of 49.2 inches in 1861–62. The rainfalls of the winters of 1850–51, 1862–63, 1863–64, 1870–71, 1876–77 and 1897–98 have been the smallest, averaging 10.8 inches. Five seasons have had an average rainfall of 40.89 inches, viz., 1852–53, 1861–62, 1867–68, 1877–78, 1889–90. The variations in winter rainfall are stated to be due primarily to the changes in the positions of the lines upon and along which the areas of low pressure originate and move in their course from the North Pacific Ocean into the interior of the continent.

FREQUENCY OF RAINY DAYS IN THE BRITISH ISLES.

THE British rainfall records for the period 1876–1895 have been studied by Scott, in order to determine the frequency of rainy days in the British Isles (*Quart. Journ. Roy. Met. Soc.*, Oct., 1898). Charts have been drawn showing the mean monthly frequency of rainfall in percentages. The greatest excess of frequency is always on the extreme north and west Atlantic coasts. The highest figures of all are found at Dunrossness (Shetland) and at Stornoway in most months, especially in the late autumn and winter. In summer the figures for the west of Ireland are higher.

R. DEC. WARD.

HARVARD UNIVERSITY.

CURRENT NOTES ON ANTHROPOLOGY.

MAN AND MONKEY.

UNDER the title 'L'Homme et le Singe,' the Marquis de Nadaillac, in the *Revue des Questions Scientifiques*, October, 1898, gives a thorough and searching criticism of the alleged descent of man from the anthropoids. He points out forcibly how many assumptions, without positive support, underlie the general theory of evolution, and especially the evolution of man from any known lower type. At the same time, he does not pretend that our present knowledge is decisive, either for the negative or the affirmative. "At the present time," he says, "in view of what is actually known, we are not prepared to deny the possibility of any such theory; but, I hasten to add, we are just as little prepared to affirm it as a truth." Such caution is certainly in season, as the tendency is constant to hasty conclusions.

THE NATIVE TRIBES OF COSTA RICA.

AN interesting contribution to the anthropology of Costa Rica has recently been published by Dr. H. Pittier (*Razas Indigenas de Costa Rica*, 1ª Contribucion, November 1898). He furnishes a number of anthropometrical data of the Guatusos Indians and a newly collected glossary of their language. Diagrams of their feet and hands are added. There are wide variations in all the physical measurements, illustrated by the pulse-rate, which varies from 58 to 87, and by the skull-form, which is dolicho-, meso- or brachy-cephalic. Dr. Pittier concludes, "that it is not possible from these data, which display such marked divergences, to establish a definite type for the race." The vocabulary is especially useful for the careful study of the sounds of the language which accompanies it.

THE CHRONOLOGY OF ARCHÆOLOGY.

FEW questions in pre-historic archæology are of greater interest than the means of determining the positive chronology of its various epochs and periods. A distinctly valuable contribution to this point is one by Dr. Robert Munro in the *Archæological Journal*, September, 1898, entitled 'The Relation between Archæology, Chronology and Land Oscillation in Post-glacial Times.' He assumes the probability of the astronomical theory of glacial causation and also the generally admitted opinion that the maximum cold in each glacial period coincided with the maximum submergence of land. With these as guides, he reviews the evi-

dence for submergence in a number of localities in Europe, and concludes that the amelioration of the climate began about 30,000 years ago, 'which synchronizes with the astronomical calculations to marvellous nicety.'

ETHNOGRAPHY OF GERMAN EAST AFRICA.

THE Germans set a good example by their investigations of the native tribes in their newly acquired possessions. An instance of this is an article by Dr. F. von Luschan on the Wassandaui, Warangi, Wambugwe and neighboring peoples of German East Africa. It is amply illustrated and presents a clear idea of their general stage of culture. Among other curious facts mentioned is one explaining the rapid diminution of the tribe known as the Wataturu. The men of this tribe are industrious and accustomed to do the work which in neighboring tribes is performed by the women; hence, they are in great demand in these tribes as husbands, and, as the rule is that they follow their wives, their own tribe diminishes. (*Beiträge zur Ethnographie des abflusslosen Gebiets von Deutsch-Ost-Africa*, Berlin, 1898.)

D. G. BRINTON.
UNIVERSITY OF PENNSYLVANIA.

SCIENTIFIC NOTES AND NEWS.

TWELVE scientific societies, representing more than half of the most important scientific work accomplished in America, are beginning their meetings at Columbia University as we go to press. We have already called attention to the dates and other arrangements for these meetings, and full reports of the proceedings of the different societies will be given in subsequent issues. The address of Professor Bowditch, President of the American Society of Naturalists, is published in this number, and other important addresses and papers will follow.

THE International Astronomical Society appears to have held a successful meeting at Buda-Pesth, though it scarcely deserves the name 'international' when American, English and French astronomers are unrepresented at its meetings. The existing organization might, however, be developed so that international congresses could be held as important as those in mathematics, zoology, geology, physiology and psychology.

A CABLEGRAM from London announces that Lord Iveagh (Edward Cecil Guinness) has presented to the Jenner Institute of Preventive Medicine, London, the sum of £250,000, in aid of scientific research in bacteriology and other branches of biology, concerned with the cause, nature, prevention and treatment of disease.

THE Regents of the University of the State of New York have decided to divide the work in geology and paleontology which was for so many years in charge of the late Professor James Hall, and in so doing have erected two coordinate departments, one of paleontology and stratigraphic geology and the other of 'pure geology,' the latter to cover dynamic and physical geology, the crystalline rocks, surficial geology, etc. They have appointed to the charge of the former Professor John M. Clarke, with the title of State Paleontologist, and to the latter Dr. F. J. H. Merrill, with the title of State Geologist. They have also appointed Dr. E. P. Felt to the position of State Entomologist as successor to the late Dr. J. A. Lintner.

PROFESSOR E. B. WILSON, of Columbia University, whose departure for Europe on a year's leave of absence we recently announced, intends to visit the Nile region in order to study, if possible, the embryonic stages of the African ganoid *Polypterus*, the supposed ancestor of the Amphibia. Those who read Dr. Harrington's article in this JOURNAL will remember that he and Dr. Hunt found this fish in the Nile last summer, but were unable to wait for the breeding season.

M. GRAVIER has been made Assistant in the Paris Museum of Natural History in the room of the late M. Bernard.

THE University of Marburg has conferred the degree of Ph.D. *honoris causa* on Professor J. M. Clarke, of Albany.

PROFESSOR ERIC GERARD, of the University of Liège, known for his contributions to elec-