outer frontal process formed the alæ nasi. In respect of the two intermaxillary bones on each side, the presence of which the speaker assumed along with Prof. Albrecht, Dr Biondi deviated from the latter in so far as that he had found, not an outer and inner intermaxillary bone on each side, but an anterior and posterior. The incisor teeth, as also the supernumerary teeth, developed themselves only in the intermaxillary bone. Dr. Biondi illustrated his address by preparations, drawings, and photographs he produced.—Dr. Pohl-Pincus next gave a supplement to his address on the polarisation colours of the hair of the human head, adducing the reasons which determined him to lay down three types of colouring: the normal, the pathologic, and an intermediate type. It was nevertheless to be understood that a whole series of transitionary hues intervened between the two extremes. He further stated that, in accordance with his experience, hair pathologically changed in its double refraction in consequence of stimulation from inflammation or from psychical excitement was long in returning to its normal condition. The speaker next described two experiments on a frog's heart. When he removed from a frog the anterior part of the cerebrum, under avoidance of heavy bleedings, then set free the heart, and stimulated one or several sensory nerves of the body, he then observed that the systole of the heart was unchanged. During the diastole, however, there appeared on the surface a chess-board-like drawing, and the diastole itself was interrupted in the middle by an intermission. By stimulation of the vagus he was able to overcome this effect of the irritated sensory nerves. The second observation he communicated respected the local diastole which a considerable time previously had been noticed by others as well as by himself. The occurrence of this diastole under local mechanical stimulation of the frog's heart was always a very uncertain one. Dr. Pohl-Pincus had now quite recently found that the local dilatation took place only when the stimulation was given during the second half of the systole. At the beginning of the systole, on the other hand, the stimulation had no effect whatever, and during the diastole it even gave rise to local systole. The effects of the local mechanical stimulation lasted some time, and, besides the local contraction or relaxation, manifested itself in a heightening of the diastolic or systolic state on each occasion at the stimulated spot.

Physical Society, April 2.—Prof. du Bois Reymond spoke on the irreciprocal conduction of electricity found by him in the electrical organ of fishes, and discussed the teleological significance of this property for the capability of fishes to discharge strong electrical currents outwardly (NATURE, vol. xxxiii. p. 407).—Following up the address at the last sitting by Dr. Baur, Dr. Pernet spoke on some other more recent thermostats, in particular on those which effected the regulation by means of vapour pressure. In the closed short leg of a manometer was a small quantity of a fluid readily susceptible of evaporation; above it was placed quicksilver, which also filled the long leg of the manometer. The short leg of the manometer with the fluid referred to lay in the bath, the temperature of which should be kept constant. Did the temperature rise above the desired degree, then the quicksilver of the manometer also mounted in consequence of the pressure of the vapour, and the flow of the gas to the flame got thereby in part shut off. The temperature than sank, the vapour condensed, and the quicksilver in the manometer fell. To render the apparatus available at every over-pressure, the manometer was cut through and connected by a movable piece of tube. As the material best adapted for these flexible connections, the speaker recommended thin steel tube, which was coated over with lead, thereby rendering it easily pliable and not liable to any elastic after-effect. The regulation by means of the long manometer tube was accomplished in an electrical way by an electro-magnet. The details of the arrangement of the thermostats in question were illustrated in part by models, in part by drawings. As fluid for very low temperatures, a mixture of two hydrochloric ethers was used; for higher temperatures, a mixture of ether and alcohol; for temperatures above 100° C., water; and for still higher degrees of temperature, other fluids. With respect to the efficacy of these thermostats, the speaker adduced that he was able to keep a water-bath for a considerable length of time constant to within 0°·02 C.—Dr. König laid before the Society a photometer sent to him from Messrs. Yeates and Son, of Dublin, which apparently far surpassed the Bunsen photometer. It consisted of two quadratic prisms of cast paraffin connected with each other on a longitudinal side. Between these two prisms was placed a silver leaf or a tinfoil leaf. When light from one source fell on the one prism, then it appeared clear white on account of the diffused reflexions. The light was able to penetrate to the other only through the metal sheet. The other prism therefore appeared dark. If a second light was placed on the other side, then the other prism appeared likewise bright. By displacement on a scale the photometer could be brought into the position in which both sides appeared equally bright. The distance from each other of the two sources of light gave in that case the relation to each other of the intensities. The speaker proposed some arrangements which would render this photometer available for coloured light as well. Similar proposals for this purpose had already been made by Dr. Jolly.—Dr. König further made some supplementary communications on the case recently discussed by him of anomalous colour-seeing arising from alcoholism. After determining that the occurrence of a neutral point in the spectrum was a perfectly certain proof that the eyes in question perceived only two fundamental colours, he investigated the extension of the colour curves by the employing of mixed colours, and thereby obtained important results, which he promised to communicate to the Society in a complete form in May or June next.

BOOKS AND PAMPHLETS RECEIVED

"Hand-book of Plant Dissection," by Arthur, Barnes and Coulter (Holt, New York).—"Manual of Physical Geography of Australia," by H. B. de la Poer Wall (Robertson, Melbourne).—"Journal of the Chemical Society," May (Van Voorst).—"Papers and Proceedings of the Royal Society of Tasmania for 1885" (Tasmania).—"Journal of the Royal Agricultural Society of England," April (Murray).—"Proceedings of the Bath Natural History and Antiquarian Field Club," No. 1, vol. vi. (Davies, Bath).—"The Topographic Features of Lake Shores," by G. K. Gilbert (Washington).—"Oils and Varnishes," by J. Cameron (Churchill).—"Year-Book of Scientific and Learned Societies, 1886" (Griffin).—"Notes on Analytical Chemistry," 2nd edition (Churchill).—"Mountain Ascents," by J. Barrow (Low).—"Dogs in Disease," 2nd edition, by Ashmont (Low).—"Bulletin de la Société Impériale des Naturalistes de Moscou," Nos. 1 and 2 (Moscou).—"British Petrography," part 4, by J. J. H. Teall (Watson, Birmingham).—"Missionary Work among the Ojibway Indians," by Rev. E. F. Wilson (S.P.C.K.).—"Our Island Continent," by Dr. J. E. Taylor (S.P.C.K.).—"A Manual of the Diseases of the Elephant," by J. H. Steel (Moore Madras).—"A Treatise on Elementary Statics," by J. Greaves (Macmillan).

CONTENTS

© 1886 Nature Publishing Group