

panied by Mr. Wilson P. Harris, as voluntary assistant, and secured a large number of plants for the outdoor plantations, many kinds of seed for growing additional species and over 900 numbers of herbarium and museum specimens, collectively including more than 3,000 specimens. In addition to these, all the duplicates of the collections of the University of Montana were obtained. Attention was also given to climatological observations. Mr. Harris devoted his attention chiefly to lichens. The exploration extended along the Mission range of mountains and into the southern Kootenais, and regions were reached which had never been touched by such an expedition. The expenses of this work were paid from funds contributed by Mr. W. E. Dodge, of the Board of Managers.

Dr. MacDougal is acting director-in-chief during the absence of Dr. Britton.

Professor L. M. Underwood, of the scientific directors, recently returned from a tour of Porto Rico, bringing with him a nice collection of cacti from the arid southern part of the island, some 75 species of seeds, many of which have already germinated in the propagating houses, a number of museum specimens and about 1,000 specimens for the herbarium. He will spend a month now in the Rocky Mountains of Colorado, continuing the exploration begun by Dr. P. A. Rydberg. A recent gift from Mr. Adrian Iselin has made the extension of the important work possible.

Professor N. L. Britton, director-in-chief, left for St. Kitts, and other of the Windward Islands, on August 30, accompanied by Mr. John H. Cowell, director of the Buffalo Botanic Gardens. The object of their expedition is to obtain living tropical plants and seeds for the conservatory collections, specimens for the public museums, and as complete a collection of herbarium specimens of these islands as can be obtained during a month or six weeks' residence there. This work is in continuation of the botanical exploration of the West Indies and Central America instituted in 1899, when Mr. A. A. Heller and Mr. Samuel Henshaw were sent to Porto Rico by means of funds contributed by Mr. Cornelius Vanderbilt, and of Professor Underwood's recent work in Porto

Rico made possible by funds contributed by Mr. W. E. Dodge.

Mr. Percy Wilson, museum aid, who was sent to the East Indies in March, accompanying Professor Todd, of Amherst College, on the total eclipse of the sun expedition, has returned, bringing with him ten large cases of museum specimens illustrating economic products, a number of living orchids, a collection of seeds for growing in the propagating houses, and a valuable set of books and pamphlets treating of the botany and agriculture of that region. He visited the botanical gardens at Singapore and at Buitenzorg, Java, where he was most kindly received, and arranged with these institutions for important exchanges of plants, books and specimens.

SCIENTIFIC NOTES AND NEWS.

THE French Institute will make the first award of the Osiris prize in 1903. It is of the value of 100,000 francs, and is awarded to the one who in the preceding three years accomplishes the most important work for science, industry or literature.

THE city of Berlin will contribute \$25,000 toward the Virchow foundation for research, now being enlarged in honor of Professor Virchow's eightieth birthday.

THE Austrian Emperor has addressed an appreciative autograph letter to Professor Ed. Suess, the eminent geologist, on the occasion of his retirement from the University at Vienna.

As the newspapers fully report, the steamship *Erik* reached North Sydney, Cape Breton, on August 14, with news from Lieutenant Peary. During the eighteen months in which no news had been received from him, he had succeeded in rounding the northern limit of the Greenland Archipelago, and in reaching the highest latitude gained by an American, 83° 50' north. Lieutenant Peary remains at Payer Harbor, and will attempt to reach the most northerly point possible in the spring of next year. Messrs. Stein and Warmbath are returning on the *Windward*, but no news is brought of Captain Sverdrup on the *Fram*.

MEMBERS of the British Geological Association visited France last month. They were

met at Clermont by MM. Glangeaud and Giraud, and after visiting the department of Puy de Dôme explored Le Cantal under the guidance of M. Boule.

DR. A. W. NIEUWENHUIS has returned from a two years' expedition across the unexplored regions of Borneo, made under the auspices of the Dutch government. Dr. Nieuwenhuis's previous expeditions to Borneo have yielded results of much zoological, geographical and ethnographic interest.

DR. H. F. KNOWLTON, of the U. S. Geological Survey, has just returned from a trip, made in company with Dr. John C. Merriam, of the University of California, through the John Day Basin, Oregon. The special object of the investigation was to secure collections of fossil plants from the rich beds of the region, and also of the vertebrate fauna of the recently differentiated rattlesnake beds. Much valuable material was secured.

DR. GEORGE A. DORSEY, curator of the department of anthropology at the Field Columbian Museum, Chicago, has returned from a trip among the Hopi Indians of Arizona.

PROFESSOR F. W. PUTNAM, professor of American archeology and ethnology in Harvard University, is at present in California, where, as last summer, he is looking into the case of the Cavalaras skull.

DR. E. W. ALLEN, of the Office of Experiment Stations, Department of Agriculture, has recently returned from an extended tour of the agricultural experiment stations in the Northwest and Alaska. He finds that the Alaska stations are meeting with encouraging success in demonstrating the entire feasibility of growing the vegetables necessary to supply the needs of the local population, and in maturing the cereal grains. He will recommend the taking up of experiments in raising and feeding farm animals to determine the extent to which this is practicable with Alaska-grown products.

REPORTS received from Professor C. C. Georgeson, the officer in charge of the Alaska experiment stations, who has just returned from a trip to the interior and down the Yukon, are exceedingly encouraging. New potatoes, cab-

bage, cauliflower and other vegetables were ready for the table early in August, and gardens planted with a variety of annual flowers were in full bloom. Rye and barley were ripened this year at the station at Rampart on the Yukon, with a fair prospect for oats and wheat. Extensive tracts of land were found on the lower Yukon which were covered with a luxuriant growth of grasses, often six feet in height, and apparently well suited to agriculture.

PROFESSOR JOHN B. SMITH, of Rutgers College, is devoting a good portion of the present season to the study of the mosquito question in New Jersey. The occurrence of these insects in great swarms along the coast, lessens the value of shore property by many millions of dollars, and some localities farther inland are rendered almost uninhabitable. The object of the present inquiry is chiefly to establish the distribution of the various species that occur in the state, their relative abundance and the general character of the breeding places. It is intended to make the facts so ascertained the basis of the report to go to the Legislature, which will probably be asked to make a substantial appropriation to carry on the work in a more thorough and comprehensive manner. It seems probable that by cooperation of the state and municipal authorities, aided by individual effort in some cases, the pest can be very materially reduced. It will require, however, a very careful study of the problem before a comprehensive plan of campaign can be formulated.

MR. WILLIAM CAMPBELL, B.Sc., F.G.S., a graduate of and former instructor in metallurgy and geology in Durham College of Science, England, has been honored for the third time by the award of an 1851 Exhibition Research Scholarship. For the past two years Mr. Campbell has been engaged in researches upon the constitution of alloys, working in the laboratories of Sir William Roberts-Austen, at the Royal School of Mines (London University), and at the Royal Mint. Mr. Campbell, at the request of the commissioners by whom the award is made, proposes to continue his researches at Columbia University in Professor Henry M. Howe's laboratory.

IN view of the resignation of Dr. Thomas L. Watson, assistant geologist of the Survey of Georgia, to accept a chair at Denison University, the State Geologist, Dr. W. S. Yeates, Atlanta, will be glad to enter into correspondence with geologists seeking such a position.

DR. EIJI AOYAGI, of the University of Kioto, is at present in the United States investigating methods for the application of electricity.

PROFESSOR A. C. HADDON, of Cambridge University, is to visit the United States, reaching New York on the steamship *Campania* of the Cunard Line about September 28 and remaining in this city until about October 7. While in this country he will deliver lectures, illustrated by excellent stereopticon views, at various educational institutions upon some of the following subjects:

The House and Family Life of the Natives of Sarawak.

Ceremonial and Secular Dances of the Papuans.

A Trip into the Interior of Borneo.

The Papuans.

Evolution in Art.

The Descriptive Art of Primitive Peoples.

The Life of a Torres Straits Islander.

As is well known, Professor Haddon is an authority on 'The Evolution of Art' and kindred subjects. He has worked for many years among the tribes of New Guinea, Borneo, Torres Straits and the adjacent territory, conducting the recent Cambridge expedition to that region.

MR. WALDRON SHAPLEIGH, a well-known industrial chemist of Philadelphia, died in Maine on August 30. He was born in Philadelphia in 1848, and was assistant professor of chemistry at Lehigh University from 1868 to 1872. He then studied abroad, and was connected first with the King's County Sugar Refinery and later with the Welsbach Company. He was an authority on the rare earths.

DR. CHARLES MELDRUM, F.R.S., formerly director of the observatory in Mauritius, died on August 28, at the age of eighty years.

THE Rev. Moses Harvey died at St. Johns, Newfoundland, on September 3, at the age of eighty-two years. He retired from active work

in the Presbyterian church in 1878, and has since been engaged in literary and scientific work.

THE death is also announced of Professor Alwin von Coler, surgeon-general of the Prussian medical service, at the age of seventy years.

THE German Geological Society will hold its forty-sixth meeting at Halle during the first week in October.

THE astronomical instruments 'conveyed' by the German soldiers from the Pekin Observatory have reached Germany, and it is said will be placed in the park of Sans Souci. Many of the German newspapers protest against the detention of these instruments.

THE director of the Paris Jardin des Plantes, M. Perrier, has asked the French government for the sum of \$2,000,000, which he claims is required for the buildings and collections.

A MAGNETIC observatory is being constructed by the government at Sitka, Alaska, under the direction of Dr. H. W. M. Edmonds, of the U. S. Coast and Geodetic Survey.

AN interesting and useful pamphlet, says *Nature*, has recently been issued by Mr. A. Hilger, containing full description and details of manipulation of the Michelson Echelon grating. Many of the principal universities of Europe have been provided with this very powerful means of spectroscopic determination, and the experience gained has been sufficient to permit the designing of a standard type of instrument. In this the thickness of each plate is 10 mm., and the width of each step 1 mm. The progressive precision in the working of the plates has enabled Mr. Hilger to avoid the considerable loss of light which was caused in the original instruments by the plates not being mechanically clamped together. They are now held in position by a screwed frame, which can be so adjusted that no distortion is perceptible, while the increase in brilliancy of the spectra is very noticeable.

MAJOR RONALD ROSS, Royal Army Medical Corps, landed at Plymouth on September 2 on his return from West Africa. He gave a press

representative an account of the work which is being done in Freetown and Lagos under his direction as leader of the expedition sent out by the Liverpool School of Tropical Medicine, in the course of which he said it was too early to speak of the sanitary work at Freetown, but the number of the mosquitoes in the center of the town had certainly been largely reduced. There were hardly any to be found in Dr. Logan Taylor's house, where formerly they used to swarm, and the same state of affairs prevailed at Government House, where Major Ross stayed with the Governor. Dr. McKendrick, of the Indian Medical Service, who had been deputed to watch over the operations of the expedition on behalf of the Government of India, was not bitten once during a whole month. In former days he would certainly have been bitten at least five or six times a day. Major Ross said he had no doubt that the expeditions would be successful and that they would be continued as long as necessary. At Lagos the measures adopted by Sir William Macgregor were admirable and he was confident of success. The Governor of Accra, Major Nathan, was anxious to start similar work there at once, and doubtless experts would be sent out immediately by the Liverpool School of Tropical Medicine. On the whole, Major Ross expressed himself as being well satisfied with his tour. Personally he did not think the health of the Coast was as bad as was painted. He believed that by minute attention to details the place would be made as healthy as India for Europeans. Old West Africans are sober and careful and generally live in very good health. It was the improvident newcomer who generally seemed to suffer. He had been informed that there was a high rate of mortality amongst such on the Cape Coast.

UNIVERSITY AND EDUCATIONAL NEWS.

MRS. PHOEBE HEARST has agreed to pay all the expenses of a department of anthropology at the University of California, which will be devoted especially to the study of Indians of the Pacific coast.

MR. AARON FRENCH, the Pittsburg manufacturer, who has made large gifts to the

Georgia School of Technology, has established a third scholarship in that institution.

SYRACUSE UNIVERSITY receives about \$40,000 by the will of the late Justice George N. Kennedy.

By the death of Mrs. Henrietta Cramp, Wesleyan College, at Bloomington, Ill., has received \$50,000, bequeathed to it by the late Rev. Samuel Cramp.

WE recently had occasion to call attention to the great development of the universities of the Central and Western States during the past ten years. There is every reason to suppose that in the course of the next ten years a great advance will be made in the Southern States. Tulane University has recently made great progress, and the University of South Carolina, under the presidency of Dr. F. P. Venable, will have this year about 600 students. This university should be included among those competent to carry on advanced work, though it was omitted from our summary of the universities awarding the degree of Doctor of Philosophy. There were, as a matter of fact, two doctorates of philosophy awarded last year, as follows:

Archibald Henderson, Mathematics: 'The Cone of the Normals and an Allied Cone for Central Surfaces of the Second Degree.'

James E. Mills, Chemistry: 'Some Molecular Changes caused by Rise in Temperature.'

As a result of the recent troubles in the Storrs Agricultural College, Mr. George W. Flint has been dismissed from the presidency. Professor R. W. Stimson, who holds the chair of English at the College, has been appointed acting president.

PROFESSOR E. M. WOOD, of Baker University, at Baldwin, Kansas, is to succeed the late Professor Henry Benner, as professor of mathematics and astronomy in Albion (Mich.) College.

PROFESSOR THOMAS C. ESTY, of Amherst, has succeeded Professor Baker in the chair of mathematics at the University of Rochester.

PAUL ARNOLD, M.A., of Los Angeles, has been appointed professor of mathematics in the University of Southern California.