

GEOGRAPHICAL NOTES.

THE Italian corvette Vettor Pisani, commanded by G. Columbo, recently completed a three years' circumnavigation of the globe, with a suitable outfit and instructions for scientific hydrographic and biological work. The vessel left Italy early in 1882, provided with the most improved apparatus for sounding with wire. The officers to whom zoölogical work was entrusted were specially instructed at the Naples zoölogical station in the methods necessary for making satisfactory collections. The regions visited included both coasts of South America, from Pernambuco on the east, south to Magellan Straits, and north to Panama, the Galapagos and Hawaiian Islands, the China, Indian and Red seas, and so home. The results of the voyage are very satisfactory, many deep sea soundings having been taken, numerous charts corrected or resurveyed, general hydrographic information gathered, and a zoölogical collection accumulated which, for its fine state of preservation and preparation, is believed to exceed any collection ever made under similar circumstances.

The government of Chili has published an important work by Al. Bertrand, entitled 'Mémorial on the Cordilleras and the Atacama Desert and adjacent regions,' which gives the result of explorations made during the period 1880-84, explains the system adopted, and maps on a large scale the region studied, beside giving numerous profiles. This work must form the foundation for any future discussion or description of the region acquired by Chili in the war recently terminated.

The last number of the *Mittheilungen* of the Vienna geographical society contains the annual summary of the president of geographical work (for 1884), beside the usual annual tables and reports. Among contributed articles is a valuable summary by Dr. Rink on the scientific work carried on in Greenland by the Danish government since 1876, and letters, nearly a year old, giving data on his last journey in Tsai-dam by Prjevalski. Breitenstein continues his interesting notes on Borneo, and especially on the Dyaks.

In the *Bulletin* of the Geographical society of Lisbon for 1883, but just distributed, Coelho has a long article on the chants and songs of Portuguese children, which have been collected by Senors Pires and Sequeira Ferraz. These have not only an ethnic interest for the anthropologist but the longer songs embalm fragments of popular tradition which have been sung by children without essential change from a very dim antiquity. Some of them are known to have existed in their present form as early as the 13th century. Probably the peasant life of the Iberian Peninsula has remained

less affected by the progress of civilization than that of any other area of equal extent inhabited by civilized man, and for this reason investigations into such topics are likely to have especial value.

The numbers of the *Bulletin* for 1885 contain articles on African exploration and on the island of Timor. Figueiredo also has an article on mediæval Portugal, with an excellent and interesting reproduction of a panorama of Coimbra as it appeared during the last quarter of the 16th century.

Some time since (*Science* No. 110) we referred to a journey by Mr. Richards of the east-central African mission in October, 1884, from Inhambane to the Limpopo River. The chief settlement of a tribe called Amagwaza, the town of Baleni was one of the localities sought, but want of time prevented the traveller from reaching it. We learn from the *Missionary herald* for September that on a second journey by Mr. Richards, beside visiting a large and hitherto untravelled area, was successful in reaching Baleni. He left Delagoa Bay on foot April 20, attended only by a Zulu convert and three porters. The Komati River, two hundred yards wide and thirty feet deep, was crossed about a day later in a 'dugout' canoe, and its course was followed for several days through unhealthy marshes swarming with insects. The river abounded with sharks, crocodiles and sea-cows. Leaving the river on the fourth day, a series of thirteen lakes was passed. Though there was no connecting stream at that season, the natives call this string of lakes the Liputa River, but there are often hills and bushy districts between the lakes. The country was hilly. On the seventh they emerged from the bush close to the Limpopo, and here Baleni was situated. Herds of cattle were visible in every direction, and clusters of small huts were very numerous. Manjobo or Manjova, the ruling chief, has several kraals on the west and one on the east side of the river, which here runs through a low flat plain of indurated alluvium 'as hard as marble.' The river banks are about two yards high, the stream being about fifteen feet deep and two hundred yards wide. Five sea-cows and eight crocodiles were seen at the crossing. Manjobo's kraal on the east side is called Emkontweni, the place where the spear is stuck in the ground. The chief is next in authority to Umganu, the son and successor of the celebrated Umzila, is very old, bald, and good natured, and commands the army of Umganu. The hostilities between his people and the Chobbas, or Machappas, have ceased on the latter agreeing to pay tribute. Previously they had been subject to raids which were little more than massacres, only the children being saved alive to be sold as slaves

to the Portuguese at Delagoa Bay, or kept in slavery by the victorious Amagwazas. The kraal is on the Limpopo, about twenty miles north of the Shangan River, which enters the former from the eastward, and is otherwise known as the Luize or Mitti River. From a hill just eastward of the Shangan the plain of Baleni could be seen extending northwest and southeast as far as the eye can reach, and about twenty-five miles in width. In the rainy season the plain is an immense pool or lake, and all the kraals are deserted for several months. Corn and millet reach a fabulous height; sweet potatoes, peanuts, melons, pumpkins, beans and bananas all seemed to flourish exceedingly. The Shangan is salt, but good water can be had by digging. The people call themselves Ama Shangani, and all the adults speak more or less Zulu, which is the language of the 'court.' Thence to Inhambane took nine days through a most populous country. Bingwana, a kraal of about 5,000 inhabitants, is about four days from Inhambane on the river of the same name, a deep but narrow stream, abounding in sea-cows. The route was considerably south of the one taken in 1884.

NOTES AND NEWS.

THE following extract from a letter of Mr. Louis Pasteur, to Professor Jules Marcou, dated Arbois (Jura), France, Sept. 7, is kindly furnished us by Professor Marcou. "I take a great deal of pleasure in the thought that, on my return to Paris, I shall present to the Academy of sciences an account of what I believe to be a very valuable prophylactic treatment against hydrophobia, applicable after the accident both to man and dogs. Do you not know some feature of this terrible disease which may be peculiar in America? Is it of frequent occurrence there? Remember that I should have the courage to apply my treatment even on persons who, after being bitten, had made the journey from Paris to America—although under these conditions at least two weeks must have elapsed since the accident—so great is my confidence in my method. However, I shall feel more sure of myself when I have made a large number of trials on man, which I shall do in 1885-86. I have as yet made but one trial—on an Alsatian boy, whose mother brought him to me. He had been bitten horribly on the fourth of last July, and death by hydrophobia seemed unavoidable. Up to the present time I have excellent news of his health, although it is sixty-four days since the accident."

—At the meeting of the American forestry congress, held in Boston, Sept. 22-24, the interest

displayed by the public was extremely little; the attendance averaging from fifty to a hundred. The following papers were read: Facts in regard to the present state of American forestry, State of forest legislation in the United States, by N. H. Egleston; Forests of California, Prentice Mulford; The Middlesex Fells, Elizur Wright; Massachusetts forestry law, Dr. George B. Loring; Arbor day, B. C. Northrop; Forest economy in Canada, Walnut culture in southern latitudes, Hon. H. J. Joly; What have the different states done in regard to their forests? J. S. Hicks; The forest laws of Colorado, E. T. Ensign; What are the requisites of an effective forest fire legislation, S. W. Powell; Spark arresters for locomotives, J. N. Lander; Relation of forests to floods, T. P. Roberts; Lumbering interests—their dependence on systematic forestry, J. E. Hobbs; Charcoal interests and the maintenance of forests, John Birkinbine; Lumbermen's waste as a fertilizer, B. E. Fernaw; Trees as educators, Prof. Edw. North; Arbor day celebration in schools, J. B. Peaslee; Seacoast planting—its importance, practicability, methods; August planting of evergreens, W. C. Strong; Recuperation of barrens by tree planting, B. G. Northrop; The osier willow and red cedar, E. Hersey; On the distribution of economically important resiniferous pines in the southern United States, and on the production of naval stores, C. Mohr; Profits of forest culture, B. P. Poore; The new version of the children in the wood, Rev. A. D. Mayo; Needs of a national forest policy, Hon. Warner Miller; Profits of forest culture, State of forest legislation in the state of New York, Hon. H. R. Low.

—The American astronomical society of Brooklyn, N. Y., issued in August last the first number of its publications, bearing the title 'Papers read before the American astronomical society,'—a pamphlet of thirty-two octavo pages. It appears to be a selection from the papers read before the society during the year 1884, and the first half of 1885; and among the papers we find, 'The disappearance of the water and atmosphere of the moon,' by Prof. George W. Coakley; 'On the structure and age of the universe,' by Garrett P. Serviss; 'Relation of sun-spots to meteorology,' by G. D. Hiscox. It is a matter of congratulation that a society in this country devoted solely to astronomy is to be found in such a flourishing condition as to be able to print its proceedings so promptly.

—Dr. D. G. Brinton of Philadelphia, has now in press the sixth volume of his Library of aboriginal American literature. It is the annals of the Cakchiquels, written by a native about 1560, and never