

# SCIENCE

FRIDAY, OCTOBER 26, 1888.

THE POLITICAL EVENTS in East Africa and the death of Major Barttelot have made the position of Emin Pacha, and probably that of Stanley, very difficult. Since the English have given up the Sudan to the Mahdi, the Europeans have lost much of their influence over the Arabs, who feel that they are able to resist European influence. As at the present time English and German traders are making rapid progress in Central Africa, and as the Sultan of Zanzibar has yielded his political power to Europeans, the Arabs are in fear of losing their profitable trade and of being compelled to abandon their slave-raids. This fear, combined with the consciousness of their power, makes the situation in eastern Africa one of great difficulty. It is erroneous to ascribe the disturbances to oppressive or offensive acts of European, especially of German officials, as the sole fact of their presence and of their progress is a satisfactory explanation. As a matter of fact, the disturbances have not originated in, and are not confined to, German territory. In April severe struggles took place between the Arabs and English traders near the northern part of Lake Nyassa. Since the German East African Company has taken possession of the coast of the mainland, the hatred of Europeans has received a sudden stimulus, and the Arabs, aided by their native supporters, everywhere offer resistance to European travellers. Thus Dr. Hans Meyer's second expedition to the Kilima Ndjaro has been scattered, and all further expeditions starting from Zanzibar have been made impossible. Besides this, new complications have arisen in the lake region. The last news from Uganda was dated June 27. According to it, communication with Emin is again absolutely interrupted. While for a long time Kabrega, King of Unyoro, seemed to be friendly to the whites, he has all of a sudden turned against them; and it would seem that the cause of his change of mind may have been either the fear of Stanley's arrival and the subsequent strengthening of Emin's power, or the advice of Arabian traders. However this may be, he has killed Mohammed Biri, the Tripolitan trader, who, in 1886, opened a trade between Uganda and Wadelai at the instance of Dr. Junker, and was the only one to continue it, and thus keep us informed of what was going on in the Equatorial Province. It would seem that Kabrega has also caused the unfortunate Captain Casati to be murdered, but it may be that this news is not correct. On account of this new interruption, the last news of Emin dates back to Nov. 2, 1887, and it seems not improbable that Stanley may meanwhile have reached him. It must be borne in mind that the news of Stanley's death and of the destruction of his caravan would have reached us from some direction. H. Wichmann, in the October number of *Petermann's Mittheilungen*, reminds us, rightly, that the news of the destruction of Hicks-Pacha in Kordofan on Nov. 5, 1883, was known in Lado in March, 1884; that the capture of Lupton Bey in the Bar-el-Gazal Province was known in November in Khartum. Events of such importance as the destruction of a whole caravan headed by many whites would have been reported and known all over the country within a few months. Undoubtedly both men, Emin as well as Stanley, are in a position of great difficulty. We are unable to know whether they have succeeded in uniting their forces since Nov. 2, 1887. The danger of their situation arises not so much from attacks of petty tribes, as from the general feeling of power and distrust against Europeans among the Arabs, and eventually in Uganda and Unyoro, and from the impossibility of obtaining the necessary ammunition and provisions. If the story of the 'White Pacha' had referred to any important event,

it is probable that we should have had additional information from the Bar-el Gazal region.

## THE INTERNATIONAL GEOLOGICAL CONGRESS.

THE fourth session of the International Geological Congress was held in London from Sept. 17 to Sept. 22. *Nature* gives a full report of its proceedings, from which we take the following notes:—

So far as members go, the congress was a complete success, as it was more largely attended than any previous meeting, both by home and by foreign geologists. The success of such a gathering may, however, be reckoned on other lines, and here opinions on the subject may differ. Those who hold that the first duty of such a congress is to formulate rules and to fix nomenclature may well feel some disappointment; for although excellent discussions took place, and the general feeling was often evident, no formal vote on any such subject was taken. It was generally felt that votes from such mixed assemblages have no value.

Three invitations for the fifth meeting of the congress in 1891 were received from America, — from Philadelphia, New York, and Washington. Philadelphia was chosen. A committee of American geologists was appointed to take such steps as it thought necessary to make the arrangements for this meeting. The committee consists of Messrs. J. Hall, Dana, Newberry, Frazer, Gilbert, Hunt, Marsh, and Walcott.

When the congress met at Bologna, much of the time was occupied with discussions upon the exact meanings to be attached to various geological terms, and upon the general principles which should guide us in geological classification. Certain rules were then laid down, which probably few authors have consistently followed, and which it is unlikely will be universally adopted. At Berlin the discussions turned more upon precise questions of classification, especially those relating to the sedimentary rocks; upon the lines by which various groups of strata should be marked off; and, in some cases, upon the names by which these groups should be known. This change of procedure was necessitated by the progress made with the international geological map of Europe; the material for such discussion on classification having been provided in the shape of reports from various national committees, of which that from England, presented by Professor Hughes, was by far the most complete.

At the London meeting the classification of the Cambrian and Silurian strata was fully discussed; and two other questions, only lightly touched upon before, were here considered in some detail, — the nature and origin of the crystalline schists, and the upper limit of the tertiary system.

In Bologna numerous votes were taken, in Berlin several, but in London none. It was recommended that members of the country in which the congress meets should vote separately from the foreign geologists: if the votes of the two groups agree, the question will be taken as settled; if they disagree, the further consideration of the question will be postponed. The resolution further recommended that votes should not be taken on questions which are purely theoretical (such questions to be simply discussed, and various views obtained), and that decisions of the congress should only refer to the more practical questions.

Two commissions of the congress have existed since the Bologna meeting, — that on the map of Europe, and that on nomenclature and classification. The work of the former is plainly marked out, and much has yet to be done. The other commission has, however, in many respects served its purpose: it has obtained reports from the various national committees, most of which have been ably summarized by Professor Dewalque. The future work of the congress will partly lie in discussing these reports, and in deciding such questions in general classification as may apply to wide dis-