

across the North Sea and that their terminal moraines form the "cliffs" of Cromer and the neighbourhood. I paid two visits to Norway and in the course of the first I dredged extensively at the mouth of the Hardanger fiord and climbed to the crest of the Folgefond snowdrift 5000 ft. above the sea. The distance from Stavanger to Hull is about 400 miles and the origin of the Scandinavian ice-flow was close to the coast where the highest ground is found. But the case I put for Antarctica only included the part of it opposite South America which was explored by the Grahamstown expedition, and the highest points from which that flow originated were only 200 miles from the coast. But as the diameter of Antarctica is 1,500 miles—their distance from the opposite coast must be at least 1,200 miles! Further, since Antarctica is 7,000,000 square miles in area and the whole of it is covered by one gigantic ice-sheet, it is safe to say that there is no evidence that any Pleistocene ice-sheet attained anything like these dimensions.

The second point which Mr. Reid Moir raises is the presumed age of Neanderthal (*alias* Mousterian) man. I placed him in the Reiss-Würm interglacial interval. I did so because there are no undoubted human remains from any earlier horizon. The terms Chellean and Acheulean are based not on remains but on stone tools, and I am heretic enough to doubt whether the differences between these tool-types represent anything more than slight changes in the same culture. If we had corresponding remains I

have no doubt that Chellean bones would be essentially similar to the Neanderthal type. But if the Chellean tools can really be placed in the Mindel-Reiss interglacial interval, I am most ready to stand corrected. That the first appearance of man belonged to a somewhat earlier horizon in the glacial epoch than I had imagined would make no difference to my argument.

E. W. MACBRIDE.

West Bank,  
Alton, Hants.

#### *Pelagohydra mirabilis* Dendy in New Zealand

DENDY<sup>1</sup> found a single specimen of *Pelagohydra mirabilis* late in 1901 on the beach at Sumner, near Christchurch. The description gives no location of the material after it was finally deposited, but apparently the work was carried out at Owens College, Manchester.

A further specimen came into my hands, collected by one of my students, on April 11, 1929, and is now in the Canterbury Museum, Christchurch. It was found on Sumner Beach in very similar circumstances to those described by Dendy.

E. PERCIVAL.

Canterbury University College,  
Christchurch, N.Z.  
April 11.

<sup>1</sup> Dendy, A., "On a Free-Swimming Hydroid", *Q.J.M.S.*, 48 (1903).

### Points from Foregoing Letters

By applying Born's theory of collisions, and also by an independent method, Dr. E. J. Williams estimates that the energy lost by fast-moving particles in nuclear collisions when traversing matter, is the same as it would be if the nuclear particles were free and isolated.

Experiments by J. L. Michiels with slow neutrons show that they are anomalously absorbed in boron and iodine filters, and that the activity produced in the detector depends on the order in which the filters are placed. The results seem to indicate either a slowing down of the higher energy neutrons by the boron into the iodine resonance region, or an increase in the energy of some of the neutrons on passage through iodine.

Photometric curves of the X-ray spectra of aluminium at different temperatures (110°, 300° and 680° K.) are submitted by Dr. H. W. B. Skinner, showing changes in the breadth of the edge of the  $L_{23}$  band at 171 Å. The change between the lower temperatures can be explained by the heat effect upon the conduction-electrons, but the broadening at the higher temperature seems to imply a distortion of the lattice near the melting point.

Dr. D. H. Menzel points out an alternative interpretation of T. L. Page's conclusions in connexion with nebular and laboratory spectra of hydrogen, which does not invalidate Kramers' absorption law.

R. F. Barrow reports the observation and vibrational analysis of the ultra-violet band system of SiSe corresponding to that of SiS recently described by him and Dr. W. Jevons.

Further steps in the elucidation of the chemical

structure of basseol, a triterpene alcohol, are reported by J. H. Beynon, Prof. I. M. Heilbron and Dr. F. S. Spring, who submit two possible formulae.

The reaction by which 2:8-diamino-acridine is produced from *meta*-phenylene-diamine in a single operation has been investigated by Dr. Adrien Albert and Miss Dorothy Large and found to be of general application. The course of the reaction is indicated.

The physiological action of desoxycorticosterone (the artificially prepared hormone of the adrenal cortex) upon rats whose adrenal glands had been removed, can be prolonged by using the esterified hormone. The longest effect has been obtained by Dr. K. Miescher, Dr. W. H. Fischer and E. Tschopp by subcutaneous injection of the palmitic acid ester dissolved in sesame oil.

Analysing data from various sources, Dr. G. Pontecorvo finds that in the females of five out of six breeds of cattle, the difference in size and proportion of fore-limbs relatively to the trunk in the various breeds (during post-natal development) are caused chiefly by the absolute values of limbs and trunk at the moment when the growth changes from positive to negative 'allometry', and this occurs either before, or at, birth. The genetical differentiation between breeds, he suggests, may be due to genes acting upon the foetal rather than the post-natal development.

J. L. Mohr points out that the parasitic zellerielles in frogs are more widely distributed than usually supposed, and that their sporadic geographical occurrence may be explained by the hypothesis that the zellerielles have been derived from the cosmopolitan proto-opalines at various times and places.