discharged his duties, and served his king Osorkon II., of the twenty-second dynasty, whose monuments are very rare." — "Several fragments, with portions of the cartouche of Osorkon II." were also found, and "a hawk in red granite more than a metre high, bearing between his claws one of the cartouches of Ramses II., the presumed builder of Pithom." — (*Academy*, March 10.)

One ruin in Egypt has been fully explored. M. Naville, with sufficient funds at hand, has, in less than two months, 'completed the examination of Pithom.' The result has been the identification of the site, and the determination of some geographical and historical problems. Inscriptions in Greek and Latin prove Pithom to have been Hero, 'the storehouse,' and Heroöpolis, 'the store-city.' M. Naville says, "It was Ramses II. who was the founder of the city. He built the storehouse and the temple, but did not finish what he had begun. In the line of the Dromos we find great blocks of granite and of a hard calcareous stone, which had evidently been brought there to make some large tablets or statues, which have been left with marks of the sculptor only. The temple was small, and (the city being chiefly a storehouse and a fortress) had no reason to have many works of art." The Egyptian exploration fund, through the liberality of Sir Erasmus Wilson, has reaped the reward of employing a cool-headed Egyptologist of the first rank, and placing sufficient funds at his command to do his work quickly and thoroughly. — (*Academy*, March 17.)

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INTELLIGENCE FROM AMERICAN SCIENTIFIC STATIONS.

PUBLIC AND PRIVATE INSTITUTIONS.

Harvard university, Cambridge, Mass.

The chemical laboratory. — During his journey in Europe last year, the director added very materially to the means both of instruction and of research at the laboratory. A dynamo-electrical machine, with an adequate motor, has been placed in the basement of the building. The apparatus required for investigations in the new branch of the science, called thermo-chemistry, has been procured. Several hundred valuable specimens have been added to the mineral cabinet, and placed on exhibition in the cases; and a favorable opportunity enabled the director to procure, at small cost, several thousand characteristic mineral specimens for the use of students. It has been very difficult, hitherto, to procure suitable specimens in sufficient number and variety for the large class in mineralogy; and this want having been thus supplied, the laboratory teaching in this subject will be made more effective.

Museum of comparative zoölogy, Cambridge, Mass.

The Schary collection of fossils. — The most valuable accession received during the past year is the collection of Silurian fossils of Bohemia, brought together by the late J. M. von Schary, which has been purchased from his heirs. This collection is of the greatest value to American paleontologists, as it will give them the means of comparing the types of the great collections which have formed the basis of the works of Barrande and of Hall. Some idea of the magnitude of this collection may be formed from the fact that it contains over a hundred thousand specimens. Of these, probably two-thirds of the collection — no less than 1,231 species, representing 157 genera — are identified.

The Schary collection, taken in connection with those brought together from American localities, now makes the museum collection of paleozoic fossil invertebrates one of the finest in existence.

Peabody museum of American archeology, Cambridge, Mass.

Shellheaps on the coast of Maine. — The material obtained during last summer's explorations of shellheaps on the Damariscotta River and Muscongus Sound, is of special interest. At the heap on Keene's Point, considerable pottery was found, and an unusual number of stone implements. In addition to the ordinary implements made of bone, a harpoon-point was obtained, having two barbs and a perforation, showing that it was attached to a shaft by a string. In another heap, on Hodgdon's Island, Mr. Gamage found a similar perforated point with a single barb. These are believed to be the first specimens of this character from the Atlantic shellheaps; and they are of special interest, from their close resemblance to points from the North-western Coast. Most of the stone implements were rudely chipped forms; but one polished stone celt was found at some depth in the heap at Keene's Point. This deposit consists principally of clam-shells; although the valves of oysters, quahaugs, and scallops, were found, as well as the shells of Buccinum and Natica. Many broken bones of animals were abundant. The most common were those of the deer, moose, and bear; but those of the fox, otter, skunk, beaver, seal, and several other species of mammals, are noted; also the bones of several species of large birds, those of a turtle, and several species of fishes, as the codfish, flounder, devil-fish, and sturgeon. Human bones were obtained from a shellheap on Fort Island; and portions of a human skeleton dug out of the great oyster-heap at Newcastle were secured. A spear-point of bone was found by Mr. Phelps, about one foot below the surface, in the Keene's Point heap; and above it, just under the sod, he found an iron point of nearly the same size and shape, which was probably made out of a piece of hoop iron in imitation of the earlier bone implements. An iron spear and an iron axe of very old form were also found in the shells near the surface of the deposit, which, with a small clay pipe of a kind made in England about the middle of the seventeenth century, found also by Mr. Phelps ten inches deep in the shells, show that this particular deposit was added to by the Indians after contact with the whites, though there can be no doubt that it was commenced long before that time.

State university of Kansas, Lawrence.

Weather report for March. — The temperature, rainfall, cloudiness, and wind-velocity were below the March averages. An occurrence unprecedented in Kansas was the continuous cloudiness of the last eight days of the month, during seven of which the wind did not change from a north-east direction.

Mean temperature, 40.90°, which is 0.90° below the average March temperature of the fifteen preceding years. The highest temperature was 69°, on the 17th and 22d; the lowest was 16°, on the 19th; monthly range, 53°: mean temperature at 7 A.M., 34.84°; at

2 P.M., 48.64°; at 9 P.M., 40.08°. The mercury fell below the freezing-point on thirteen days.

The first blossoms of the white maple (Acer dasycarpum) were observed on the 1st; of the white elm (Ulmus Americanus), on the 8th; and of the dog-tooth violet (Erythronium albidum), on the 23d; these dates being considerably later than usual.

Rainfall, including melted snow, 1.28 inches, which is 0.96 inch below the March average. Rain or snow, or both, fell on eight days, on one of which the amount was too small for measurement. The snow was at no time more than sufficient to whiten the ground. There was one thunder-shower. The entire rainfall for the three months of 1883 now completed has been 4.32 inches, which is 0.39 inch below the average for the same period in the past fifteen years.

Mean cloudiness, 48.92 % of the sky, the month being 0.96 % clearer than usual. Number of clear days (less than one-third cloudy), 13; entirely clear, 4; half-clear (from one to two thirds cloudy), 8; cloudy (more than two-thirds), 10; entirely cloudy, 8: mean cloudiness at 7 A.M., 49.03 %; at 2 P.M., 50.64 %; at 9 P.M., 47.09 %.

Wind: N.E., 30 times; N.W., 24 times: S.W., 23 times; S.E., 7 times; N., 4 times; W., 3 times; E., once; S., once. The entire distance travelled by the wind was 12,080 miles, which is 2,728 below the March average. This gives a mean daily velocity of 389.68 miles, and a mean hourly velocity of 16.24 miles. The highest velocity was 50 miles an hour, on the 18th.

Mean height of barometer, 29.164 inches; at 7 A.M., 29.181 inches; at 2 P.M., 29.147 inches; at 9 P.M., 29.164 inches; maximum, 29.774 inches, on the 3d; minimum, 28.630 inches, on the 18th; range, 1.144 inches.

Relative humidity: mean for month, 65.6; at 7 A.M., 75.4; at 2 P.M., 49.4; at 9 P.M., 72.0; greatest, 100, on the 24th; least, 21, on the 17th. There was no fog.

NOTES AND NEWS.

— It will be remembered that the great comet of 1882 was first noticed by railroad employees in the Argentine Republic, and that Dr. Gould's attention was called to it as seen Sept. 6. On Sept. 7 it was seen at the Cape of Good Hope and in Australia; and on the 11th, Cruls saw it at Rio, and cabled its discovery. Finally, A. A. Common of London announced its discovery in England on Sept. 17.

By the courtesy of Prof. E. C. Pickering of Harvard college observatory, we are allowed to publish the following translation of a letter from the director of the observatory at Chapultepec to the secretary of state and interior of Mexico, which shows that the comet was seen in Mexico on Sept. 14.

I have the honor to communicate to you, that this day, between five and six in the morning, there has been observed at this observatory, by Felipe Valle, a comet which was seen yesterday by Francisco Toro, an employé of the central meteorological station.

The data which Sr. Valle has been able to collect are the following: the approximate position of the comet was 10h. 30s. right ascension, and 1° 15′ declination south, placing it, consequently, in the constellation Sextaus Uraniae, a little below and about half way between α Hydrae and α Leonis (Regulus), with which stars it forms a nearly right-angled triangle. Its nucleus appears as a star of the second magnitude, having a strong resemblance to Mars, both on account of its red color and its brilliancy. The nucleus is separated entirely from the coma, both this and the tail having a transparent yellow color. The tail is 5° to 6° in length. The breadth of the coma is about 1′ 3″, and, of the nucleus, about 40″. The tail has sharply defined edges, and is straight at its origin, but appears to bend further on, with the convex side towards the zenith. The comet appears on the horizon at 5h. 12m., and can be seen by the naked eye up to 5h. 40m.; that is, eight minutes before sunrise; but with the telescope of our altazimuth instrument, using a magnifying power of thirty-nine diameters, it can be seen even fifteen minutes after the sun is up.

I shall give you information in regard to our future observations.

Chapultepec, Sept. 14, 1882.

— The Philosophical society of Washington, at its meeting March 24, listened to an account, by Prof. J. R. Eastman, of the methods and success of the Florida expedition for observation of the transit of Venus, and to an historical and critical review, by Professor Cleveland Abbe, of methods of determining the temperature of the air. A communication from Professor Charles E. Munroe described a method of ascertaining the specific gravity of solids by means of the hydrometer.

— A mathematical section of the Philosophical society of Washington has been formed. At the meeting held March 29, Professor Asaph Hall was elected chairman for the year 1883, and Mr. Henry Farquhar secretary. Mr. Alex. S. Christie read a paper on 'A quasi general differentiation,' which was discussed by Messrs. C. H. Kummell and E. B. Elliott.

— Mr. Albert E. Menke has been elected to the professorship of agriculture and agricultural chemistry in the Kentucky state college.

— The Ohio weather bureau has decided on a set of signals which will be displayed on the sides of the baggage-cars of moving trains. A red sun will indicate higher temperature; star, stationary; and moon, lower. A blue sun, general rain or snow; star, local rain or snow; and moon, clear or fair weather. These signals will be placed, one above the other, on a white ground, and will be as large as the space will allow. It is believed that they can be distinguished at a considerable distance.

— The Boston society of natural history has just issued a list of its officers and members, — the first that has been printed for fifteen years. It shows that its resident membership has fallen in that period from 492 to 422. Women have been admitted to membership, and a new class added of associate members, through which all must pass on their way to corporate membership. In the same way its list of honorary members has fallen from 31 to 20, and of its corresponding members from 228 to 109. The latter lists have clearly been strengthened by the decrease.

— A treatise on projections by Dr. Thomas Craig has been published by the U. S. coast and geodetic survey in a quarto volume of 247 pages.