ARGENTINE METEOROLOGICAL REPORTS.

AMONG the most elaborate discussions of meteorological observations published in America are those of the Argentine Meteorological Office, under the direction of Walter G. Davis, whose headquarters are at Cordova, in the middle of the pampas. The latest volume issued, number IX., is in two parts; the first giving the original observations at Cordova since 1872, the second giving the mean values determined from this important series of records. A notable climatic feature is the occurrence of a wet summer, October to March. and a dry winter, April to September, The summer rains are chiefly supplied by thunderstorms, yet curiously enough the rains exhibit both in quantity and in number of occurrences a distinct afternoon minimum and an early morning maximum; but the scale of cloudiness has its maximum toward midday, and in January in mid-afternoon. High barometric pressure confirms the continental quality of the winter dry season. Westerly winds are rare; northeast and southeast are common, the latter flowing feebly through the night, the former actively through the afternoon; and thus indicating the left-handed or austral deflection that might be expected with increased velocity in the southern hemisphere. The strong diurnal winds last from ten to five o'clock in late summer, but only from noon to three in midwinter; while the duration of the quiet winds of night plainly varies with the period from sunset to sunrise. Although the text and tables are most elaborate, the treatment of the subject is local, numerical and climatic, rather than general, descriptive and meteorological.

THE SPECIOUS TERM, 'REFORESTATION.'

THE hard times lately reported as afflicting some of the Western States in the debatable belt, where agriculture is an uncertain occupation, recall by contrast the over-confident opinions, so freely uttered by 'experts' before Congressional committees, concerning the improved climatic conditions that might be expected over the Great Plains as settlement advances. Governmental science will, we fear, suffer severely when the inaccuracies of this quasi scientific testimony are understood. Hardly less misleading than the loose phrases concerning 'the underflow,' from which an inexhaustible water supply has been looked for, is the term 'reforestation,' used with the implication that the barren plains of to-day have been forested in the past. One official has testified: "By the destruction of the forest which originally covered this region, the very condition of its existence and of its natural recuperation was destroyed; and thus, in a reverse manner, reforestation of parts by artificial means may make natural reforestation over the whole area possible by and by. . . . Reforestation on the plains and forest preservation on the mountains is of greater national concern than the location of irrigation reservoirs." There is no shadow of evidence that the Plains have ever been forested since their geographical surroundings were like those of to-day. It is a most gratuitous assumption to use the term 'reforestation' in writing of the Plains. It does harm to those who are tempted to settle there by these and other over-favorable views concerning the climate of the sub-arid region; and it discredits governmental science by exposing it to so easy contradiction.

W. M. DAVIS.
HARVARD UNIVERSITY.

ANNUAL RECEPTION OF THE NEW YORK ACADEMY.

THE New York Academy of Sciences last year instituted a series of annual receptions, suggested by the famous *conversazione* of the Royal Society of London. The first Reception was held in the Library of Co-

lumbia College. The second, held upon March 14th, in the Galleries of the American Fine Arts Society, was much larger and more successful than the first, including 331 separate exhibits, grouped under sixteen branches of Pure and Applied Science. In the South Gallery were placed Physics, Electricity, Astronomy, Mechanics and Chemistry; in the Middle Gallery, Photography, Psychology and Mineralogy; and in the Vanderbilt Gallery, Zoölogy, Palæontology, Human and Comparative Anatomy, Botany and Geology. Each branch was under a Chairman who had entire control of the the general arrangements, and while the exhibits were largely from the educational institutions and museums in and around New York a number of most interesting objects were sent from considerable distances, such as the photographs from the Allegheny and Lick Observatories. Among the very large number of excellent exhibits it is only possible to mention a few of the most novel.

Mr. Charles A. Post, of the Strandhome Observatory, had charge of the astronomy, in which he displayed photographs of star spectra between F. and D. from the Allegheny Observatory, glass positives of comets and the Milky-Way from the Lick Observatory, and a number of new spectroscopic and other astronomical instruments. Professor Mayer, of Stevens' Institute, had charge of the physical section, in which were shown his series of Chladni figures preserved in sand, illustrating the errors of older figures and the accuracy of Lord Rayleigh's theoretical deductions. A number of new physical instruments for spectroscopic and sound measurement were exhibited in operation by Professor Hallock from the Columbia Physical Laboratory. Professor Crocker had charge of electricity, in which were shown Professor Pupin's machines for producing alternating currents for multiplex telegraphy and other purposes, also E. H. Dickerson's acetylene illuminating gas produced from calcium carbide made in an electric furnace. The mechanical exhibit was in charge of Professor R. S. Woodward, and included models of the international prototype metres and kilogrammes, and several pieces of new mechanical apparatus. In the mineralogical exhibit, arranged by Dr. L. P. Gratacap, of the American Museum, was a series of Babylonian and Assyrian cylinders, illustrating the different minerals employed between 4000 and 300 B. C.; also an extensive display of new types of American minerals. The photographic exhibit, in charge of Dr. Edward F. Leaming, besides new apparatus from Zeiss of Jena, included all the recent applications of photography in color printing, and the combination of colors in lantern projection shown by the inventor, Frederic E. Ives, of Philadelphia. Dr. Leaming's micro-photographs of nervous and cellular tissues and of bacteria formed an important feature of this exhibit. The exhibit in experimental psychology was contributed by the department of experimental psychology of Columbia College. The apparatus has been recently made for the college, and with the exception of the harmonium was designed by members of the department. The harmonium was designed by von Helmholtz and Ellis to give pure intervals in place of the equal or tempered intervals used in musical instruments with fixed keys. The other apparatus shown was: (1) an instrument which measures the duration, intensity and area of lights, now being used for the investigation of after-images; (2) an instrument which measures the time (to 0.0001 sec.) objects are exposed to view, now being used to study the legibility of letters and types, and in an altered form to measure the perception, memory and attention of school children; and (3) a new chronograph of very high speed with fixed drum and movable carriage. Physiology was represented by a number of special ex-

hibits made by the Chairman, Prof. J. G. Curtis, and by Professor Thompson, of the New York University. The botanical exhibit, arranged by Dr. Carlton C. Curtis, included an extensive display of new plants from North and South America, Dr. Schneider's studies of lichens, and the morphological and embryological studies carried on under the direction of Dr. Curtis, by the students of Dr. Curtis and of Professor Gregory of Barnard College.

The American Museum contributed two extensive exhibits in Zoölogy and Palæontology, arranged by Professor Allen and Professor Osborn. The Zoölogical exhibit illustrated the rapid improvement in the modern methods of taxidermy by a series of comparisons of specimens of work just completed and that of ten years ago, the most notable being the preparation of the chimpanzee 'Chico' by Mr. Rowley. The results of the current field explorations of the Museum and the natural methods of group mountings were also shown by extensive exhibits. In vertebrate Palæontology the chief feature was three panels showing the stages in the evolution of the horse; first, of the modern skeleton in comparison with that of *Hyracotherium venticolum*, from the Cope Collection recently acquired by the Museum; second, a complete series of feet, and third, a complete series of skulls. Two newly discovered ancestral forms of Titanotheres from the Eocene were also shown, displaying the first rudiments of the great horns which characterize the latest surviving members of this group. The most noteworthy feature in invertebrate Palæontology was the collection shown by Messrs. Van Ingen and Matthew, of what appears to be a sub-Olenellus fauna from the lower Cambrian, in other words, the oldest fauna thus far discovered. Under Geology, as arranged by Professor J. J. Stevenson, was shown an extensive series of eruptive rock from the pre-Cambrian volcanoes along the Atlantic coast, besides many results of Prof. Kemp's field work. The Columbia biological laboratory contributed to the zoölogical exhibit a full series illustrating the Golgi silver nitrate nerve-cell preparations, together with the results obtained by the 'lithium-bicromate' and 'formalin' modification introduced by Mr. Strong, exhibitor. Professor E. B. Wilson, displayed his new series of fertilization stages of the Sea-Uchin, proving that the archoplasm is entirely derived from the spermatozoon. All of these cytological exhibits were accompanied by micro-photographs taken by Dr. Leaming. Dr. T. H. Cheeseman had charge of the bacterial exhibit, including principally a display of preparations by the new formalin method, and an illustration of the stages in the preparation of the anti-toxine treatment of diphtheria. In Anatomy, Professor Huntington displayed a unique series of 194 preparations, showing the comparative anatomy of the caecum and vermiform appendix throughout the vertebrata.

The Exhibit was open throughout the afternoon to students, and throughout the evening to guests of the Academy. The admirable arrangements were largely due to Professor Hallock, Chairman; Dr. Dean, Secretary, and Professor Lee, Chairman of the Reception Committee. The event fully justified the large amount of time and care which was given to its preparation, and in the opinion of all those who were present will prove a great stimulus to the various branches of research now in progress in New York. It has been informally decided to renew these receptions from year to year, and to attempt to give them a more national character by inviting exhibits from other parts of the country. The galleries of the Fine Arts Society, with unlimited wall space for the exhibition of charts and diagrams, with admirable means for electrical illumination for microscopic and other purposes, and

with very extensive floor space for tables, is exceptionally adapted to the needs of an extensive exhibition of the annual progress of science. HENRY F. OSBORN.

CORRESPONDENCE.

AN INTERNATIONAL SCIENTIFIC CATALOGUE AND CONGRESS.

EDITOR OF SCIENCE: *Dear Sir:*—In considering your very courteous invitation to contribute something of present interest to your valuable journal, it has occurred to me that I could not perhaps do better than to follow the example set in your issue of Feb. 15th, by the distinguished representatives of my *alma mater*, Prof. Bowditch and his committee, in their report to the Harvard University Council on the circular of the Royal Society, respecting the proposed International Catalogue. My letter of reply to this circular does not, as you will see, in any way conflict or interfere with the recommendations made in that excellent report. It deals almost entirely with other points in the circular which are not directly noticed in the report.

Should the suggestions which I have ventured to make, especially in regard to the meetings of an International Congress of Science in connection with the proposed Catalogue, be finally approved and carried into effect, they may lead to practical results of great importance. Such meetings, held from time to time—perhaps in various cities of the two continents—may not only bring together from all parts of the globe the most eminent votaries and friends of science in fraternal conference, but may help not a little, with other influences which are now constantly at work, in converting Tennyson's 'parliament of man' and 'federation of the world' from a poetical vision into a beneficent reality.

Yours faithfully,

HORATIO HALE.

CLINTON, ONTARIO, CANADA,
May 30, 1894.

GENTLEMEN: As you have honored me by addressing to me a copy of your important circular letter, in which you solicit from the recipient the expression of his views respecting the establishment of a 'Central Office or Bureau,' by 'international coöperation,' for the purpose of preparing and publishing, at brief intervals, a catalogue of all scientific publications of every description (whether appearing in periodicals or independently), I cannot, in due courtesy, decline to offer in response such considerations as occur to me, however inadequate they may seem in comparison with others which will reach you from better qualified correspondents.

That the proposed scheme is both highly desirable and abundantly feasible cannot reasonably be doubted by any one who is aware of the immense increase in the number of scientific publications of late years, and the equally rapid increase of scientific associations, public libraries and high institutions of learning, for most of which such a catalogue will be found of very great advantage and ultimately a necessity. The most convenient 'method of inaugurating the scheme' would seem to be by first ascertaining the probable annual cost, which can readily be judged through the experience already gained by the Royal Society in the publication of its annual 'Catalogue of Scientific Papers,' and then by appointing in each (presumed) contributing country, under some appropriate title, an 'Aid Bureau,' which should be an existing institution of high standing, and one that either is already, or can easily be placed, in touch with the chief scientific associations, colleges and public libraries of the country, and can ascertain the amount of contributions which could be obtained from them. In the United States, for example, such a suitable Aid Bureau at once presents itself in the Smith-