

Dr. Rusby states that the journey from Espia, at the head of navigation on the Bopi River, down to Huachi, was accomplished successfully except for the loss of five boxes of provisions and ammunition. The loss of their ammunition leaves the party in a rather precarious condition as they were depending on it for obtaining not only museum specimens of rare birds and small mammals but also to supply the camp with fresh meat.

Among botanical collections are included specimens of the "tree of life." This name is a literal translation of the Spanish name "Arbol de la Vida," given to the "Boldo" plant, so called because of its use by the natives for medicinal purposes. Photographs were made of what Dr. Rusby considers the largest true cactus in the world, which rises to the height of a good-sized tree and with a limb spread of forty feet or more.

Many forms of insect life have been collected. With these, as in the case of plant life, specimens collected in one of these deep Andean valleys may differ entirely from those of a similar valley very closely adjacent.

The party expected to arrive at Rurrenabaque, Bolivia, about October 1 and by this time are probably forcing their way into the depths of the Bolivian jungle in the vicinity of Lake Rocagua.

THE ECLIPSE EXPEDITIONS TO CHRISTMAS ISLAND

ACCORDING to an article in the *London Times*, with the aid of the Joint Permanent Eclipse Committee of the Royal Society and the Royal Astronomical Society, the Royal Observatory at Greenwich is sending an expedition to Christmas Island to observe the total eclipse of the sun which will occur on September 21 next year.

The Greenwich party will consist of Mr. H. Spenser Jones, Chief assistant, and Mr. P. J. Melotte, the discoverer of the eighth satellite of Jupiter. They will leave England early in February for Singapore, whence they and their equipment will be conveyed to the island by a steamer belonging to the Christmas Island Phosphate Company, which is giving valuable help to the project.

A joint Dutch and German expedition, the personnel of which will include Professor Voute of Batavia University and Professor Freundlich of Germany, will also go to Christmas Island, and it is possible that Professor Einstein will himself be present to observe the eclipse.

It is hoped to confirm the results obtained by the British expeditions at Principé and Sobral during the eclipse of May, 1919, when Einstein's prediction as to the value of the deflection of a ray of light passing through a gravitational field was verified by measurements of the position of stars in the immediate neighborhood of the sun during totality.

It has been arranged that the Greenwich expedition, which will have erected its instruments by May, shall carry out an extensive program of photometric work. Based on the Harvard standard sequence of stars at the North Pole comparisons will be made of areas in South Declinations 30 deg. and 45 deg., with areas in North Declination 15 deg. Magnitudes of stars in the latter zone have already been determined at Greenwich in direct comparison with those in the North Polar area, and the photographs to be taken at Christmas Island will enable work on these lines in the northern and southern hemispheres to be linked up and carried on to the South Polar area by southern observatories. The equipment to be taken by the British party will include the 13 in. astrographic telescope used in the making of the Greenwich sections of the international photographic chart of the sky.

The path of totality will begin in Abyssinia, pass over the center of Italian Somaliland and across the Maldive Islands, where Mr. J. Evershed, the director of the Kodaikanal Observatory (India), will be stationed. At the Maldives the duration of totality will be 4 min. 10 sec. with the sun 34 deg. above the horizon. At Christmas Island the duration will be only 3 min. 42 sec., but the sun will be 78 deg. above the horizon. The maximum duration, nearly 6 min., occurs over the Indian Ocean where no observing station exists. After leaving Christmas Island the

path of totality crosses Australia in latitudes which, except in Queensland and in a corner of New South Wales, are to the north of the inhabited regions of the continent, and ends near Norfolk Island in the Pacific. It is possible that an Australian expedition will observe the eclipse from the neighborhood of Cunnamulla.

Christmas Island is an isolated island lying to the south of Java in Lat. S. $10^{\circ} 25'$, Long. E. $105^{\circ} 42'$. It is about 12 miles long and nine broad and rises to a height of over 1,100 ft. The population of the settlement, called Flying Fish Cove, after the warship which discovered the anchorage, is about 250, consisting of Europeans, Indians, Malays, and Chinese. The island is attached to the Straits Settlements administration and was annexed by the United Kingdom in 1888.

SCIENTIFIC NOTES AND NEWS

CHARLES R. CROSS, professor emeritus of physics at the Massachusetts Institute of Technology, died on November 16 in Brookline aged seventy-three years.

DR. W. J. MAYO delivered the John B. Murphy memorial address before the meeting of the Clinical Congress of the American College of Surgeons in Philadelphia at which meeting honorary fellowships in the Royal College of Surgeons of Ireland were conferred upon him and on Dr. C. H. Mayo.

C. O. MAILLOUX, chairman of the International Electrotechnical Commission, has been invited by the President of the French Republic to deliver on November 24, the address of eulogy on Ampère. The ceremony will take place at the Sorbonne in Paris.

THE magnetic-survey yacht *Carnegie*, under the command of J. P. Ault, returned to Washington on Thursday, November 10, thus satisfactorily completing her two years' world cruise. Dr. Bauer, director of the Department of Terrestrial Magnetism, joined the vessel at Panama and remained with her until the arrival at Washington. Although considerable rough weather was encountered, it was found possible with the special appli-

ances aboard the *Carnegie*, to make satisfactory magnetic and electric observations daily.

EIGHT medical investigators, five Americans and the other three British, sailed from New York on November 16 on the *Santa Teresa* for Peru, where they will undertake studies of the physiological changes which enable people to live permanently at high altitudes. The party will make their headquarters at Cerro de Pasco, Peru, situated in the Andes at a height of over fourteen thousand feet. The American members of the party are Dr. Alfred C. Redfield, assistant professor of physiology at the Harvard Medical School; Dr. Arlie V. Bock, M.D., of the Massachusetts General Hospital; Dr. Henry S. Forbes, now engaged in research in industrial medicine at Harvard; Dr. C. A. L. Binger, of the Rockefeller Institute, New York, and Dr. George Harrop, late of the Presbyterian Hospital, New York.

SIR ROBERT WOOD, president of the Royal College of Surgeons of Ireland, Sir William Taylor, ex-president of the same organization, and Professor Shoemaker, of The Hague, visited the Mayo Clinic on November 1, 2, and 3. A meeting was held in their honor in the lobby on November 2, at which time Sir Robert Wood gave a brief talk on education in Ireland; Sir William Taylor discussed the organization of the Royal College of Surgeons of Ireland, and Professor Shoemaker spoke on operations on the stomach and colon which he had originated.

A DELEGATION of Serbian physicians, guests of the Rockefeller Foundation, visited the Mayo Foundation on October 27 and 28. The delegation is composed of Dr. G. J. Nikolitch, under-secretary and first medical officer of the Ministry of Health of Serbia; Dr. G. Joannotitch, professor of pathologic anatomy, and Dr. R. Stankovie, professor of internal medicine, in the Belgrade Medical School. Mr. Frank B. Stubbs, of the Rockefeller Foundation, and Dr. Henry John, of Cleveland, accompanied the delegation.

CHARLES E. WEAVER has resumed his professorship of geology in the University of Wash-