

Apart from the curious circumstance of desiccation in an insect leading to a femoral hernia which perforates to give rise to a surgical emphysema, these observations present two points of interest: first, that in the desiccated condition the larvæ are apparently hygroscopic and can absorb water vapour from a moist atmosphere (though the possibility of their taking up minute droplets of fluid condensed on the proboscis has not been entirely excluded); and secondly, that small foreign bodies, such as the blood corpuscles of vertebrates, can circulate in the blood stream, apparently indefinitely, without being removed by phagocytosis or otherwise.

I am indebted to Dr. H. B. Newham for taking the photographs of living *Cimeæ*.

V. B. WIGGLESWORTH.

London School of Hygiene and  
Tropical Medicine, Jan. 22.

#### Conjunctival Halos.

THE letter on this subject from Mr. Sidney Melmore, in NATURE of Jan. 3, leads me to describe an experience of my own which may be of some little interest. Recently I was accidentally struck in the right eye with a dog-whip, and I was conscious of a faint mistiness in front of that eye. But I was surprised to find on looking at an electric light, on the same evening, that it was surrounded by a set of diffraction halos, two orders being visible. Unlike the case described in Mr. Melmore's letter, the space round the electric light was white and only the red ring of the first order halo was visible, whereas all the colours of the second order could be seen. A very approximate measurement of the first red ring gave its angular diameter as  $7^\circ$ , in fair agreement with the value quoted in Mr. Melmore's letter. An examination of the eye in a mirror showed that it was bloodshot, but revealed no trace of any abnormality in the part of the cornea immediately in front of the pupil. The intensity of the halos decreased with time, and they disappeared completely after five days. It would be interesting to know the nature of the small particles responsible for the halos, and how they were produced by the blow.

A. W. BARTON.

Repton School, Derby.

THE probable explanation in Mr. A. W. Barton's case is a transient oedema of the corneal epithelium, produced by the blow. The basal corneal epithelial cells average about  $10\mu$  in breadth by  $18\mu$  in height, and the other epithelial cells are somewhat smaller. These elements appear to be of about the right order in size.

J. HERBERT PARSONS.

54 Queen Anne Street,  
Cavendish Square, W.

#### Embryology and Evolution.

IN the issue of NATURE for Feb. 7, p. 200, Mr. Malcolm E. MacGregor revives a form of vitalism that has lain dormant for a number of years; and well might it have been permitted to do so for as many more. It is surely well recognised that science is only a conceptual scheme which presumably bears some relation to the percepts that it attempts to correlate. What lies outside that scheme may indeed be of the greatest importance, but it is not science. Mr. MacGregor adduces no evidence that the force primarily operating the living cell is an external one. His wishes would be equally fulfilled by some form of hylozoism, but then it would be very difficult to acclaim the view as likely to be a guiding star for biological advance. If one wishes to hold such vitalistic theories as being true, one cannot remain immune from scientific attack

except by rigid adherence to some form of dualism, such as that of the great Nicholas of Cusa. Thus, if it be contended, as he did, that there is an external form of experience subject to natural law but separate from an inner form that has no relation to such law and is beyond reason, then no scientific criticism is possible.

The sterility of vitalistic hypotheses in the past leads one to doubt their fertility in the future; and the deification of entelechy does not carry us far.

A. PINEY.

Woodham Mortimer Hall,  
Maldon, Essex, Feb. 6.

#### The Photo-Reaction of Hydrogen and Iodine Monochloride.

WE are able to confirm the observations of D. P. Mellor and T. Iredale<sup>1</sup> on the photo-reaction between iodine monochloride and hydrogen, as against the photo inactivity of the mixture reported by Rollefson and Lindquist.<sup>2</sup> A rapid photo-reaction between these substances when not specially purified had been observed by us before the appearance of Rollefson and Lindquist's paper; the reaction, however, is much influenced by traces of impurities, for when special pains are taken to avoid contamination by organic materials, stopcock grease and the like, the rate of reaction under the influence of light is much decreased. There remains, however, an easily measurable reaction under the influence of the light of a mercury arc. The main products are hydrogen chloride (HCl) and iodine (I<sub>2</sub>); no appreciable amount of hydrogen iodide has been found. The photo-reaction between iodine chloride and methane has also been established in this laboratory; the rate here is great compared with that of the hydrogen reaction. Both reactions are being investigated in detail.

S. E. ASHLEY.

WILLIAM WEST.

Washington Square College,  
New York University,  
New York, Feb. 2.

<sup>1</sup> NATURE, 127, p. 93, Jan. 17, 1931.

<sup>2</sup> Jour. Amer. Chem. Soc., 52, 2793; 1930.

#### Growth Factors.

IN a recent communication (*Proc. Physiol. Soc.*, October 1930) Thompson demonstrated that by certain methods of extraction a growth inhibiting substance could be obtained from fresh parathyroid glands. Further work in this laboratory has shown that a similar substance can be extracted from the flesh of vertebrates. Purification of such extracts shows that the substance responsible is thermo-stable, is not a sterol, and is probably nitrogenous.

W. J. BOYD.

J. LATTER.

W. ROBSON.

Departments of Physiology and Botany,  
King's College, University of London,  
Feb. 23.

#### Transmission of *Leishmania donovani*.

WE have received the following telegram from New Delhi, dated Feb. 19:

"Lieut.-Col. Shortt reports successful transmission of *Leishmania donovani* to Chinese hamster by bites of artificially infected *Phlebotomus argentipes*. Hamster bitten repeatedly during twelve months; generalised infection found seventeen months after experiment began.—Scientific India."

We understand that the telegraphic address "Scientific India" refers to the Scientific Advisory Board of the Indian Research Fund Association.