

Calendar of Geographical Exploration

May 18 (or 20), 1499.—Amerigo Vespucci

Alonso de Ojeda sailed from Cadiz, with Amerigo Vespucci on board one of his vessels. Vespucci was a contractor for ship's provisions, and did not, apparently, go to sea until he was more than forty years of age. He claimed to have made four voyages to the New World, in 1497, 1499, 1501, and 1503. The first and third voyages are rejected by many, but not all, students. However this may be, there is no doubt that Vespucci went with Ojeda on his voyage, though the two men were not on the same boat, Ojeda reaching the coast of America near Surinam and proceeding to Maracaibo, while Vespucci reached it in 5° S., roughly. In his third voyage, Vespucci claims to have sailed along the east coast of South America from 5° to 50° S., a voyage which, if genuine, gives him a high place in exploration. According to Vespucci's own statement, he had on his first voyage reached the mainland on June 16, 1497, namely, 8 days before John Cabot. The name America appears to have resulted from a copy of Vespucci's letter about this voyage reaching the professor of cosmography at St. Dié University (Lorraine), who suggested in his "Cosmographia Introductio" (1507) that the newly discovered land should be called "America, because Americus discovered it".

May 19, 1845.—Sir John Franklin

Sir John Franklin left England for Cape Walker, whence he hoped to reach Bering Strait. He wintered on Beechey Island, and next summer proceeded southward down Peel Sound, spending the second winter in 70° 5' N., 98° 23' W., on the pack ice, where the ships were held fast all through the summer of 1847. Franklin died on June 11, 1847: the party deserted the ships in April 1848, and tried to penetrate south by land, but all perished. The numerous parties organised to try to obtain information about Franklin's fate resulted in great additions to geographical knowledge of the American arctic. News of Franklin's fate was first obtained from Eskimo in 1851; and in 1859, Hobson, a member of M'Clintock's expedition, found a sheet of paper on King William Island recording briefly what had happened up to the attempt to escape overland. Franklin's first arctic voyage was undertaken in 1818, when he was in charge of one of the vessels in Buchan's expedition. In 1819 he was leader of an expedition which resulted in the charting of much of the unknown coast-line of North America and occupied three years. This and a further journey in 1826 added 1200 miles of coast-line to the map of arctic America. From 1836 until 1843 he was lieutenant-governor of Tasmania (van Diemen's Land). Renewed interest in the polar regions at the time of his return to England led to his last and tragic journey.

Societies and Academies

LONDON

Royal Society, May 5.—A. V. Hill: A closer analysis of the heat production of nerve. The heat production of nerve is believed to occur in two phases, 'initial' and 'recovery': the former is presumably an accompaniment of the physical and chemical changes which take place during the propagation of the impulse; the latter, of the processes by which those changes are reversed and the nerve restored to its initial state. It is not easy to separate the one from the other. The possibility that the initial heat is due to phosphagen

breakdown or lactic acid formation is discussed: the quantities available are sufficient.—H. E. Roaf: The influence of coloured surrounds and coloured backgrounds on visual thresholds. Exposure of the retina to light raises the differential threshold. For the fovea, the chief influence in raising the threshold is the simultaneous exposure to light, and for the parts of the retina outside the fovea there is considerable spread of effect from one part of the retina to another. The influence of wave-length on the results is very striking with foveal vision, as 'red' light raises the threshold for all parts of the spectrum, but 'green' and 'blue' lights have a negligible effect on the long wave-length end of the spectrum.—N. Gavrilescu, A. P. Meiklejohn, R. Passmore, and R. A. Peters: Carbohydrate metabolism in birds. The site of the biochemical lesion in avian polyneuritis. Oxygen uptakes of normal and avitaminous brains have been measured. The results suggest that vitamin B₁ deficiency is connected essentially with the intermediary metabolism of carbohydrate.

Geological Society, March 23.—William S. Boulton: The rocks between the Carboniferous and Trias in the Birmingham district. The succession at Windsor Street Gas Works in east Birmingham is continuous to a depth of more than 1000 feet, and includes the Bunter (with a basal breccia), the Nechells breccia, and part of the calcareous conglomerate group. The content of the breccias and conglomerates was described, and a graph was given showing the percentage distribution of rock types at different depths. The heavy mineral residues of the associated sandstones have also been determined. The Barr Beacon beds underlying the Bunter Pebble beds, mapped by the Geological Survey as Hopwas breccia, are of Bunter age, and with them were correlated the breccias at Tower Hill, near Hamstead, and also the more extensive beds of sand-rock at the base of the Bunter of Cannock Chase. The breccias of Hopwas, Sutton Park, Warley, Northfield, and the Lickey, though discontinuous deposits, are of the same general age, and have all been derived from highlands to the immediate east and south, the outcrops of which mainly consisted of Uriconian felsite- and andesite-tuffs and lavas, and basalts. Extensive and prolonged erosion accompanied and followed the Hercynian earth-movements in the area.

LEEDS

Philosophical and Literary Society, March 1.—E. C. Stoner: The correlation of the gyromagnetic ratio and the magnetic moment of paramagnetic salts. The observed magnetic moments and gyromagnetic ratios are compatible with each other, and may be accounted for by considering the interaction between the spin and orbital moments of one ion and the interaction of the ion with its surroundings.—G. W. Brindley: On the refraction of X-rays by perfect crystals. If the *atomformfaktor* f is incorporated in Ewald's treatment of the reflection of X-rays by perfect crystals in the way suggested by Darwin's earlier treatment of the subject, then the refractive indices of calcite for X-rays calculated from the observed widths of reflections are in good agreement with values obtained in other ways. The agreement is not good if the *atomformfaktor* is omitted.—E. C. Pollard: Nature of the potential barrier of the nitrogen nucleus. Experiments have been carried out on the variation of the yield of protons produced by fast α -particles from nitrogen as the energy of the impinging particle is reduced; the aim being to determine whether the α -particle enters the nucleus by resonance or by scaling the potential barrier. The results appear to show that resonance does not occur; entry is over the