

The rain gauge at Hearne overflowed at 24 inches. The floods resulting from these extraordinary rainfalls were extremely destructive, as readers of SCIENCE will doubtless remember. Between 30 and 35 lives were lost, and crops and other interests suffered to the extent of millions of dollars.

VOLCANIC SMOKE AND THE PREVAILING WINDS.

The *Monthly Weather Review* for July contains an interesting note contributed by Curtis J. Lyons, of Honolulu, on the course taken by the smoke during the recent eruption on the island of Hawaii. This smoke rose to a height of about 30,000 ft. above sea level, and then floated off to the northeast, being carried in a horizontal direction by the anti-trades. It then sank to sea level about 600 miles from Hawaii, and was brought back by the northeast trade wind, covering the entire group of islands with heavy smoke fourteen days after the eruption. The S. S. *Mariposa*, on her voyage from San Francisco, met the cloud of smoke at the above distance from Honolulu. The smoke was overhead at first, and as the steamer proceeded it covered everything at sea level.

HURRICANE TRACKS IN THE NORTH ATLANTIC OCEAN.

The *Pilot Chart of the North Atlantic Ocean* for November gives the tracks followed by the centers of all the West Indian hurricanes which have occurred in the North Atlantic during the period 1890-1899. It appears from a tabulation of the 25 hurricanes noted during these years that the ideas which were formerly held regarding the recurvature of the storms of a particular month within certain narrow limits of latitude need some revision. The table shows that the hurricanes of September, instead of recurving between latitudes 27° and 29°, as formerly maintained, may in actual practice recurve in any latitude from 20° 20' N., to 33° 30' N., while those of October, instead of recurving in latitude 20°-23° N. may continue their northeasterly course until the parallel of 39° is reached.

TORNADO POWER.

As the result of studies of the amount of pressure necessary to bend the rods of certain

railroad switch targets, Mr. B. F. Groat comes to the conclusion that the velocity of the wind in the New Richmond, Wis., tornado of June 12th last was 134 miles an hour. Mr. Groat's paper is published in the *Monthly Weather Review* for July.

R. DeC. WARD.

HARVARD UNIVERSITY.

REPORT OF THE PRESIDENT OF COLUMBIA UNIVERSITY.

President Low's annual report to the trustees, after paying a tribute to the memory of Cornelius Vanderbilt and expressing thanks to Professor Van Amringe, who was acting president during his absence as a delegate to the International Conference of Peace, gives a clear and interesting account of the progress and present condition of Columbia University.

The cost of the new buildings and grounds was in all \$6,879,011. By the payment of President Low of \$600,000, completing his great gift for the construction of the Library, the debt against the new site is reduced to about \$2,975,000. There is also a debt against the College of Physicians and Surgeons amounting to about \$86,500. Although Columbia University has gained greatly by its removal in many ways, including a large increase to its funds by gifts for the grounds and buildings, it is evident that the interest, even though a large part of the debt has been refunded at 3 per cent., is a serious burden, and President Low states that the growth of the University is necessarily checked until this incubus is removed. As a matter of fact the University did receive liberal gifts during the year; \$73,494 for current uses and \$490,417 for endowment. The increase of the library during the year was 25,404 volumes.

The growth of the University, since the beginning of Mr. Low's administration nine years ago, is indicated by the fact that in this period the officers of instruction have increased from 170 to 339. This is not due to the multiplication of subordinate officers as the number of professors and adjunct professors has increased from 41 to 84. The number of students has increased from 1,753 to 2,208 although the growth has been checked by increasing the re-

quirements, as by adding a fourth year to the medical course and by reorganization of the Law School. A further growth is represented by the students of Barnard College and Teachers College, respectively 278 and 297, both established at the beginning of President Low's administration and now under the sphere of influence of Columbia University. If 1,173 extension students are added the total number under the immediate influence of the University is 3,985.

Among the important educational advances of the year may be mentioned the creation of a large number of scholarships in the place of free and reduced tuition, the establishment of a professorship of anthropology and an adjunct professorship of mechanical engineering, and the decision to conduct a summer session in 1900.

SCIENTIFIC NOTES AND NEWS.

WE record with great regret the death of Sir William Dawson, the eminent geologist and author, for twenty-eight years principal of McGill University. He was born in Nova Scotia in 1820 and died on November 19th.

THE University of Pennsylvania has appointed a committee to arrange with similar committees of other organizations for a memorial in honor of the late Professor Brinton.

THE Washington *Star* states that the orders recently issued in the case of Professor S. J. Brown, U. S. A., have been modified by the Acting Secretary of the Navy, so as to assign him to duty as astronomical director of the Naval Observatory, to take effect December 17th, instead of making him director of the Nautical Almanac, an office attached to that institution, as originally intended.

A COMMITTEE formed at the Dover Meeting of the British Association is making arrangements for an international meeting of scientific men in connection with the Paris Exposition of 1900. Those wishing to assist in this undertaking should address the assistant secretary, Mr. J. R. Marr, 5 Old Queen Street, London, S. W.

THE third annual meeting of the Society for Plant Morphology and Physiology, will be held, in conjunction with the meetings of the Ameri-

can Society of Naturalists and the Affiliated Scientific Societies at New Haven, on Wednesday, Thursday and Friday, December 27-29th.

FREDERIC W. SANDERS, Ph.D. (Chicago), formerly professor in the University of West Virginia, has been elected President and Director of the New Mexico College of Agriculture and Mechanic Arts and Agricultural Experiment Station at Mesilla Park, New Mexico.

DR. W. H. CORFIELD, professor of hygiene and public health in University College, London, has been appointed to the newly created post of consulting sanitary adviser to the British Office of Works.

MR. HORACE PLUNKETT, M.P., has been appointed vice-president of the new department of Agriculture and Technical Education for Ireland.

WE learn from *Nature* that at the recent annual meeting of the Royal Academy of Medicine in Ireland, the following men of science were elected honorary Fellows of the Academy: Sir J. Burdon-Sanderson, Bart., F.R.S.; Prof. Howard Kelly, Baltimore; Professor Koch, Berlin; Professor Kocher, Bern; Professor Th. Leber, Heidelberg; Sir W. MacCormac, Bart., K.C.V.O., London; Professor Martin, Berlin; Professor Nothnagel, Vienna; Professor Osler, Baltimore; and Sir W. Turner, F.R.S., Edinburgh.

DR. WILLIAM S. CHURCH, President of the Royal College of Physicians, London, has been elected an honorary fellow of University College, Oxford.

THE gold medal of the Highland Agricultural Society of Scotland has been awarded to Professor Cossar Ewart in recognition of his intercrossing and other experiments.

PROFESSOR H. S. CARHART of the Physics Department of the University of Michigan, who, as we have already stated, is in Berlin, has compared the standard Clark cell with the standard of the Physical Technical Institute and found that the electromotive force of the standard Clark cell does not differ more than one in twenty thousand from the average electromotive force of the standard cell of the institute.