

deposits. He maintained also that the evidence is equally clear in regard to the implements found within the caverns, which he said must have been introduced before the glacial deposits blocked up and covered over the caverns. The question as to the direction from which pre-glacial man reached this country is an exceedingly interesting one, and seems now to be fairly open to discussion. It is admittedly fraught with difficulties, but the facts recently obtained seem to require that an attempt should be made. The evidence, so far as it goes, points to a migration to this country from some northern source, as the human relics found in the caverns, and also in the older river gravels (which Prof. Prestwich is now disposed to assign also to the early part of the Glacial epoch, when the ice-sheet was advancing), occur in association with the remains of animals of northern origin, such as the mammoth, rhinoceros, and reindeer. Up to the present no human relics have been found in this country (and it is very doubtful whether they have been found in any other part of Europe) in deposits older than those containing the remains of these northern animals. If man arrived in this country from some eastern area, it is but natural to think that he would have arrived when the genial Pliocene climate tempted numerous species of deer of southern origin, and other animals suitable as food for man, to roam about in the south-east of England. Hitherto, however, not a relic has been found to show that man had arrived in this country at that time. But in the immediately succeeding period, with the advent of cold conditions and of the northern animals, evidences of the presence of man become abundant. Whether man at an earlier period migrated northward from some tropical or sub-tropical area, and that he then lived on fruit and such-like food, there is no evidence at present to show; but it seems certain that the man of the Glacial period in this country had to live mainly on animal food, and that he found the reindeer to be the most suitable to supply his wants. He followed the reindeer in their compulsory migrations during the gradually increasing glacial conditions, and kept mainly with them near the edge of the advancing ice.

Observations on Recent Explorations made by General Pitt-Rivers at Rushmore, by J. G. Garson.—Dr. Garson began his paper by defining the early British races; he then proceeded to describe the discoveries of General Pitt-Rivers at Rushmore, near Salisbury, where he has found the remains of no less than four British villages of the Roman period, besides many tumuli and cists. The human remains are extremely interesting, and throw much light on the characters of the people to whom they belonged. The chief point of interest which they show is the small stature of the people, the average of the males being 5 feet 4 inches, and of the females 4 feet 11 8 inches, in the village of Woodcuts; while in that of Rotherly, the other village excavated this year, the heights are 5 feet 1 inch and 4 feet 10 inches respectively. The skulls are of a long, narrow, oval form, with one or two exceptions, when they are of rounder form; these were found associated with longer limb bones, showing them to be of different race from the majority of the inhabitants. Two forms of skull are frequently met with in long barrows, both of a long narrow shape, but differing from each other in one having a regular oval outline, while the other broadens out from a narrow forehead, and, having attained its greatest width, terminates rapidly behind. The skulls found in these villages correspond exactly to the first type. It is therefore probable that there were two distinct races of the long-headed people which will have to be distinguished in future.

SOCIETIES AND ACADEMIES.

PARIS.

Academy of Sciences, October 10.—M. Hervé Mangon in the chair.—On the theory of outflow between narrow walls at a low or a high level, by M. J. Boussinesq. The problem here discussed deals with the discharge of water into a basin, which is subjected from below to a constant pressure either less or greater than that exercised by the atmosphere from above.—On the grading of tubes intended for gasometric measurements, by M. Berthelot. The author here studies some of the difficult problems presented by the different forms of graduation in tubes employed for the measurement of gaseous volumes.—On the mechanical labour expended by the gull in its horizontal flight, by M. Marey.—On M. G. A. Zanon's memoir entitled "La Cinetica combattuta e vinta da G. A. Hirn," by M. H. Faye. M. Zanon, Professor of Naval Construction at Venice, here intervenes on the side of M. Hirn in the controversy between that physicist and M. Clausius on the subject of the modern theory of kinetics.

—Remarks accompanying the presentation of M. Rouvier's seventeen charts of the Congo region, by M. Bouquet de la Grye. These charts, prepared with the co-operation of Capt. Pleigneur, of the French Marines, comprise a general map of the French possessions in the Congo basin, and special maps of the lower course of the main stream and of its affluents on the right bank. They embody the results of the first exact surveys made in this extensive region over which the French protectorate has recently been extended.—Observations of Palisa's new planet, No. 269, made at the Observatory of Algiers with the 0.50 m. telescope, by MM. Rambaud and Sy. The observations include the positions of the comparison-stars and the apparent positions of the planet on September 23 and 24.—Apparent positions of Olbers's comet (Brooks's, August 24, 1887), measured with the 8-inch equatorial at the Observatory of Besançon, by M. Gruy. The observations cover the period from September 14 to October 1.—A new solar eruption, by M. E. L. Trouvelot. A description is given of a protuberance of unusual size and brilliancy observed by the author on June 24, 1887, at 267° on the western edge of the solar disk.—Action of carbonic acid on some alkalies, by M. A. Ditte. It is shown that under pressure carbonic acid and aniline unite at equal equivalents, yielding a crystallized carbonate below + 8° C., liquid, or at least in permanent superfusion, at 10° C. This carbonate, soluble in the aniline, does not dissolve the carbonic acid, but dissociates when the pressure is lowered.—On a new source of capric acid, by MM. A. and P. Buisine.—The tactile rays of *Bathypterois*, Günther, by M. Léon Vaillant. The specialized organs of touch resulting in certain fishes from a modification of the pectoral and ventral fins, are shown to acquire quite an unusual degree of perfection in the *Bathypterois* captured during the *Talisman* Expedition, from depths of 400 to 1000 fathoms.

BOOKS, PAMPHLETS, and SERIALS RECEIVED.

The Sailor's Sky Interpreter: S. R. Elson (Thacker).—Class-Book of Algebra Examples, part 2: John Cook (Madras).—Dix Années dans L'Histoire d'une Théorie: J. H. Van 't Hoff (Bazendijk, Rotterdam).—Report of the Voyage of H.M.S. *Challenger*: Zoology, vol. xxii. (Eyre and Spottiswoode).—Other Suns than Ours: R. A. Proctor (Allen).—Madras Journal of Literature and Science.—Journal and Proceedings of the Royal Society of New South Wales, vol. xxi. (Trübner).—Transactions of the Edinburgh Geological Society, vol. v. part 3 (MacLachlan and Stewart).—Boletín de la Academia Nacional de Ciencias en Cordoba (Buenos Aires).

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