are affixed and compounded to an indefinite extent. Gender is indicated by the affixes for male and female, and there is no distinction between animate and inanimate. The numeral system is decimal, and ends with *tapitrisa* (ended are the numbers), the word for a million. There are two moods of the verb,— the indicative and the imperative. There are two classes of personal pronouns,— the inclusive of the speaker, and the exclusive. Other peculiarities in grammar are pointed out by Dr. Parker in an exhaustive dictionary of fourteen dialects, which unite the Malagasy with the Malay stock-language. To account for this anomaly of race and language, Dr. Hildebrand supposes the Hovas to have first settled the island, and to have been overpowered by African marauders, who killed most of the Hova men, and married their wives. The children, learning their language from the mothers, perpetuated at the same time their African blood and their Malay language. But Dr. Parker seriously objects to this explanation. Mr. Keane is of the opinion that the Africans were introduced as slaves, who, while gradually corrupting the blood, would have little effect upon the language. Dr. G. Oppert also commented upon the paper. — (*Journ. anthrop. inst.*, xii. 478.) J. W. P. [38

The flora of ancient Egypt. — The student of anthropology is repeatedly charmed and surprised by the varied and brilliant illumination thrown upon his subject by sister sciences. He is not less pleased to know that quite frequently the light proceeds in the other direction, and that human custom preserves for other sciences their sibylline leaves. In 1881 Emil Brugsch Bey discovered in the vault of a king of the twentieth dynasty a large number of plants contained in the funeral offerings, repasts, and wreaths of the dead. Among these are several species not known to have belonged to ancient Egypt. Mr. G. Schweinfurth, deputed by M. Maspero, has studied these plants, and classified them in the Egyptological museum of Boulak, according to the high personages for whom they were intended. A very extended and interesting account of these labors was communicated to Sir Joseph D. Hooker, together with a set of the wreaths, flowers, etc., described. Excellent illustrations accompany the paper of Mr. Schweinfurth. These objects were exhibited at the annual *soirée* of the Royal society on the 25th of May, and are now on view at the Royal gardens, Kew. — (*Nature*, May 31.) J. W. P. [39

INTELLIGENCE FROM AMERICAN SCIENTIFIC STATIONS.

STATE INSTITUTIONS.

Missouri weather service, St. Louis.

Weather report for May. — The average temperature for May at the central station has been 63.4°, which is 2.8° below the normal temperature, and 3.5° above the temperature of May, 1882. Since 1837 the May temperature has fallen below that of last month five times. The extremes during last month at the central station were 38.0° and 88.4°; although, in the suburbs of St. Louis, the temperature fell to 36.0° on the evening of the 21st. In 1851 Dr. Engelmann observed a temperature of 29.0° in May, but it was in the early part of the month. The lowest minimum temperatures reported were, 29.5° at Centreville; 31.0°, at Big Creek, Warren county; 32.0°, at Steelville; all other stations reporting over 34.0°. The highest minimum temperatures are reported from Glasgow, 45.0°, and Harrisonville, 47.0°. The highest maximum temperatures reported were, Corring, 91.0°; Miami, 98.0°; Harrisonville and Big Creek, 90.0°. The highest average temperatures reported were, Cairo, Ill., 65.2°; Mascoutah, Ill., 65.0°; Harrisonville, 64.0°: the lowest being at Keokuk, Io., 59.9°; Macon, 60.4°; Louisiana, 60.5°.

The rainfall at the central station was 2.61 inches, which is 2.2 inches below the normal May rainfall at St. Louis. In western Missouri, however, from Harrisonville northward along the Missouri valley, the rainfall has been over seven inches; and a small maximum of over seven inches occurs in the region around Ironton. An area of minimum rainfall of between two and three inches occurs in south-west Missouri, around Greenfield and Lamar, and another occurs along the lower Missouri below Chamois, extending along the Mississippi as far south as Cairo.

On the 13th, tornadoes occurred at various points in Missouri and Kansas, as follows: the town of Oronogo, Jasper county, was destroyed at about 7.40 P.M., two persons being killed, and forty injured. This tornado is probably the one which passed about two miles north of Carthage. Hailstones as large as hen's eggs fell at Springfield at about 10 P.M. Another storm passed two miles south-east of Pattonsville, Davies county, on the same evening. Two tornadoes passed through Kansas City at 5 o'clock, one passing a few minutes later than the other. Several persons were killed, and a great deal of damage was done to property. These whirls were slender whip-like vortices, the diameter at the surface of the earth being only a few feet, although the destructive path was about seventy feet. These storms originated apparently in Wyandotte county, Kan., where they caused great damage. A later development of this storm passed through Macon City, one hundred and twenty miles east-north-east from Kansas City, where a tornado occurred about 8.30 P.M. The track was from one-fourth to three-eighths of a mile wide. Three persons were killed at Macon.

On the 18th, tornadoes occurred in Missouri, Illinois, and Wisconsin. At 7 P.M. a tornado did considerable damage at Berger, Gasconade county, Mo. At about 8.20 P.M. a tornado passed through Wentzville from the south-west, causing great destruction to property, and loss of life, as far as St. Paul, Mo. At about the same time a storm passed from Cottle-

ville, through Elm Point, to Grafton, on the Illinois shore of the Mississippi River.

Hail-storms have occurred as follows: at Big Creek, 10th; Centreville, 9th; eight miles north of Savannah, 3d; Hannibal, 9th; Louisiana, 9th and 10th (and at Springfield and Dover church, near Louisiana, large hail fell on the afternoon of the 18th); Lamar, 3d; Chamois, 9th, — a violent storm of wind and hail at 7 P.M., for seven to ten minutes, the hail completely covering the ground, some stones weighing six ounces. On the 18th, at 5.50 P.M., a dark cloud in the south-west moved to the west with a heavy roaring noise, appearing to spend its force when due west, rain and small hail following.

Killing frosts occurred on the nights of the 21st and 22d. At Big Creek great damage was done to wheat, corn, and fruit. At Centreville, at 9 P.M., on the 21st, the temperature was 32°, and fell later to 29.5°, — the latest frost in sixteen years. Fog prevented damage in the valleys of the Black River, but in the dry valleys every thing was killed. Louisiana, 32° at sunrise on the 22d; Chamois, destructive frost with ice an eighth of an inch thick in a pan of water; Greenfield, heavy frost, which injured foliage of forest-trees so that they looked as though scorched by fire.

White frosts occurred at Hannibal, Greenfield, Mexico, Chamois, 5th; Hannibal, Louisiana, Chamois, Miami, 11th; Ironton, 16th; over the entire state, 21st and 22d, but light in the south-west, where the temperature was about 40°; Mexico, Ironton (33° at 5.30 A.M.), Louisiana, Chamois, Miami, Greenfield, 23d; Sedalia, Centreville, Greenfield (heavy), Ironton, Chamois, Miami, 31st.

ADDENDUM to April report. — At Cairo a heavy shock of earthquake was felt at 2.36 A.M. on the 12th, which lasted thirty seconds. Vibrations, three per second, from south-south-west to north-north-east. An old one-story frame-building, which was occupied at the time the shock occurred, was shaken down and collapsed, the inmates receiving slight injuries.

Iowa weather service, Iowa City.

Weather bulletin for May. — May was remarkably cold, very rainy, with late frosts, westerly and northerly winds prevailing. The mean temperature of the air was nearly five degrees *below* normal. In forty-five years, May has been six times as cold or colder than this year; namely, in 1882, 1867, 1858, 1851, 1850, and 1849. The late frosts about the 12th and 22d were general.

The rainfall was much above normal throughout Iowa, except in middle northern Iowa and down the middle Cedar and Wapsipinicon valleys. The total rainfall was highest along the Mississippi and Missouri rivers, and from Wayne to Polk county: in the regions here specified, the rainfall averaged seven inches. The rain frequency was also high: two of every three days were rainy in most parts of the state.

The principal storm-days were the 8th and 9th, the 13th and 14th, 17th and 27th. On the 9th a very small tornado did slight damage in Linn county, near Norway station: on the other storm-days, Iowa was spared the visitation of tornadoes, which struck, on the 13th, Kansas City; 18th, Racine; 28th, southern Indiana.

While unusually cold and quite wet, the season is much more promising than last year, when May was much colder.

NOTES AND NEWS.

Stephen Alexander, professor emeritus of astronomy at Princeton, died June 26. He was born at Schenectady, N.Y., and was educated at Union college, where he graduated in 1824. Since 1840 he has been connected with Princeton, first as professor of astronomy, and later as professor of mechanics as well. As an astronomer he became widely known.

— Sir Edward Sabine, whose death has been lately announced, was born in Dublin, in October, 1788. He studied at the military schools of Marlow and Woolwich, and at the age of fifteen entered the English army. In 1813 he was made captain, and took part in the campaign on the Niagara frontier, commanding the batteries at the siege of Fort Erie, 1814. From 1818 to 1825 he made a number of voyages from the equator to the arctic regions for the purpose of studying terrestrial magnetism, the figure of the earth, and other questions in terrestrial physics. He was with Ross and Parry on the arctic expedition of 1818, and with Parry the following year. He edited a number of translations of scientific books, and published a large number of papers on his favorite studies, having read more than forty before the Royal society, and having contributed many to the proceedings of the British association. From 1827 to 1830 he was secretary of the Royal society, and president for the ten years 1861 to 1871, and president of the British association in 1853. In 1875 the French academy elected him as a corresponding member.

— A few weeks ago (April 26) *Nature* gave a sketch of the life of Spottiswoode. In the number for June 14 we find a regret expressed at his absence, on account of sickness, from the Royal society meeting of that week. On June 27 he died. Born in London, Jan. 11, 1825, he began his education in a private school at Laleham, and then at Eton and Harrow; his stay at Eton being short on account of some experiments with detonating mixtures, in which he was found to be interested. In 1842 he entered Balliol college, Oxford, where, in his last year (1845) as undergraduate, he read with the Rev. Bartholomew Rice. After graduation he held university mathematical scholarships for two years, and for a short time lectured on geometry of three dimensions. But he soon took an active part in the management of the large printing-business about this time resigned to him by his father, and which he largely developed. His scientific work was mainly in mathematics, although of late years he has devoted himself to physics, his recent investigations in electricity being well known. When a young man, he travelled widely, and, among others, published a very lively account entitled "A Farantasse journey through