequent examination which he has made of the uterine fœtus of the Kangaroo.

The author traces the regular gradation which obtains in different orders of Mammalia in which true viviparous or placental generation takes place, towards the ovo-viviparous or oviparous modes, in which the exterior covering of the ovum never becomes vascular, and shows that the *Ornithorhynchus* constitutes a connecting link in this chain.

Drawings illustrative of the anatomical descriptions of the parts examined by the author accompany the paper.

11. "Observations with the Horizontal and Dipping Needles, made during a Voyage from England to New South Wales." By James Dunlop, Esq. Communicated by Capt. Beaufort, R.N., F.R.S.

This paper contains a very numerous and uninterrupted series of magnetical observations, made in the circumstances stated in the title, and extending about 180 degrees in longitude and 100 degrees in latitude. The apparatus, of which a detailed description is given, was suspended from the roof of the cabin, and no alteration was made in its suspension from the beginning to the end of the voyage.