SCIENTIFIC NOTES AND NEWS.

THE official party of the British Asociation, including Professor G. H. Darwin, the president, and the other officers, left Southampton by the mail steamer *Saxon* on July 29 for Cape Town, where they were expected to arrive on the fifteenth inst. The party included Professor Ernest W. Brown, of Haverford College; Professor Henry S. Carhart, of the University of Michigan; Professor W. M. Davis, of Harvard University, and Professor William B. Scott, of Princeton University.

MAJOR RONALD ROSS, professor of tropical medicine, and Dr. Rupert W. Boyce, professor of pathology and dean of the School of Tropical Medicine, Liverpool, sailed on August 12 on the *Campania* for New York, *en route* to New Orleans, where they will study the epidemic of yellow fever.

The Observatory gives the following information in regard to eclipse expeditions: The astronomer royal and Mr. Dyson, with Professor Sampson, have started for Sfax. Professor Turner and Mr. Bellamy have left for Egypt. Sir Norman and Dr. Lockyer with their party intended to have anchored the gunboat which is put at their disposal in the harbor of Philippeville, in Algeria, but for certain reasons the French object. Several French observing-parties are arranged: MM. Deslandres and Rayet will be at Burgos; M. André, of the Lyons Observatory, at Tortosa; M. Trépied, of Algiers, with MM. Stephan and Borelly, of Marseilles, are going to Guelma, where there will be some observers from Paris; M. Bigourdan, of the Paris Observatory, proposes to make actinometric observations at Sfax, and there will also be a French expedition to Cistierna, in Leon. The Peninsular and Oriental Company is arranging to send a vessel by way of Gibraltar to Palma, where she will wait during the eclipse, and thence to Marseilles.

DR. STEWART PATON, formerly of the Johns Hopkins University, who recently occupied the Smithsonian table at the Naples Zoological Station for a term of three weeks, has received an appointment to that Station for six months from November 1, 1905. Dr. Harold Heath, associate professor of zoology in the Leland Stanford Junior University, has been awarded the Smithsonian table at the station for three months from January 15, 1906.

AN expedition to Florida for the purpose of securing series of the embryos of the alligator has recently been conducted for the Smithsonian Institution by Professor Albert M. Reese, of Syracuse University. Professor Reese reports almost complete success, he having already obtained a fine series of nearly three hundred embryos, covering all but the very earliest stages of development.

DURING the month of July Messrs. M. L. Fuller and F. G. Clapp, of the U. S. Geological Survey, made a reconnaissance trip through Newfoundland and along the coast of Labrador to a point north of Hopedale for the purpose of comparing the glacial features with those of northeastern United States. Several interesting points relating to possible Pre-Wisconsin deposits, to the origin of the high terraces and to the recentness of the last glaciation were brought out. The intention was to go further north, but this was impossible because of the presence of unusually heavy pack ice along the shore from which the vessel was obliged to withdraw after penetrating it for a distance of some ten miles.

DR. ERNST EBERMAYER, professor of agriculture in the University of Munich, celebrated on July 3 the fiftieth anniversary of his doctorate.

MR. A. B. SKINNER has been appointed director of the South Kensington Museum, succeeding Sir Caspar Purdon Clarke, the new director of the Metropolitan Museum of Art, New York City.

MR. W. A. DAVIE, assistant lecturer in agricultural chemistry, Aberdeen University, has been appointed a deputy-inspector in the Agriculture and Lands Department under the Soudan Government.

MR. J. R. MCCOLL, associate professor of steam engineering at Purdue University, has accepted a position in the engineering department of the American Blower Co., at Detroit.

PROFESSOR VOSSIUS, rector of the University of Giessen, gave an address at the recent celebration of the university on 'The recent development of ophthalmology.'

THE Alvarenga Prize of the College of Physicians of Philadelphia has been awarded to Dr. Chalmers Watson, Edinburgh, for an essay on 'The Importance of Diet; an Experimental Study from a New Standpoint.'

A STATUE in honor of Robert Bunsen, the eminent chemist, is to be erected in Heidelberg.

PROFESSOR ALEXANDER MELVILLE BELL died on August 7, at the age of eighty-six years. Professor Bell was known for his important contributions to phonetics. Like his father, Alexander Bell, formerly professor of elocution in London, and his son, Dr. A. Graham Bell, he took an important part in developing modern methods of teaching the deaf and dumb.

GENERAL ROYCE STONE, the well-known army officer and engineer, died on August 5, at the age of sixty-nine years.

THE death at the age of forty-six years, of Mr. H. Lamb, of Maidstone, author of 'The Flora of Maidstone,' is reported in *Nature*.

THE International Anatomical Congress, which has been in session in Geneva during the past week, has accepted an invitation to meet in Boston in 1906.

THE arctic steamer *Terra Nova*, which went to the relief of the Ziegler polar expedition, has rescued Capt. Fiala and all the others connected with the expedition. Mr. W. J. Peters, of the U. S. Geological Survey, who, on the nomination of the National Geographic Society, was placed in charge of the scientific work of the expedition, has cabled that a considerable amount of scientific work has been accomplished.

THE next award of the Rogers prize will be made by London University in 1907. The subject announced is 'The Physiology and Pathology of the Pancreas.'

THE Carnegie Museum of Pittsburg has acquired by purchase the entire collection of the birds of New Zealand belonging to Sir Walter L. Buller, K.C.M.G., F.R.S., upon which he founded his magnificent standard work upon the birds of New Zealand. The collection contains a number of species in all stages which are now known to be extinct or rapidly verging upon extinction. Gould's birds of Australia are the property of the Academy of Natural Sciences in Philadelphia. It is rather remarkable that the two great classic collections of birds from the antipodes should both have found a final resting place upon the soil of Pennsylvania.

DR. A. PECKOVER has presented to the Royal Geographical Society, of which he has been a fellow since 1853, a valuable collection of atlases and maps.

THE demand for foresters is increasing rapidly both for state work and with private owners. Many states now have forest commissions, and several of them have state foresters. A trained forester at $2,400 a year and two assistant foresters at $1,200 each are wanted by California. Wisconsin wants an assistant forester at $1,500, Indiana a forester to take charge of its state reserve, and Washington offers $1,800 a year for a trained forester. In many other states the advisability of creating the office of state forester has been under discussion this year, and it is only a matter of a few years when such an official will be considered a regular part of an efficient state government. The demand for foresters by private timber owners is growing at a still more rapid rate. During the last twelve months seven of the Bureau of Forestry force have left to take up work with such owners, and four have accepted public positions—two with Massachusetts, one with Connecticut, and the fourth with Ontario, Canada. A number of other requests from private owners can not be met because men are not available. The year before there were less than half as many applications for trained men. But the demand for trained specialists in this line has only begun. Large lumber companies, great wood manufacturing concerns, owners of extensive forests, railroad companies and others are taking a hitherto unknown practical interest in

conservative forestry. They must have expert men to control their holdings. The result is that forestry is very rapidly taking its place as a recognized profession. A number of forest schools are training young men for this work, but the demand has outrun the supply.

We learn from the London *Times* that a conference was held in London, on June 22, between representatives of sea fishery authorities and the board of agriculture and fisheries on matters affecting the sea-fishing industry of the United Kingdom. Mr. Ailwyn Fellowes, M.P., in welcoming the delegates from the sea fisheries committees, regretted that much had not resulted from their conferences in the past in the way of legislation; but he hoped that now that the fisheries had been taken from an overburdened department like the board of trade to the board of agriculture something would be done for the fishing industry. Many of the matters in which they asked for legislation required money; but, unfortunately, the imperial finances were not in such a satisfactory state as to allow of money being spent at present on sea fisheries. He hoped that in future there would be more frequent meetings of the officials of the board of agriculture and fisheries and the representatives of the sea fisheries districts in dealing with local fishery problems, and also in promoting legislation applicable to the whole kingdom. The conference then proceeded to discuss several subjects, such as the protection of undersized sea fish and lobsters, fishery statistics, the pollution of estuaries and inspection of shell-fish beds, and the necessity of imperial grants being given to local fisheries committees for fishery research. At the conclusion of the conference Sir Thomas Elliott said it was the desire of the board to further in every way the sea-fishing industry of the country.

The *Geographical Journal* states that the latest report to the Academy of Sciences, by the French committee controlling the scientific operations for the degree measurement in Ecuador shows that the difficulties with which the observers have had to contend have shown no signs of lessening during the year under review, and that, as a result, the completion of the undertaking must once again be subject to an unforeseen delay. As in former years, the meteorological conditions have proved persistently adverse, the amount of fog prevailing in the upper region of the Andes rendering long sojourns at many of the stations necessary. Besides this, the presence of bubonic plague in Ecuador has further hampered operations, while several of the officers in charge have been invalided through fever and other illnesses. After summarizing the operations actually carried out in 1904, the report discusses the steps to be taken in view of the unexpected retardation of the work. In order to keep within the limits of the funds at present available, it would be necessary to curtail the operations in four different ways, *viz.*, by shortening the length of the arc; substituting a less precise method for the measurement of the southern base; omitting the pendulum observations; and giving up the extension to Machala on the coast. The reporter points out the grave defects by which the results would be impaired if these curtailments of the original plan were decided on, one important requirement—viz. the testing of the possible effect on the form of the geoid exercised by the attraction of the Andes—being thereby left unfulfilled. It is therefore urged that the idea of such an abbreviation should not be entertained, but that every effort should be made to carry out the undertaking in its entirety. It is thought that, even allowing for continued causes of delay, the whole should be completed by May, 1906.

Counsel Bardel, writing from Bamberg, Germany, says that in order to promote agricultural interests the Kingdom of Bavaria has established agricultural schools in thirty-one towns. These schools are in charge of teachers who, in addition to an academical education, must be generally efficient in botany, geology, chemistry, physics, zoology and natural history. The consul says: At a time when nothing is doing in the fields, from November to March, these schools are open, and peasant farmers for a nominal fee can attend courses on cultivation and fertilization of the soil, the

proper succession of crops on the same land, the best sources for good seeds, irrigation, and the raising of stock. They are made acquainted with improvements and new inventions in agricultural implements the adoption of which can be recommended. They are taught the rudiments of bookkeeping and other commercial knowledge essential for the up-to-date farmer. In the spring, after these farmers have returned to their work in the fields, it becomes the duty of the teachers who instructed them during the winter to travel from county to county and to act as advisers to the farmers. Much good results from the travels of these wandering teachers. By practical suggestions to the farmers they induce them to make valuable improvements in the cultivation of their farms. The wandering teacher helps to form cooperative clubs for the joint interests of a number of farmers in one district. From time to time the teacher has to lecture in these clubs on any subject practical or scientific which might prove of interest to the members. These visits and lectures to the different districts are entirely free to the people, since the state assumes all expenses. There is probably no other country in the world in which so much is done by the state for its rural inhabitants as is the case in Bavaria. Other German states have these agricultural schools, but their teachers are not sent in such a practical way direct to the places where they can do the most good, as is done here. The results of this commendable care have been very gratifying.

Concerning the exhibition held recently in London in connection with the Optical Congress, *Nature* says: The exhibition of optical and scientific instruments which is being held during the present week at the Northampton Institute, Clerkenwell, E.C., in connection with the optical convention, presents many features of interest, and all who have had any experience in the use of an optical instrument, from the wearing of a pair of spectacles to the handling of an accurate spectrometer, will find something to repay the trouble of a visit to Clerkenwell, still the center of the optical industry. While the number of actual novelties offered is not, perhaps, very large, there are few classes of instruments unrepresented, and though the names of certain important firms are conspicuously absent from the list of exhibitors, the exhibition as a whole may be taken as well representative of the activities of the British manufacturers of optical and other scientific instruments. In the main of an optical character, the scope of the exhibition has been extended to cover such other scientific instruments as are usually manufactured by optical instrument makers. Meteorological instruments and thermometers, mathematical and drawing instruments and calculating machines, and laboratory apparatus generally, are thus included. Electrical measuring instruments, however, are not shown. It is for many reasons to be regretted that the exhibition has been confined to the work of British makers; a foreign section would have had much interest for the ordinary visitor, and would have been of great educational value both to the British manufacturer and his competitors; we understand, however, that the limitation was dictated by considerations as to space, and the necessity of restricting the magnitude of a somewhat novel undertaking. In the catalogue which has been prepared in connection with the exhibition, the convention committee is to be congratulated on having produced a volume which should be of considerable value as well to the user of scientific instruments as to the firms whose instruments are there described. The volume is not confined to apparatus actually exhibited; the aim has been to provide a convenient work of reference generally descriptive of the productions of British firms, and in which particulars as to the types offered by different makers of any special instrument may be readily found. To this end the instruments have been arranged in classes, which are in many cases further subdivided, and in addition to a table of contents, an alphabetical list of exhibitors, with general information as to their manufactures, and an index of instruments have been provided. A short introduction to each class furnishes some particulars as to the instruments included thereunder, with notes as to recent advances in the mode of construction.