Calendar of Geographical Exploration

March 21, 1699.—Abyssinia via the Nile

A Jesuit, Father de Brèvedent, and a French doctor, Charles Poncet, reached Sennar. They left Cairo in June 1698, went down the Nile to Siout, and then struck across the desert and passed through Dongola to Sennar, reaching the Blue Nile above its confluence with the White Nile. Leaving Sennar, they recrossed the Blue Nile, reached the Gundwa, the headstream of the Atbara, and arrived at the borders of Abyssinia, where de Brèvedent died. Poncet entered Abyssinia, and stayed there until early in 1700, when he returned to Massaua. Poncet's journal gave much information about the regions through which he passed, and especially about their natural history.

March 21, 1871.—Henry Morton Stanley

Stanley's remarkable series of African explorations began on this date with his journey from the east coast of Africa to Ujiji, where he met Livingstone and with him explored the northern shores of Tanganyika. His next expedition, 1874–77, from east to west of Central Africa, resulted in the mapping of the course of the Congo River, in a knowledge of the relation of the Kagera to the Nile, in the discovery of Lake Dweru, and in the solution of many other geographical problems of the region. In 1887–90 he discovered the Ruwenzori Mountains, traced the course of the Semliki River, discovered Lake Edward Nyanza and the great south-western gulf of Victoria Nyanza. Much information about the pygmy tribes of the Congo forest was collected. His journeys outlined the main facts of the sources of the Nile, and completed the work of the earlier explorers of the Nile and of Livingstone and Cameron.

March 22, 1830.—Mouth of the Niger

Richard and John Lander arrived at Badagry, on the Slave Coast of the Gulf of Guinea. They then made their way inland to Bussa, on the Niger River, the journey occupying three months. After careful preparations, they embarked on the river in two canoes and sailed down it to the Atlantic Ocean, thus at last clearing up the course taken by the Niger River. They also found that the Benue River joined the Niger. Their courage in entrusting themselves in such frail barks on an unknown river and in facing the dangers of tropical diseases, hostile tribes, and uncharted rocks, dangers which had already taken toll of many previous explorers, was rewarded by the solution of a problem upon which Mungo Park and Clapperton had worked. It is interesting to note that a 'stay-at-home' geographer, James M'Queen, had fourteen years previously correctly mapped out the course of the Niger on scientific principles, and had proved that it could only terminate in the Bight of Benin.

March 23, 1843.—Middendorf in Siberia

A. T. Middendorf left Turukhansk, went down the frozen Yenisei, and thence over the tundra to the basin of the Khatanga River. He then proceeded northwards to the Taimir peninsula, and, in spite of many hardships, brought back valuable descriptions of the life of the region. Later he journeyed from Yakutsk to the Sea of Okhotsk, crossing the Stanovoi Mountains and exploring the Amur basin as far as Lake Baikal. Middendorf's accounts of the regions he traversed are of great scientific value, especially for the study of the flora and fauna of Siberia.

March 24, 1921.—R. E. Cheesman in Arabia

Major R. E. Cheesman started his exploration of the coast-line of eastern Arabia, near the island of Bahrein, at the Bay of Salwa. The coast between Oqair and Salwa had never been visited by a European, though Burchardt in 1904 passed Salwa on a different route. Cheesman made a route traverse of the coast, accompanied by a sailing boat which carried his chronometer. He was much interested in the ruins of Salwa, which may have been the Phœnician Gerra. In 1923–24 Cheesman explored the desert of Arabia southward from Hofuf, discovering the oasis of Jabrin, previously unvisited. A feature of his work was his record of bird life in the regions which he visited.

Societies and Academies

LONDON

Institute of Metals, March 9.—**J. Newton Friend**: The relative corrodibilities of ferrous and non-ferrous metals and alloys. (3) Final report. The results of three years' exposure at Southampton Docks. The metals examined included lead, zinc, tin, aluminium, copper, nickel, and various alloys containing iron, chromium, nickel, copper, and zinc. Nickel-copper alloys, particularly the 70:28 alloy, offered great resistance to corrosion. High-grade zinc and tin were slightly more attacked than the less pure metals. Tension, riveting, and cold-working did not appreciably affect the corrosion of nickel-chromium alloy steels, but in every case cracks appeared at welds. Alloy steels resisted corrosion well; they are subject to serious localised corrosion.—**O. F. Hudson** and **J. McKeown**: The properties of copper in relation to low stresses. The effect of cold-work, heat-treatment, and composition. (1) Tensile and compression tests under short-time loading. The tensile tests have shown that all the materials tested possess a certain limit of proportionality due to the applied cold-work, and that this limit of proportionality can be considerably raised by suitable heat-treatment. There is a superior resistance to deformation brought about by cold-work and suitable heat-treatment, and also a greater resistance to deformation conferred on copper, particularly at elevated temperatures, by the presence of a very small percentage of silver and also by the presence of tin and silicon.—**H. J. Tapsell** and **A. E. Johnson**: The properties of copper in relation to low stresses. The effect of cold-work, heat-treatment, and composition. (2) Creep tests at 300° C. and 350° C. of arsenical copper and silver-arsenical copper. Improvement in resistance to creep at 300° C. and 350° C. is effected by the special pre-treatment of the alloys, and alloys containing 0·072 per cent silver are superior to the silver-free alloys.—**R. Seligman** and **P. Williams**: The interaction of aluminium and water vapour. The statement having been made recently that aluminium and its alloys are rapidly attacked by super-heated steam at 300° C., the authors have made experiments and have found that no such attack takes place under the conditions which they define.—**F. Bollenrath**: On the influence of temperature on the elastic behaviour of various wrought light metal alloys. The elastic properties increase with decreasing temperature, except in the cases of two aluminium alloys with a high silicon content.—**D. Hanson** and **C. E. Rogers**: The thermal conductivity of some non-ferrous alloys. Aluminium-copper alloys were tested, also the effect of aluminium, nickel, iron, phosphorus, and arsenic on the thermal conductivity of copper.—**A. J. Sidery**, **K. G. Lewis**, and **H. Sutton**: Intercrystalline corrosion