NOTES AND NEWS.

THE third field-meeting of the Indiana Academy of Sciences will be held at Greensburg, Ind., May 8, 9, and 10. The first meeting will be held at 7.30 P.M., Wednesday, May 8, at which time, in addition to miscellaneous business, a popular address will be delivered by Dr. J. P. D. John, the retiring president, upon "Our Celestial Visitors." As important business is to be transacted at this meeting, it is very desirable that as many members report as possible. It is particularly desired that all the members of the executive committee and of the committee on meeting of the American Association for the Advancement of Science at Indianapolis be present. The next day, Thursday, May 9, will be spent in the field along Cobb's Fork of Sand Creek. The citizens of Greensburg will furnish carriages. The creek will be followed for about four miles. Here are to be found the rarest plants of the county; the junction of the Lower and Upper Silurian, rich in fossils; and as much zoölogical material as can be found in the region. It will be a very profitable trip for all departments of field-work. Returning to Greensburg in the evening, another public meeting will be held at 7.30 P.M. This meeting will be of a somewhat varied character, consisting of brief reports by different members of the academy upon results of the field-work of the day. The meeting will be of special interest to the citizens of Greensburg, as they will hear discussed, in a popular way, the most interesting scientific features of their own vicinity. Friday morning another excursion will be made, as interesting as that of the day before. The details have not been fully determined, but every thing will be arranged for. This excursion of Friday will close the work of the academy.

— The abandonment of silk-culture in California, according to *Bradstreets*, is foreshadowed by the action of the governor of that State in vetoing an appropriation of ten thousand dollars made by the legislature to carry on experiments in that direction. The reason given is that California cannot compete with China or Japan in that industry.

— The solid matter present in mineral oils has recently been examined, says London *Industries*, by J. A. Le Bel, who has satisfactorily established the fact that asphalt obtained from petroleum and bitumen contains, in addition to an oxidized organic coloring-matter, a large percentage of inorganic constituents. The ash from a specimen of asphalt obtained from mineral oil procured from Egypt contained 11 per cent of lime and sulphur, while the asphalt derived from the Crimean oils yielded 6 per cent of ash. Purified asphalt from Lobsann, in Alsatia, gave 5.4 per cent of ash, consisting of lime, oxide of iron, silica, sulphuric acid, and a trace of manganese. The presence of silica in the ash, the author considers, supports the hypothesis of Mendelejeff, that the mineral oils are formed by the action of steam on the heated rocks of the interior of the earth. In the asphalt from Lobsann, Le Bel has also obtained 4.9 per cent of sulphur in combination with silicon.

— The manufacture of artificial coffee from burnt flour or meal is reported to be carried on by certain firms in Cologne. London *Industries* explains that the artificial beans are made in specially devised machines, and resemble closely in appearance the natural ones. They have been examined by O. Reitmair, who has shown that they consist of 34.6 per cent of extract soluble in water, mixed with 56.25 per cent of insoluble organic constituents. The amount of ash on ignition is small, amounting to 1.10 per cent. They can be readily distinguished from the natural beans by their property of sinking when immersed in ether, as genuine coffee-beans float on that liquid. Strong oxidizing agents do not decolorize the artificial product so rapidly as natural coffee.

— A correspondent of *The American Field*, after reading Greener's "Modern Shot Guns," noting that the author states that he has never known of snow causing the bursting of a gun when gotten in the barrel, vouches for its having done so in one instance, and believes it will in most cases, with ordinary charges, if the snow completely plugs the end of the barrel, though it may not cause as bad a burst as a more solid substance, as mud. Some years ago, while shooting with an English-made muzzle-loader, this correspondent got a small quantity of snow in one barrel, and carelessly discharged the gun before removing it, with the result that about an inch of the metal at the end of the barrel was torn away at top and side (being twisted and bent over toward the outside of the barrel). The recoil was not very great. The gun was a heavy one, with good-quality barrels, and the charge only ordinary or rather below the average. Doubtless the result would have been worse with more than a small quantity of snow in the barrel. The barrels were cut off below the break, and have been used many times since.

— Dr. A. T. Hudson of Stockton, Cal., has made a statement which, in the opinion of *The American Field*, will be contradicted by scores of people. Dr. Hudson asserts that whiskey is no antidote for rattlesnake-poison, on experiments made by Dr. S. Weir Mitchell. He says, "Dr. Mitchell mixed the virus of the rattlesnake with alcohol and with other reputed antidotes, and found, on injecting the solution into animals, that its power was not altered. He found also that the effect of the virus was subject to very well defined limits, and that a quantity which would kill an animal of a certain size was much less powerful or inert upon larger animals. If a large snake should bite a goat of about fifty pounds weight, and afterward two children of corresponding weight, he might kill the goat, while the children would survive, because not enough virus was left after the goat was bitten seriously to harm the children; then, if whiskey were given to the children, their recovery would be attributed to it, while it really had nothing to do with the matter. It is rare that an adult person dies from the bite of a rattlesnake. Whiskey may, however, be regarded as physiologically antidotal, in so far as it will sustain the flagging powers while the poison is being eliminated by the excretory organs."

— For a long time the quarters occupied by the live animals at the Smithsonian Institution, Washington, D.C., have been infested by rats; and every means known for their destruction or extermination have been used, but all to no purpose, as the rats are steadily increasing in number. They seem to know what rat-traps are for, and keep out of them, no matter how tempting the bait. But last week, according to *The American Field*, Capt. Weedin, who has charge of the animals, made a valuable discovery, by means of which he expects to clear the place of these destructive vermin. In a storeroom drawer a quantity of sunflower-seeds, used as food for certain of the birds, was placed, and it was noticed that the rats eagerly gnawed their way through the drawer to get at the seeds, which they evidently relished. Acting on this supposition, Capt. Weedin baited his rat-traps with the seeds, and there was no more astonished man in Washington than he was when he discovered, the next morning, that every trap so baited held from ten to fifteen rats each. The rats were turned into the cages containing the weasels and minks, which did the killing in less time than it takes to tell it. The minks would kill the rats instantaneously.

— The Ventura Society of Natural History was organized in San Buena Ventura, Cal., in June, 1884. It numbers about fifty members, and holds its meetings once a month. The society has made collections in minerals, fossils, conchology, botany, etc. Rev. Stephen Bowers, Ph.D., has been president of the society from the time of its organization. Congressman Vandever and other prominent men are active members; and while but a small proportion of its members have time for original investigation, yet it is said to be doing good work in some departments of science. Dr. Bowers has been instrumental in securing one of Mr. Alvan Clarke's best six-inch lens telescopes, which will be erected upon an eminence north of the city overlooking the Santa Clara valley of the south, the Pacific Ocean, and the coast range of mountains.

— A very interesting report to the United States Hydrographic Office from Commander Allen D. Brown, U.S.N., commanding the U.S.S. "Kearsarge," shows an abnormal state of the weather and ocean-currents about Barbadoes. From March 16 to 25 the trades disappeared entirely, being replaced by calms and light variable winds, chiefly from the westward, with frequent rain-squalls, — most unusual weather. March 19 and 20, strong south-easterly currents were observed (to the southward and eastward of the island), thirty and twenty knots a day respectively; March 29, between Barbadoes and Martinique, a current setting due north, ten

knots in fourteen hours; and in the passage between Martinique and Santa Lucia, four knots in one hour, and eight in four hours. Both the last two observations were by bearings.

— The International Congress of Anthropology and Archæology will hold its tenth meeting at Paris. When the congress adjourned at Lisbon, in 1880, no arrangements were made for future sessions. Notwithstanding numerous endeavors to bring about a new meeting, the congress did not assemble for eight years. In July, 1888, a number of French anthropologists, who considered the great International Exhibition a good opportunity of re-organizing the congress, proposed to the permanent committee of the congress to arrange for a meeting in the present year. A committee was appointed, the president of which is the eminent anthropologist, A. de Quatrefages, and invitations have been sent out. The congress will hold its tenth meeting at Paris from Aug. 19 to Aug. 26. The following questions are proposed as subjects of discussion by the committee: (1) the erosion and filling of valleys and caverns in reference to the antiquity of man; (2) the periodicity of glacial phenomena; (3) art and industry of the caves and of the alluvium; value of paleontological and archæological classifications applied to the quaternary epoch; (4) chronological relations between the stone, bronze, and iron ages; (5) relations between the civilization of Hallstadt and other Danubian stations, and those of Mycenæ, Tiryns, Issalik, and of the Caucasus; (6) critical examination of quaternary crania and bones found during the past fifteen years; ethnical elements of the various stone, bronze, and iron ages of central and western Europe; (7) ethnographical survivals, which may throw light upon the early inhabitants of central and western Europe; (8) how far do archæological and ethnographical analogies justify the hypothesis of affinities or prehistoric migrations?

— At the meeting of the New York Academy of Sciences, April 22, Mr. John C. Henderson read a paper on the proposed Tehuantepec Ship Railway. Mr. Henderson's paper was followed by an interesting discussion, which is reported in *The Railroad Gazette*. Gen. Andrews said that canals had played a conspicuous part in past history, and even now they have not fallen into disuse, and in countries of a lower grade of civilization, such as China, they are the chief arteries of commerce. It is estimated that the traffic on the canals of China equals, or perhaps exceeds, the combined commerce of all the rest of the world. But progressive nations are abandoning canals, and substituting railroads. Experience proves that railroads can work cheaper than canals. If New York State should fill up her Erie Canal, and build a four-track railroad, she could haul freight over it cheaper than the canal-boat can carry it. Estimates which he regards as incontrovertible show that a ship can be hauled by a locomotive over a ship-railroad, or, as he prefers to designate it, a ship-tramway, with the expenditure of only one-half the amount of coal which the same ship must burn to propel herself through the water of a canal. The most frequent objection urged against the practicability of the scheme is that it would rack the ship; but Gen. Andrews explained that the weight is so distributed among the numerous supports that no one need sustain a greater weight than a man presses upon his foot in walking. The gradients of the route will be very slight, not exceeding two inches in four hundred feet, the entire length of a vessel. He had made observations, during a voyage aboard the steamer "Britannic," to measure the amount of strain to which she was exposed in a sea of no very great roughness, and found by stretching cords that the steamer was bent sixteen inches by the waves, but without the slightest injury: hence he infers that the stress on a vessel in crossing the isthmus would be inappreciable and harmless. A powerful argument, he holds, in favor of the Tehuantepec route, is that it is the nearest to this country, and is in the region of winds, so that sailing-vessels could use it; whereas Panama is almost a dead calm, and even Nicaragua is not to be depended on by sailing-vessels. The result of opening either of the southern routes, therefore, would prove to be, as the Suez Canal has already proven, that the route would be monopolized by British steamers, and that the American flag would not be seen. President Newberry said that the proposed scheme appears to be practicable, but that it is so novel as to seem to require the test of experience before we can be certain that all practical difficulties will be successfully met. The smaller ship-railroad from the Bay of Fundy to the Gut of Canso is being rapidly constructed, and will probably be in operation by about September, 1890. The results will be watched with interest, and, if successful, the larger work at Tehuantepec will undoubtedly soon follow.

— It is stated, that, notwithstanding the threatened opposition of the English Government, the Channel Tunnel Company will proceed with the bill which it proposes to bring before Parliament, and take a division upon next session. It is said that since last year the promoters have received great encouragement to proceed, particularly from a large number of persons connected with the manufacturing and commercial centres of England and Scotland. They have also in many cases been promised the support of several members of Parliament. The following from *Iron* (London) gives the present status of the tunnel: "The machinery which was used for boring the tunnel is still in the heading, and is periodically set in motion to keep it in order; but no attempt is made to advance the heading, the length of which measures about 2,100 yards. It is now two years since the works were stopped; and the tunnel is said to be so far impervious to water, that, on an average, not more than 400 gallons has found its way into the entire heading in the course of twenty-four hours. The boring operations for coal near the mouth of the tunnel still continue, and a depth of about 1,000 feet has now been attained. The character of the strata is such as to encourage the continuation of the operations in the hope of ultimately finding coal. While the prosecution of the borings for coal ought to be encouraged in every way, the same cannot be recommended for the tunnel-works. In the present state of public opinion, the money spent that way will only be wasted."

— An alarming illustration of the facility with which steel corrodes under certain conditions, the *Engineer* says, has just been observed at Portsmouth, England. H. M. S. "Nile" was launched at Pembroke on the 27th of March last, since which time, as there is no dock accommodation at the Welsh yard, she had been afloat in her launching trim without there being any opportunity afforded of examining and protecting the under-water parts of the hull. When she was placed in No. 13 dock at Portsmouth for the purpose of removing the launching gear, and changing her temporary propellers, it was discovered that the red lead with which her bottom was coated had extensively peeled off, and that serious corrosion of the plating all along the water-line on both sides had taken place. The starboard side amidships was very much pitted, though, as a rule, the pitting and scoring were tolerably uniform. The rivet-heads were greatly corroded, and in many instances they appeared to be completely eaten away. The same is said to be the case with some of our new steel war-vessels, the steel being extensively pitted, especially along the water-line.

— Although West Indian hurricanes may be encountered during any month of the year, yet there is such a marked increase in their number and violence during July, August, September, and October, that these four months constitute what is called the hurricane season. In regard to the hurricane regions, the United States Hydrographic Office says that they include the tropics north of the 10th parallel, the Caribbean Sea, Gulf of Mexico, and a broad belt curving north-westward from about St. Thomas, and following the Gulf Stream towards the Grand Banks of Newfoundland. The earliest indications are unusually high barometer, with cool, dry, fresh winds, and very transparent atmosphere; a long, low ocean-swell from the direction of the distant storm; light, feathery plumes of cirrus clouds, radiating from a point on the horizon where a whitish arc indicates the bearing of the centre. Unmistakable signs are the following: As the cirrus-veil spreads overhead, with halos about the sun and moon, the barometer begins to fall, slowly but steadily, and the ocean-swell increases; the air becomes heavy, hot, and moist; dark red and violet tints are seen at dawn and twilight; the heavy cloud-bank of the hurricane soon appears on the horizon, like a distant mountain-range; the barometer falls more rapidly, and the wind freshens, with occasional squalls of fine, misty rain. As regards the general size and velocity of progression, the storm area is smaller in the tropics than farther north, the

cloud-ring averaging about five hundred miles in diameter; and the region of stormy winds, three hundred miles, or even less. In low latitudes the entire storm moves westward and north-westward, about seventeen miles an hour; in middle latitudes, north-westward and northward, moving more slowly as it recurves; and finally north-eastward, with a velocity of translation of twenty or even thirty miles an hour, its area increasing rapidly as it follows the Gulf Stream toward the Grand Banks, and sweeps across the Atlantic toward northern Europe.

— The weather forecasts for May of the Hydrographic Office are, that fair weather will prevail generally over the North Atlantic with occasional northerly gales along the American coast, and moderate north-westerly gales along the transatlantic steamship routes, north of the 40th parallel. Northers in the Gulf of Mexico will occur less frequently, and be of less duration, but are liable to be of great violence. There will be a notable increase of fog off the Grand Banks, due to the northward movement of the Gulf Stream and the southward extension of ice brought down by the Labrador current. Icebergs and field-ice may be encountered almost as far south as the 40th parallel, between the 41st and 58th meridians.

— A large assemblage of men and women who are interested in the discussion and study of psychological matters gave Professor Elliott Coues a hearty reception at Cartier Hall, 80 Fifth Avenue, New York, Wednesday evening, April 24, when he lectured on modern miracles.

— The semi-annual meeting of the American Antiquarian Society was held at Boston, April 24. President Salisbury presided. The secretary reported the acknowledgment by Gladstone of his election as a member of the society. The report of the treasurer made the following showing: cash investments, $107,141; cash on hand, $7,609; amount of the thirteen funds, $105,937. On motion of Senator Hoar, the society voted to ask the Rev. Dr. Hamlin to prepare a history of the Roberts College, Constantinople, together with the attitude of the Turkish Government toward it.

— The executive committee of the International Exhibition of Geographical, Commercial, and Industrial Botany, to be held at Antwerp in 1890, we learn from *Nature*, has decided to celebrate on this occasion the three hundredth anniversary of the invention of the microscope. It proposes to organize what it calls a retrospective exhibition of the microscope, and an exhibition of instruments produced by living makers. Conferences relating to all important questions connected with the microscope will also be held. The exhibition ought to be remarkably interesting, and will no doubt be a great success.

— According to a recent statistical return, 12,486,407 hectolitres (hectolitre = 22 imperial gallons) of beer were produced last year in Austria, Bosnia, and Herzegovina, — a falling-off of 190,019 hectolitres as compared with 1887. The exports, however, increased by 9,087 hectolitres, having amounted to a total of 250,963 hectolitres.

— Professor Liebreich, at a meeting of the Berlin Physical Society, March 22, exhibited a series of experiments intended to explain the occurrence of the inert layer in chemical re-actions. Two years ago, we learn from *Nature*, he had demonstrated to the society the chief phenomena of its occurrence, as seen when a solution of sodium carbonate is mixed with chloral hydrate. When this is done, the larger part of the mixed fluids very soon becomes milky, owing to the formation of innumerable small drops of chloroform, while at the same time a thin layer on the surface of the fluid remains clear. This clear portion is the inert layer, and is bounded above by the general meniscus of the mixture, and below by a curved surface, whose convexity is turned upwards towards this meniscus. The speaker had, by means of a series of experiments, disposed of the view which had been put forward, that the inert layer is only a portion of the mixed fluids, from which the chloroform had evaporated. Of these experiments it may suffice to mention only one, in which the fluid was poured into a flat, open basin until it projected with a convex surface above the edges of the basin. Notwithstanding the larger fluid-surface thus exposed, no inert layer was to be seen. Similarly he had been able to show, by observations under the microscope, that the phenomenon cannot be explained by any vortex movements in the fluid. Further, the assumption that it is due to a solution of alkali from the glass, which then prevents the precipitation of the chloroform, had been excluded by using a vessel made of quartz crystal. Professor Liebreich inclined to the view, on the basis of his past experiments (which, however, must be further followed and extended), that the suppression or slowing of the chemical re-action at the surface of the fluid, which gives rise to the inert layer, is determined by the greater solidity and resistance of this part of the liquid.

— At the Massachusetts Agricultural College Experiment Station, according to *Garden and Forest*, pollen was taken from a carnation-flower of a magenta color, and, after being kept in a dry place for five days, was applied to the stigmatic surfaces of a yellow flower. From twenty-seven seeds obtained by this crossing, nineteen plants were grown, all but one of which produced double flowers. Five of them bore yellow flowers of various lighter and deeper shades, eight bore magenta flowers, four bore scarlet flowers, and two white-striped flowers. In another trial the pollen used was taken from a flower of the same variety, — in this case a yellow-striped one, — and the seedlings all showed yellow-striped flowers, although they varied somewhat in shade. This seems to indicate that for the production of varieties distinct in color, cross-fertilization is a necessity.

— *Garden and Forest* quotes this simple method of testing the quality of a pear: write a name with pen and ink upon the dry skin of the fruit. If the ink is quickly absorbed, leaving clear, sharp lines, the quality of the fruit is good; if the skin does not absorb the ink quickly, and the lines are blotted, the quality in inferior.

— Four articles have been prepared at Harvard College Observatory in successive years, with the object of exhibiting, so far as conveniently practicable, the recent progress of observations of variable stars. These articles were published in the "Proceedings of the American Academy of Arts and Sciences." An index to observations of variable stars, just published, is intended to provide similar information for the entire period from the beginning of 1840 to the end of 1887. It makes no pretension to absolute completeness, which would not at present be attainable; but it may still prove serviceable as a further step towards the systematic arrangement which is so much to be desired in the existing mass of information respecting variable stars, and in the absence of which the profitable study of their changes is extremely difficult. The observations are in general unpublished, and have been reported to this observatory by the astronomers who made them. It may be hoped that this record of their existence will in some cases insure their preservation, and make them available to future inquirers. It will also show to what extent particular variable stars have been observed at particular times, and will thus serve to guide observers in the selection of stars for future observation. Three large series of unpublished observations by Argelander, Heis, and Schmidt, important both from their early date and from the reputation of the observers, are mentioned.

— Mr. C. Carus-Wilson writes, in a letter to *Nature*, that he has devised a simple and effective dry method by which the denser minerals — zircon, rutile, tourmaline, etc. — may be separated from sand. A piece of cardboard about two feet long is bent in the form of a shoot or trough (it must not be allowed to break), and held in this form by elastic bands at either end. This must then be held, or fixed, at an angle sufficiently inclined to allow the sand to travel slowly down the shoot on being gently tapped. A small quantity of the sand to be treated is now placed at the head of the trough, which is then tapped with the finger. When the trough is tapped, the sand travels slowly down; and, in doing so, the denser grains lag behind, forming a dark mass in the rear of the stream. This dark mass increases as the sand flows on, and must be collected and placed in a receptacle just the moment before the last tap would cause it to fall off the trough. When a sufficient quantity of this denser sand has been thus collected, it should be placed in the lid of a cardboard box (about twelve inches by six), and gently shaken to and fro at a slightly inclined angle, the mass being

at the same time gently blown upon with the breath. The finer quartz-grains will thus be blown away, and hardly any but the denser grains will remain.

— During last year the archæological researches that have been carried out in Norway were extended as far north as 70° 15′ north latitude, according to *Nature*. The results appear to show that the islands and the coast were well populated in prehistoric times, but that the cultivation of the soil did not begin until a late date. Numerous burial-places were found; and among the weapons and implements discovered were schist arrow-heads, knives of three kinds, and chisels. No stone axes like those found in the south were discovered. From the fact that no bronze objects have ever been found in the north of Norway, it is concluded that the inhabitants of the stone age, on coming in contact with those of the early iron age, adopted the use of iron, and never learned the use of bronze. It is worthy of note that all the implements from the stone age are of schist, none being of flint, as in the south.

— At a meeting of the Berlin Physical Society, March 22, Dr. Assmann gave, according to *Nature*, an account of the results he had obtained by a microscopic examination of the structure of rime, hoar-frost, and snow. In opposition to the view most usually held, that the solid condensations of aqueous vapor from the air are crystalline, he had observed some years ago, during a sojourn in winter on the Brocken, that hoar-frost consists of amorphous frozen drops, which, by their juxtaposition in rows, build up the long needles of which it is composed. He observed the same structure in some rime which he had collected from very various objects in December last, during a cold which was not at all intense; in this case, also, the spicules of ice were composed of amorphous drops of ice frozen together in lines. In one case the little masses of ice which composed the rime were frozen together into a leaf-like structure. At the same time some small, scattered, and glittering ice-formations which had been formed in large numbers on the ground were crystalline in structure, consisting of thicker or thinner six-sided tablets or somewhat elongated prisms. On other occasions he found that the rime was itself composed of unequally developed crystalline structures, which branched at angles of sixty degrees, and thus gave rise to a dendritic formation; at the same time the hoar-frost was also composed of crystalline structures. He had also succeeded in forming ice-flowers artificially on a pane of glass, and had satisfied himself by a microscopic examination of the same that they are always crystalline in structure. The structure of snow was investigated on the snow-garlands which had been described at a meeting of the Meteorological Society, and consisted of amorphous granules, such as compose the upper surface of a glacier. Dr. Assmann attributes the formation of rime and of hoar-frost to the existence of over-cooled drops of water, which suddenly solidify when driven by the wind against the solid substructure on which they are found. On the other hand, solid transparent ice is formed when water at 0°, or some temperature above zero, comes in contact with any solid object whose temperature is very low.

— At a meeting of the Berlin Meteorological Society, April 2, Professor Börnstein spoke on the ebb and flow of the tide. After explaining the nature of the moon's action on the fluid part of the earth's surface, and showing that the flood is essentially due to a diminution of gravity and the ebb to its increase, says *Nature*, he passed on to the consideration of the moon's attraction as it affects the atmosphere. Many experiments have been made with a view to proving the influence of the moon on the atmosphere; and at various places observers have succeeded in establishing a daily variation in the pressure of the air dependent upon the moon, and showing two maxima and two minima. These places are Singapore, St. Helena, Melbourne, and Batavia. The amplitude of the variation amounted to from 0.079 to 0.2 of a millimetre. But opposed to these are the observations of Laplace on the variations of the barometer in Paris, as also of Kreil in Prague, and, further, Bessel's observations on atmospheric refraction. All these last-named observers found that the action of the moon on the earth's atmospheric envelope was either *nil* or else the reverse of that described above. Professor Börnstein then discussed the question whether any ebb and flow of the atmosphere could possibly be detected with the means now at our disposal, and showed that the mercurial barometer can never be able to give indications of any such action, since it is itself affected by the alterations of gravity which are due to the varying position of the moon. He explained the phenomena observed at the four stations mentioned above as due to the fact that they are situated either on the sea-coast or on islands, at places on the earth's surface at which the ebb and flow of the sea is very considerable. The ebb and flow of the sea acts secondarily on atmospheric pressure, especially by means of the alteration of surface, and gives rise to corresponding increases and diminutions in that pressure. Paris, Prague, and Königsberg are, on the other hand, inland stations, at which the barometer cannot be affected by any variations on the level of the sea's surface.

— The public funeral of M. Chevreul, which took place in Paris, Saturday, April 13, says *Nature*, was one of great splendor. This was due in part, no doubt, to the interest excited by M. Chevreul's extraordinary age; but it must also be taken as a striking indication of the respect felt in France for men who achieve eminence in science. In front of the house in which M. Chevreul died, beside the Jardin des Plantes, a tent was fitted up as a chapel; and here the body was placed in state. The procession to the Cathedral of Notre Dame was headed by a detachment of police, who were followed by a platoon of cuirassiers, the 103d Infantry Regiment, with flags and a band of ushers, carrying wreaths presented by the stearine-makers of France, the stearine-makers of Lyons, the Friendly Society of Anjou living in Paris, and a large number of other public and private bodies. Last of all came a wreath sent by the Gobelin Works, surrounded by a woollen fringe dyed by M. Chevreul himself. The pall-bearers were MM. Fallières, minister of public instruction; Louis Passy, president of the Society of Agriculture; Chaumeton, president of the Students' Association; Des Cloizeaux of the Academy of Sciences; Quatrefages of the Academy of Sciences; Chautemps, president of the Municipal Council of Paris; and Roy, manager of the Society of Arts and Manufactures. Next came the members of M. Chevreul's family, grandchildren and great-grandchildren; and they were followed by the representatives of the president of the republic, by several of the ministers, the presidents of the Senate and the Chamber, and representatives of all the great educational and scientific bodies and administrative departments. At Notre Dame there was an impressive religious service. The interior of the church was hung with black; and over the porch, whlch was also hung with black, was a scroll bearing the dates "1786–1889." In the centre of the choir was a catafalque resting on silver columns, and surmounted by a canopy with bands of ermine. After the religious ceremony, the body was removed to L'Hay, and interred in the family vault. In compliance with M. Chevreul's last wishes, no speech was made over his grave.

— The Massachusetts Agricultural College, says *Agricultural Science*, is in a most prosperous condition. At no time, with one exception, has there been a larger attendance of students; the total for the year 1888–89 being 149, the freshman class being 48. The library contains 8,285 volumes, and during the year the students drew out on an average 14 books each. Of the graduates of the college, 46 are farmers, 6 fruit-growers and market-gardeners, 8 florists and landscape-gardeners, 4 planters, 9 poultry and stock raisers, 7 veterinarians, 2 editors of agricultural papers, 4 fertilizer manufacturers, 9 chemists to fertilizer companies, and 28 engaged in agricultural colleges or experiment stations. There are 150 other graduates engaged in various occupations. The college farm is being much improved, and has 46 head of cattle, consisting of Jerseys, Guernseys, Short-horns, Holstein-Friesians, and Ayrshires, 31 pigs, and 23 Southdown sheep. In 1888, 212 tons of hay were cut from a little over 80 acres of land.

— The officers of the Boston Society of Natural History for 1889–90 are, president, F. W. Putnam; vice-presidents, John Cummings, G. L. Goodale; curator, Alpheus Hyatt; honorary secretary, J. C. White; secretary, J. Walter Fewkes; treasurer, Charles W. Scudder; librarian, J. Walter Fewkes.