

As the Stanley relief expedition makes it unnecessary to send another expedition to the relief of Captain Casati, the Milan Società d'esplorazione commerciale in Africa has changed its plans, and has sent two of Tippo-Tip's men to Unyoro, bearing letters of credit for Casati to the missionary and trading stations on the route. Thus Casati will be enabled to return from Unyoro to Zanzibar, and it is probable that in this way Emin Bey will be informed of Stanley's attempt to reach him.

It is stated in *Petermann's Mittheilungen* for May that the German Reichstag has appropriated 150,000 marks (about \$36,000) for the continuation of explorations in Africa. While former appropriations were used for the expeditions of the German-African society, the government has resolved to use the present appropriation for the exploration of the German possessions in Africa. Lieut. R. Kund, the explorer of the Lukenye, will be sent to Kamerun, to penetrate from that point into the interior, which, on account of the hostility of the natives, has been hitherto inaccessible.

A. von Dankelmann has reduced the barometrical observations of R. Kund, and compared them with those obtained from the observations of von François, Dr. Büttner, and von Mechow. As stated in *Petermann's Mittheilungen*, he considers the height of Stanley Pool (900 feet) and of San Salvador (1,800 feet) reliable. The rivers Kuango, Kuilu, Sankuru, and Lukenye are from 1,050 to 1,300 feet above sea-level, the western rivers being the more elevated. This fact shows that these rivers run through an extensive plain, into which they have cut their beds.

New Guinea.

We learn from the Proceedings of the Royal Geographical society for May that the government of Victoria is preparing to send out a well-equipped expedition to explore the Owen Stanley Mountains from Port Moresby, and has offered the leadership to the man of all others best able to carry so difficult an undertaking to a successful issue; namely, the Rev. J. Chalmers. A grant of ten thousand dollars has been made towards the cost of the expedition, and further contributions are expected.

America.

Chaffanjon writes from Ciudad Bolivar to the Geographical society of Paris (*Compt. rend.*, No. 9) that the success of his expedition to the sources of the Orinoco was complete. His companions, Indians from the Maquiritares and Bares tribes, were so much afraid of the Guaharibas, who inhabit the region about the head waters of the Orinoco, that he had the greatest difficulty in inducing them to follow him. He explored the

mountains of that region, and determined the positions of numerous places by astronomical observations. He is going to visit the sources of the Essequibo before returning to France.

The expedition of Dr. K. von den Steinen, before leaving the coast of Brazil, made some anthropological and ethnological researches among the Sambuquis in the province of Santa Catharina (*Gazette géogr.*, May 12). The company intended to start for the head waters of the Xingu on the 2d of May. Although ethnological studies are the main objects of the expedition, Messrs. Gervaiso Ninus Piris and Moreira de Silva have accompanied it for the purpose of making geological observations.

NOTES AND NEWS.

THE vessels of the U. S. coast survey are now located as follows: the *Bache* left Key West May 24, and arrived at New York last Tuesday, where she will fit out for work in Vineyard Sound; the *Gedney* left New York May 30 for work on the coast of Maine; the *Olympia* is now at work on the coast of Washington Territory; the *Endeavor* is now on the Louisiana coast, but will close its work this week and proceed to New York. Mr. F. W. Perkins, who has been on the steamer *Hitchcock* on the coast of Louisiana, has dismissed his party, and will be in Washington until June 15; Mr. J. H. Turner has been ordered to Salt Lake City, and will continue the work on the triangulation of the 39th parallel; Captain Bou-telle has gone to St. Paul, Minn., to organize a party under the direction of Professor Hoag of the University of Minnesota, for making a triangulation survey of the state. The work will begin between St. Paul and Fort Snelling.

—The American fisheries society began its annual session in Washington last Tuesday. There was a large attendance of the members. The following are the officers of the society: president, Dr. W. M. Hudson, Hartford, Conn.; vice-president, W. L. May, Fremont, Neb.; treasurer, E. G. Blackford, Brooklyn, N.Y.; recording secretary, Fred Mather, Cold Spring Harbor, N.Y.; corresponding secretary, W. A. Butler, jun., Detroit, Mich. Prof. W. O. Atwater of the Wesleyan university presented a paper on "The chemical changes produced in oysters in floating, and their effect upon their nutritive value." Mr. K. Ito, superintendent of the fisheries of northern Japan, spoke upon the methods of fishing in Japan as compared with American methods.

—The fifteenth annual session of the American society of mechanical engineers began in Washington on Tuesday, May 31, over seven hundred

members being present. The secretary, Mr. F. R. Hutton, presented the report of the council, which stated that through Mr. Stephen W. Baldwin the society had gained possession of much of the expert apparatus belonging to the late Mr. John C. Hoadley of Boston.

— The second field-meeting of the Indiana academy of science was held at Waveland, Montgomery county, Ind., May 19 and 20. The first day was devoted to the exploration of the rugged sides of Sugar Creek in the vicinity of 'Shades of Death.' In the evening, Dr. T. C. Mendenhall, president of Rose polytechnic institute, delivered an address on 'Weather-predictions.' The second day was devoted to an excursion to Pine Hills, a picturesque region along Sugar Creek. The evening exercises consisted of a general discussion of the natural history of the localities visited. Over thirty members were present. The meeting was in every way a success. The committees which made the arrangements are deserving of much credit for the way in which their arrangements were carried out. The next meeting will be held at Indianapolis late in December.

— The American institute of electrical engineers was organized at New York City on May 13, 1884. It was the intention of its founders to establish a national organization of high character, which should be in every respect worthy of the support of American electrical engineers. In order to enhance its usefulness to the electrical fraternity, a determined effort was made at the annual and general meetings just past, to purchase a building in New York City, which is to be, what the title of the society implies, the 'American institute of electrical engineers.' This movement has been under consideration for three years past, a standing committee having been previously appointed for the work during the first term of Pres. Norvin Green. Among the important features of the institute will be an electrical library and a museum, to which, if space permits, an experimental laboratory may be added. Suitable accommodations will be provided for council and general meetings and the entertainment of members and their guests, and the house will be open at all reasonable hours. The work already accomplished is shown by the contents of the three yearly volumes of Transactions. These, however, will be surpassed by the volume now in press, which completes the record of the institute up to May, 1887.

— In Bulletin No. 26, issued recently from the department of zoölogy and entomology of the Michigan agricultural college, on p. 6, a typographical error makes the proper proportion of

Paris green or London purple to water, for spraying apple-trees for the codling-moth, to be one pound of Paris green to two gallons of water; whereas the proportion should be one pound of Paris green or London purple to two barrels, or one hundred gallons, of water.

— We learn from the *Naturwissenschaftliche Rundschau* of May 21 that on May 3 and 4 the curves of the barographs at Berlin showed sudden changes of the atmospheric pressure which could not be accounted for by meteorological phenomena. This fact is of interest as being coincident with the Sonora earthquake. Von Bezold, who mentioned this matter in the Physical society of Berlin on May 6, calls to mind the fact that the eruption of Krakatoa on Aug. 27, 1883, was also accompanied by sudden changes of the atmospheric pressure in Europe.

— Porter & Coates announce a new edition of 'Amateur photographer,' with two new chapters on paper negatives and microscopic photography, by E. Waller, jun.

— Botanists owe Professors Farlow and Trelease a debt of gratitude for the publication of their bibliography of North American fungi in the May number of the *Harvard university bulletin*, just issued. It contains a list of such works on North American fungi (excluding the Schizomycetes as belonging rather to the department of medicine than to botany proper) as are of greater or less value to working botanists. It is the first list of the kind yet published, and will show that the general belief of those not specialists in this branch of botany, that little has been written on North American mycology, is by no means correct. It includes a very large number of papers of a popular and indefinite character relating to fungi not specifically named which are scattered through various agricultural, horticultural, and other journals; the entries are in all cases accompanied by brief descriptive notes, which adds greatly to the value of the list; it contains also, when procurable, the place and date of birth of the authors included in the list. The most prolific author noted is M. C. Cooke, whose papers, including those published with other persons, number 71; other prominent authors are J. B. Ellis (50), W. G. Farlow (31), and M. J. Berkeley (30). Probably the complete list will contain more than seven hundred entries, of which nearly one-half are given in the present instalment, which reaches the letter H.

— In *Science* for May 20, p. 481, first column, second line, 'phenomenon' should read 'phenomenon in Assyrian.'