

With a settled government and increased population, there is no reason why this should not become one of the most prosperous tracts of central Asia.

GEOGRAPHICAL NOTES.

THE fifth expedition of the Belgian international African association, which started with the view of connecting by a chain of stations the east coast with the interior basin, has returned, the expense proving too great to render the project profitable. The Zanzibar agent of the society has returned to Europe. The efforts of the association at present will probably be confined to the Kongo watershed.

The death of Mirambo, the noted chief of Unyamwezi, is confirmed. His principal rival, Kapira, is also dead. The power of the former was so great an element in securing peace and security of travel, that his death seems a public misfortune. The son of M'tesa is reported to have succeeded his father. He is young and intelligent, and favorably disposed toward Europeans. He was for several years a pupil of Father Levinhac, recently consecrated bishop of Uganda.

Lieut. Hovgaard intends to visit the east coast of Greenland next year at the expense of the Danish government. Herr August Gamel, the owner of the steamer *Dimfna*, has placed it at his disposal. The majority of copies of the work known as '*Meddelelser om Grönland*,' published by the Danish government, and which received one of the annual medals of the Paris société de géographie, were burned in the recent conflagration at the palace of Christianborg in Copenhagen.

Caspari has reported on the station of Sheik Said at Cape Bab-el-Mandeb, claimed by France. It appears to be a desert spot, with an exposed roadstead, severe heats, no vegetation, and the fresh water scarce and bad. There is a shallow lagoon containing many fish, out of which a small community of Arabs manage to gain a living. Altogether it would seem a most unpromising spot for a European colony.

La société des études historiques, Paris, offers a prize of one thousand francs, or a medal of equal value, to the author of the best memoir on the following subject: "A study of the consequences, from the point of view of political economy, of the new relations between Europe and West America, eastern Asia and Polynesia, which would follow the completion of the Panama canal." For conditions, competitors should address M. L. Racine, administrator of the society, 62 boulevard de Courcelles.

Assan Khan Saniédوله, minister to the shah of Persia, has sent to the Paris geographical society a memoir on the district and town of Maybaud, another on the region of Kelat-i-Nadiri, with a map, and the first volume of a series of three, to be devoted to Khorassan, all in the Persian language.

A steamer called the *Industrie*, of 513 tons, has arrived at Cologne, March 18, being the first vessel to enter that port direct from an ocean voyage. It is

expected that she will prove the forerunner of an important commerce.

The missionaries of Uzigay in the equatorial lake region of Africa report that the use of a sort of beer made of bananas has been used by them with excellent results as a prophylactic against malarial fevers. Owing, as they suppose, to its use, they have enjoyed in that pestilent region the best of health. The matter seems worthy of investigation.

Teisserenc de Bort writes, that, midway between Khurd-Rumed and Beresof, his party had discovered a depression called by the inhabitants Sebkha Zeita, six or eight kilometres in extent, which forms a lake during the wet season. It is surrounded by an almost circular chain of dunes, between which and the lake are found very numerous chipped flints and other vestiges of man, including hundreds of hearths where the stones show traces of fire.

ASTRONOMICAL PROGRESS IN 1884.

PROFESSOR NEWCOMB contributes to vol. ix. of Appletons' annual cyclopaedia, just published, an interesting article on 'Astronomical phenomena and progress during the year 1884.' In observatories and instruments, he notes the completion of the Lick observatory, with the exception of its equatorial; and the mounting of the great telescopes at the University of Virginia and at Pulkowa, the latter of thirty inches aperture, the largest refractor yet made. In solar physics, Langley's Mount-Whitney work receives first attention, and the tardy appearance of the sun-spot maximum in 1884 (one or perhaps two years behindtime) is remarked. From recent determinations of the velocity of light, the solar parallax is found to be 8.794", and the corresponding distance of the sun, in round numbers, 93,000,000 miles, "which is not likely to be altered by much more than 100,000 miles by any future discoveries."

Recent observations on Jupiter appear to show that the period of rotation at its equator is more than five minutes less than in the latitude of the great red spot, — a result which is of great interest, as tending to confirm the suspected resemblance of that planet to our sun. Saturn, during the winters of 1884, 1885, and 1886, is in an unusually favorable situation for observation; and we may expect valuable testimony on the disputed variability of the rings, and on the many interesting physical phenomena which the planet presents. The asteroids and comets of the year receive due notice. Attention is called to Professor Pickering's inventions in photometry, which have provided us with a standard catalogue of the magnitudes of over four thousand stars, — 'Harvard photometry.' By a very elaborate calculation, Professor Oppolzer has investigated the question whether the excess of the moon's apparent acceleration above its computed value may not arise from the mass of the earth being gradually increased by the falling of meteors upon its surface. He concludes that a precipitation of cosmic dust of about