

natural history of that district, although the Society has existed only 18 months. It numbers over 300 members. Dr. Stolterfoth and Mr. Liddell are energetically working the Diatomaceæ and Foraminifera of the Dee, and lists of these, we believe, will shortly be published. Several other members are actively at work in all three departments; the results of this work we hope to see in a permanent form. On the 27th inst., the President, Canon Kingsley, will read a paper on "Deep Sea Dredging," and on January 30, Professor Boyd Dawkins one on his favourite subject—"Cave Explorations."

WE learn from the *Athenæum* that the Government of Colombia, or New Granada, has extended for five years the grant to Mr. José Triana to enable him to publish in London, in Spanish, "*La Flora Colombiana*," and the Botanical Geography of Colombia.

WE are glad to learn that a good deal of attention is being given to the systematic study of science in Glasgow by members of the teaching profession actual and prospective. Mr. E. M. Dixon, B.Sc. (London), one of the lecturers in the Established Church Normal Training College, has for several sessions regularly given a very comprehensive course of instruction in physiology to the male students in training; and this year the female students have been introduced to the study of botany by Mr. Robertson, another of the lecturers in the Glasgow Training College. It is understood that the Free Church Normal College is also about to do something in science teaching. Mr. John Mayer, F.C.S., has, during the last few years, had large classes of pupil teachers in physiology, and of schoolmasters and assistant-schoolmasters in physiology, chemistry, and metallurgy, the class for teachers being held on Saturdays, so as to be suitable alike for town and country students. It is evident that Scotland is becoming more alive to the value of science as a means of intellectual discipline and culture. In many little towns and villages north of the Tweed, special science classes are now in course of establishment for the first time.

WE learn from the *Journal of Botany* that a Flora of Portugal is announced as in preparation by Señor Baroo de Castello de Paiva. It will include all the additions made since 1804, the date of Brotero's excellent Flora Lusitanica.

#### AMERICAN SCIENTIFIC INTELLIGENCE\*

THE arrangements for an extended exploration of the Pacific Ocean by the Navy Department of the United States, have been brought almost to a conclusion, and it is understood that the *Portsmouth*, under Captain Skenett, will leave New York about the middle of November for the scene of operations. The vessel will proceed, with only the necessary stops, by way of Cape Horn, to the west coast, and will commence her work in the Gulf of California. Two years will probably be spent in the investigation of the hydrography of the peninsula, including the entire gulf region, as also in the exploration of the Revillagigedo group of islands. A subsidiary object, to receive a due share of attention, will be a general investigation into the physics and natural history of the deep seas and of the adjacent islands. Dr. Street, the surgeon of the expedition, has already distinguished himself as a naturalist and a collector in the Darien expedition, and will doubtless win new laurels on the present occasion. The astronomical department will be in charge of Paymaster Tuttle, well known as the discoverer of an asteroid and of a telescopic comet. The *Narraganset*, now on the Pacific station, has also been detailed for the same service, and will probably refit at Callao for the purpose. There are few portions of America more interesting in a natural history point of view than that to be immediately explored by this expedition, the Galapagos themselves being scarcely more noteworthy. This is shown by the researches of Mr. Xantus

and of Colonel Grayson. The former gentleman spent several years at Cape St. Lucas, in the service of the United States Coast Survey and of the Smithsonian Institution, and obtained large numbers of specimens in all branches of natural history, many of which were entirely new to science. Colonel Grayson, in his explorations of Socorro Island, one of the Revillagigedo group, found that, as at Cape St. Lucas, there were many animals peculiar, or unknown elsewhere, most of them being then undescribed. They have, however, lately been published by Mr. George N. Lawrence, in a memoir of the collections of Colonel Grayson.—Professor Marsh announces the very important discovery of fossil quadrupeds in the eocene deposits of the Rocky Mountains. The genera *Limnotherium*, *Thinolestes*, and *Telmatolestes* are, in his opinion, closely related to the lemurs, especially in the correspondence of the larger bones. The teeth are more numerous than in any known quadruped, some species having apparently forty—namely two incisors, one canine, and seven premolars and molars on each side of each jaw. The professor also describes a new genus of large carnivora, under the name of *Limnofelis latidens*, in which the canines and premolars of the lower jaw resemble those of the hyena, but with only two incisors on either side. The single species, *Oreocyon latidens*, is supposed to have been as large as a lion. Another novelty consists in a cretaceous reptilian, allied to *Mossosaurus*, and possessing peculiar characteristics. The animal has been called *Colonosaurus mudgei*, after the discoverer, Professor Mudge, who obtained the remains in Western Kansas.—Mr. J. F. Whiteaves, of Montreal, has completed his investigations into the deep-sea fauna of the Gulf of St. Lawrence, already mentioned as undertaken in continuance of those of last year; and he is now engaged in preparing his report for presentation to the Minister of Marine and Fisheries, at Ottawa. The greatest depth reached by him was 310 fathoms, off the south-western end of Anticosti, where he obtained a *Virgularia*, and specimens of *Pennatula* additional to those secured last year. He also found an interesting cup-shaped coral about an inch across the disc.—Recent advices from Mr. Stevenson, director of the Snake River division of the United States Geographical Survey, under command of Professor Hayden, announce the arrival of the entire party at Fort Hall on the 11th of October, the Snake River Basin having been carefully explored by them. The party reached the Geysir Basin the last of July, having obtained supplies from Virginia City, *via* Madison Valley. They followed the Madison River to its source in a small lake, and crossed the "divide" to Madison Lake, which they found to have no connection with Madison River, but with an outlet about one hundred feet wide, flowing in an opposite direction from the one given on the maps. They followed this to its entrance into another lake about five miles wide, and which proved to be the real source of Snake River. They found a geyser basin near the sources of Snake River, with about two hundred springs of all sizes, some of which spouted eighty to one hundred feet in height. Mr. Stevenson divided his party above the Snake River Cañon into two portions, one of which passed through the cañon, and the other explored the Teton Pass, both meeting again at the lower end of the cañon. The division under the immediate direction of Professor Hayden reached Bozeman on the 14th of October, having completed the season's labours. Every step is said to have been a success, and the amount of valuable material of scientific and practical value to far exceed that of any previous year. The Professor and his assistants proceed at once to Washington to prepare the report, to be presented to Congress for publication at an early date. Just before closing his field labours, Professor Hayden's party had explored the Gallatin River to its source, and completed the examination of the Yellow Stone by descending it to Mount Shields River, thence returning to the Three Forks. He expected to visit Helena before proceeding to Washington, for the purpose of determining its latitude and longitude. His astronomers had already fixed the geographical position of Virginia City, Fort Ellis, and Fort Hall.—One of the most striking of the many interesting discoveries of vertebrate fossils made in the wonderfully rich formations of the West is that of a fossil bird obtained by Professor Mudge in the upper cretaceous shale of Kansas, and described by Professor Marsh. The remains indicate an aquatic form about the size of a pigeon, but differing widely from all known birds in having biconcave vertebrae. The rest of the skeleton, however, is quite similar to that of the average type. The species has been named *Ichthyornis dispar*.

\* Communicated by the Scientific Editor of *Harper's Weekly*.