NOTES AND NEWS.

IN the table on page 11 of *Science* for July 3, the totals of the third, fourth, fifth, and seventh columns should be 83, 85, 87, and 120 respectively, instead of 82, 84, 86, and 115.

— The University of Pennsylvania has decided to increase the time given to the subjects of mechanical and electrical engineering by providing additional courses in these subjects, extending over four years.

— Entomologists everywhere will deeply regret to hear of the death of Mr. Henry Edwards, who loved his favorite studies quite as much as he did the stage, and brought to both an ardor and freshness contagious and perennial. "Do mention," writes one of his correspondents to *Psyche*, "his unwearying kindness and unfailing help to entomologists who were more ignorant than himself. I owe much to his help and encouragement, and shall miss him sorely, though I never saw his face." and these qualities which so endeared him to a large cirle of friends were indeed conspicuous in that face. It is understood that Mr. Edwards left little to his widow besides his collection, which is for sale.

— The tanning of elephant hides is comparatively a new industry, according to the *Boston Journal of Commerce*. The method employed is practically the same as in the tanning of cow hide, except that a stronger combination of the tannic ingredients is required, and greater length of time — about six months — is necessary to perform the work. When the hide is taken out of the vat it is an inch and a half thick. Among the articles made of elephant leather are pocket-books, small satchels, cigar-cases, card-cases, and similar articles, and they are said to be expensive luxuries. In finishing the hide, no attempt is made to glaze or polish it, everything being done to preserve its natural color and appearance. The leather is very enduring, several years' wear having but little effect upon it.

— Some experiments were recently made at the Riverside Iron Works, Wheeling, W. Va., on the comparative liability to rust of iron and soft Bessemer steel. As stated in *Engineering*, a piece of iron plate and a similar piece of steel, both clean and bright, were placed in a mixture of yellow loam and sand, with which had been thoroughly incorporated some carbonate of soda, nitrate of soda, ammonium chloride, and chloride of magnesium. The earth as prepared was kept moist. At the end of 33 days the pieces of metal were taken out, cleaned, and weighed, when the iron was found to have lost 0.84 per cent of its weight and the steel 0.72 per cent. The pieces were replaced and after 28 days weighed again, when the iron was found to have lost 2.06 per cent of its original weight and the steel 1.79 per cent.

— In the Pilot Chart for July the attention of masters of vessels is called once more to the importance of using oil to prevent heavy seas from breaking on board their vessels. The following report, printed in the chart, illustrates the fact that even the largest and most powerful vessels may sometimes derive benefits from its use, and that the precaution is especially necessary when a vessel encounters the terrific seas of a West Indian hurricane. Captain Ringk, of the German steamship "Fulda," reports that at 5 A.M., June 9, in latitude 44° 06′ north, longitude 43° 06′ west, the wind lulled to a dead calm for a short time and then suddenly sprang up from the south, shifting to south-west and north-west and blowing a perfect hurricane. The sea was like a boiling mass of foam, and the flying spray prevented those on board from seeing far ahead. Soon a very high and heavy sea came up from the west-south-west, and the ship (westward-bound) labored heavily and shipped a great deal of water. An oil-bag was then used with great success.

— The following appointments to fellowships in the Johns Hopkins University, for 1891–92, are announced: William Wilson Baden of Baltimore, Sanskrit; Edward Ambrose Bechtel of Colora, Md., Latin; Julius Blume of Münster, Germany, Romance languages; Albert Bernhardt Faust of Baltimore, German; Simon Flexner of Louisville, Ky., pathology; Ulysses Sherman Grant of Minneapolis, Minn., geology; William Asbury Harris of Richmond, Va., Greek; Harry Clary Jones of New London, Md., chemistry; James Lawrence Kellogg of Kewanee, Ill., biology; Elmer Peter Kohler of Egypt, Pa., chemistry; Paul Erasmus Lauer of Cleveland, O., history; David Judson Lingle of Chicago, Ill., biology; John Hanson Thomas Main of Baltimore, Greek; Frank Jewett Mather, Jun., of Morristown, N.J., English; Michael Andrew Mikkelsen of Sioux Falls, S.D., history; John Dyneley Prince of New York City, Semitic languages; Brantz Mayer Roszel of Baltimore, astronomy; George Owen Squier of Baltimore, physics; Sydney Grant Stacey of Kezar Falls, Me., Latin; Joseph Moody Willard of Orford, N.H., mathematics.

— The British consul at Hankow, China, writing of the varnish exported from that city, says, according to *Nature*, that he is informed it is the gum of a tree, the *Rhus vernicifera*. On this tree, before daylight, incisions are made, and the gum that runs out is collected in the dark, and strained through a cotton cloth bag, leaving behind a large amount of dirt and refuse. This operation can only be performed in the dark, as light spoils the gum, and causes it to cake with all the dirt in it. It cannot be strained in wet weather, as moisture causes it to solidify. When the Chinese use this varnish, they rub it on with a sort of mop, or swab, made of soft waste silk. It should only be used in wet weather, as, if the atmosphere is dry when it is rubbed on, it will always be sticky. As used by the Chinese, the varnish takes about a month to dry, and during the time it is drying it is poisonous to the eyes. The consul thinks that this gum may have been one of the ingredients of the celebrated Cremona varnish, and he suggests that it might be worth the while of musical instrument makers to experiment with it with a view to producing a varnish that would give a mellow instead of a glassy sound.

— Ever since the story of Robert Bruce and the spider, says a correspondent of *Engineering*, that insect has been proverbially held up to view as an example of pertinacious skill. An attempt to establish instinct as a guide to reason is, however, a fallacy. The setting hen is an example of instinct, not maternal constancy. This perseverance of spiders may have been an encouragement to Robert Bruce, but it is often a discouragement in engineering work. In sinking plumb lines down shafts for middle headings in tunnelling, in order to obtain an alignment for the tunnel, the accuracy of the work is often seriously impaired by spiders attaching their webs to the lines and drawing them towards the walls, often with sufficient tension to introduce material errors in the position of the plumb bobs. In fixing the alignment of the Hoosac Tunnel, in Massachusetts, at the bottom of a shaft 1,028 feet deep, the spiders prevented accurate work with plumb lines, until two cases were made inclosing the whole length of these lines. For shallow pits the spiders' webs can be broken by raising the lines and then lowering them to position shortly before fixing upon points; but in this instance the distance was so great as to require several hours before the vibration of the lines would cease, even with the bobs in vessels of mercury. The suggestion is made that the lines might be freed from similar interferences by insulating the suspended apparatus and the bob from the earth and attaching a grounded electric light circuit to the wire, relying upon the dampness in the pit to give sufficient conductivity to the cobwebs to cause them to be seared by the escape when any cobweb connected the earth to the plumb wire. Many years ago, when the writer used the level with an engineering party, there were frequent difficulties with the instrument. Curved lines like arcs of circles would appear in rapid sequence across the field of vision, which would be nearly eclipsed at times. These difficulties would arise at irregular and generally inconvenient intervals. The instrument was carefully examined without revealing any cause. The writer, distrustful of his own eyesight, visited an eminent oculist, receiving some vague advice and paying a realistic fee. It was afterwards discovered that a minute spider had ensconced himself in the cover of the eyeglass of the telescope of the level. Recently it was found that the meter in the store of a patron of an electric lighting station in America was recording what was a small fraction of the electricity known to be used. The meter was of the revolving fan type, and it was found that a spider had entered the case through a screw hole, and spun a web

in such a manner as to prevent the free revolution of the fans. If gas meters were susceptible to similar treatment it is feared there might be a tendency to perforate the cases and imprison spiders therein.

— Mr. E. H. Kern, of Mankato, Kan., writes as follows to *Insect Life:* "Several seasons ago my potato field was almost ruined because I could not use Paris green, as my stock was in danger from it. A large pond of water attracted about twenty of my neighbor's ducks to its shore. I never did fancy ducks very much, and I told him so. He said he would give them to me if I could care for them, as he could not keep them at home. The next morning I went down to the pond at sunrise to try and drive said ducks in a pen. I saw a very curious sight. Headed by an old drake, the twenty ducks were waddling off in a bee-line for my potato field. I crawled into some bushes and awaited developments. As they came to the end of the rows they seemed to deploy right and left, and such a shovelling-in of bugs I never beheld. They meant business, and for fully one-half hour did they continue, until every duck was filled up to its bill with bugs. Then they went for that pond, and I went for their owner and paid him one dollar for the entire bunch — this being all he would accept. When I returned, every duck seemed to be trying to outdo its fellow in noise. This expedition was repeated about 4 P.M., and kept up until every bug went under. I have tried these ducks and others since, and find they all like them, and seem to get fat on potato bugs."

— Fears had been entertained by the citizens of Provincetown, Mass., for some years before 1867 that the harbor was being silted up by the movement of sands from Lancy's Harbor and House Point Island flats on one side, and from East Harbor on the other side, reinforced by such material as might find its way into the harbor from the south side of Long Point. In 1867 a call was made on the United States Coast Survey by the harbor commissioners of Massachusetts for a re-survey of the harbor of Provincetown. This resulted in a survey during that year by the party of Assistant Henry D. Whiting, followed by a report, published as Appendix No. 12, Coast Survey Report for 1867. In this paper, Mr. Whiting discussed the results of a comparison made with the survey of Major Graham in 1835, treating the subject under three heads; first, with reference to changes at Long Point and on House Point Island flats; second, East Harbor Inlet and Beach Point; and third, the beaches at the head of East Harbor. His recommendations for the construction of works for the improvement of the harbor were based upon the conclusions stated in his report, and some of his suggestions have been carried out. A dike was built by the United States at the "wading place" at High Head in 1868–69. Another dike was built across the outlet of East Harbor creek by the State of Massachusetts, effectually cutting off the water communication between East Harbor and the bay, and in 1870 still another dike was thrown across the head of Lancy's Harbor at Abel Hill, to prevent the flow of the tide from that basin into the main harbor. This dike was rebuilt in 1871. A study of the results of the present comparison points decidedly to the conclusion that these improvements have in great measure arrested the forces which were working toward the injury of the harbor. The success of the dike at Abel Hill in arresting the wash of the sands from Lancy's Harbor only points with stronger emphasis to what should be done to arrest the wash of material from House Point Island flats. So long as the low and narrow sandy barrier to the northward of Wood End lighthouse remains intact, the wash off the flats will remain at a minimum, but should the seas make a breach through the beach during a gale, there is no telling what damage might follow, and it would seem the part of prudence for the Government to heed the recommendation made by Mr. Whiting in 1867, and urged again in 1886 by Major Gillespie, United States engineers, that a dike be built from Stevens Point, in Provincetown, to Long Point, thus effectually inclosing the whole of House Point Island flats. The preservation of Long Point (a natural mole guarding the deep-water basin of the harbor), which has been in charge of the United States engineers, should be secured by ample appropriations from Congress. Two comparative maps accompany the paper of which this note is an abstract, and which will be published as an appendix to the "Report of the Coast and Geodetic Survey for 1890." In the preparation of these maps reference was made to Major Graham's map of 1835. A comparison of the entire harbor area outside of the mean low-water line shows that in 1835 this area was 1,302 acres, and that in 1867 it had been reduced to 1,247 acres, a loss of 55 acres in 32 years, or one-tenth of one per cent per year. Between 1867 and 1889 the area increased to 1,274 acres, or 27 acres in 22 years, which is at the rate of nine-thousandths of one per cent per year. The maps confirm these results by indicating a resultant shoreward movement of the submerged contours, leading to the conclusion that the conditions since 1867 are most favorable to the maintenance of the present depths.

— "I recently had a curious bean shown to me by a friend," says a correspondent in *Insect Life*, "and, desiring to learn more about this interesting article, I take the liberty of addressing you on the subject, and will thank you kindly for any information you can give me regarding it. The bean in question came from Mexico, is brown in color, and a section through it at right angles to its length would be a triangle. My friend said the name he had heard for it was 'broncho bean,' given from the fact that it had the power of locomotion, by means of quick, short jumps or tumbles, imparted to it, as I have since learned, by a worm, which claims the bean as its home. The muscular effort exerted by the worm on the interior of the bean is sufficient to propel it forward about three-sixteenths of an inch at each jump. To a person who has not heard the reason for the peculiar action of the bean the movement is, to say the least, wonderful. If there is a printed description of this bean, giving the localities in which it may be found, will you kindly advise me of same?" To which the editor replies: "It is the seed of a euphorbiaceous plant believed to be *Colliguaja odorifera* Moline, and the contained 'worm' is the larva of a little tortricid moth known as *Carpocapsa saltitans*, a near relative of the common codling moth (*Carpocapsa pomonella*). It is found chiefly in Sonora, Mexico."

— At a meeting of the Royal Society, London, on May 18, reported in a recent number of *Nature*, Dr. J. Berry Haycraft gave an account of some experiments which show (1) that the displacements of the heart, which since Harvey's time are supposed to take place with every contraction, do not really occur in the unopened chest, and (2) that the cardiogram has been misinterpreted by physiologists. It is usually supposed that, during each contraction, the heart twists towards the right while its apex moves forward, and, pressing against the wall of the chest, causes the "apex beat." Again, it has been supposed by some that, during expansion, all diameters of the heart are not increased, but that, on the contrary, one diameter is diminished in length. Dr. Haycraft's experiments show that all diameters are increased during expansion, and that all are diminished during contraction. They show also that the motions, above described, do not occur in the unopened chest. The heart, in order that it may be observed in the opened chest, is necessarily separated from its attachments and falls towards the back of the chest (the animal operated upon being supposed to be placed upon its back). During expansion, the heart becomes flaccid, and so is flattened against the back of the chest. The first effect of the stiffening which occurs during the muscular contraction is therefore an elevation of the heart, against gravity, towards the front of the chest. Similarly, if the animal be turned upon one side, the heart, during contraction, moves towards the upper side of the chest; and the "beat" can even be made to take place towards the back. In the unopened chest, the heart on the whole remains in position during contraction, and therefore its boundaries move from the chest walls. But the cardiogram, as usually interpreted, shows that the chest wall is thrown outwards by the impact of the heart during contraction. Dr. Haycraft asserts that this is due to deformation of the heart by pressure of the chest wall when the button of the cardiograph is pressed against the exterior of the chest. The first effect of the muscular contraction and stiffening of the heart is therefore increased pressure against the chest-wall, which gives rise to the up-stroke of the cardiogram. When the cardiograph is made as light as possible, the up-stroke is greatly diminished; but it never

entirely vanishes, because the flaccid heart is always slightly distorted by the chest-wall even when the cardiograph is not pressed against it. Dr. Haycraft further shows that the sinuosities, which always appear to a greater or less extent on the cardiogram, are not due to peculiarities in the action of the heart, but are instrumental in their origin, being caused by oscillations which result from the inertia of the cardiograph.

— Writing to the editor of *Insect Life*, Mr. R. J. McGuire, of Rosedale, Miss., says: "Inclosed please find an insect, the name and habits of which you will oblige me by giving. I found it on a willow tree in a swamp on Island 73, in the Mississippi, belonging to Arkansas. I was hunting deer, and being tired lay down under a small willow to rest. After lying there a few moments the air suddenly became filled with little drops of water, as if rain or mist were falling. I got out from under the tree, and as soon as I moved the mist ceased. I stood a short distance away and watched, and gradually came closer, and after watching for half an hour I discovered this little bug on a twig. When I first saw it, it was perfectly quiet, but soon put its head to the limb and immediately minute drops of fluid began to be ejected from the rear end of its body, which extended past or even with the ends of its wings, but since its death it has shrivelled to its present length. The leaves of the tree on which I found it were pierced in thousands of places, and the mist from the tree was thick; but this bug was not on a leaf, but on a small limb. I could find no other insects on the tree, but know there were hundreds. The one I caught slipped around the limb very much as a squirrel would, and I had difficulty in catching it. It made no effort to fly. The natives of the island called the tree a weeping tree, and are very superstitious about it." Replying, the editor says: "The insect which you send is one of the so-called leaf-hoppers, which has been frequently referred to in print on account of its habit of ejecting honey dew and causing the phenomenon of so-called 'weeping-trees.' The scientific name of the one which you send is *Proconia undata*."

— The following appointments from among the graduates of Johns Hopkins' University have recently been made: J. William Black, to be professor of history at Georgetown College, Ky.; Charles C. Blackshear, associate professor of chemistry, Woman's College of Baltimore; Benjamin L. Bowen, associate professor of the Romance languages, Ohio State University; Edwin G. Conklin, professor of biology, Ohio Wesleyan University; Paul J. Dashiell, instructor in organic chemistry, Lehigh University; Alfred Emerson, professor of archæology, Cornell University; Charles H. Haskins, assistant professor of history, University of Wisconsin; George L. Hendrickson, professor of Latin, University of Wisconsin; Francis H. Herrick, Professor of biology, Adelbert College; William H. Hobbs, assistant professor of mineralogy and metallurgy, and curator of the geological museum, University of Wisconsin; Arthur L. Kimball, professor of physics, Amherst College; Oliver P. Jenkins, professor of physiology and histology, Stanford University; James C. Johnston, Loomis fellow in pathology, University of the City of New York; James E. Keeler, professor of astro-physics and director of the observatory at Allegheny City, Penn., James T. Lees, professor of Greek, University of Nebraska; Henry P. Manning, assistant professor of mathematics, Brown University; W. D. McClintock, assistant professor of English literature, University of Chicago; Dice McLaren, director and agriculturist, Wyoming Agricultural Experiment Station; J. Leverett Moore, associate professor of Latin, Vassar College; Ernest M. Pease, professor of the Latin language and literature, Stanford University; George Petrie, professor of history, Alabama Agricultural and Mechanical College; George M. Richardson, assistant professor of inorganic chemistry, Stanford University; Edward B. Rosa, professor of physics, Wesleyan University; Edward A. Ross, professor of political economy, Indiana University; William T. Sedgwick, professor of biology, Massachusetts Institute of Technology; Robert B. Steele, professor of Latin, Illinois Wesleyan University; Bernard C. Steiner, instructor in history, Williams College; William D. Taylor, professor of civil engineering, University of Louisiana; Edward P. Thompson, professor of mathematics, Westminster College, Penn.; Henry A. Todd, Professor of Romance languages, Stanford University; William H. Tolman, instructor in history, New York City; Frederick J. Turner, professor of history, University of Wisconsin; Stephen B. Weeks, professor of history and political science, Trinity College, N. C.; Langdon Williams, instructor in history, Chicago, Ill.; Arthur B. Woodford, assistant professor of political economy, University of Pennsylvania.

— The following appointments have recently been made in the Johns Hopkins University: Maurice Bloomfield, now associate professor, to be professor of Sanskrit and comparative philology; William Hand Browne, now librarian and associate, to be associate professor of English literature; James W. Bright, now associate, to be associate professor of English philology; Professor C. T. Winchester to be one of the lecturers on the Donovan foundation for 1891–92; Professor R. C. Jebb to be the lecturer on the Percy Turnbull memorial foundation for 1891–92; Rev. W. M. Taylor and Rev. R. S. Storrs to be the Levering lecturers in 1891–92; Nicholas Murray, now in charge of the publications, to be librarian; J. S. Ames, now assistant, to be associate in physics; C. H. Chapman, now instructor, to be associate in mathematics; Hermann S. Hering to be associate in electrical engineering; John E. Matzke to be associate in the Romance languages; W. W. Randall to continue as assistant in chemistry; Christopher Johnson, Jun., now fellow, to be instructor in Semitic languages; E S. Lewis, now fellow, to be assistant in Romance languages; C. C. Marden, now of the University of Michigan, to be assistant in Romance languages; W. S. Symington, Jun., to be assistant in Romance languages; Hermann Schoenfeld, of Columbian University, to be instructor in German; George H. Nuttall to be assistant in bacteriology and hygiene; Edward Renouf to be a member of the standing committee on the gymnasium and its secretary; J. B. Crenshaw to the charge of the gymnasium; G. P. Dreyer to continue in the office of senior demonstrator of physiology; Theodore Hough to continue as junior assistant in the biological laboratory; C. L. Poor, lately a fellow, and now of the College of the City of New York, to be instructor in mathematics; C. A. Smith to be assistant in English; W. A. Scott to be assistant in history; Thomas H. Morgan to hold, for another year, the fellowship in biology founded as a memorial of the late Adam T. Bruce; Edwin G. Conklin to occupy the table allotted to this university in the United States marine laboratory at Wood's Holl.

— Dr. Buchan read a paper before the Royal Society, London, May 18, on the barometer at Ben Nevis observatory, in relation to the direction and strength of the wind (*Nature*, June 18). In arranging the results, Dr. Buchan has referred the direction of the wind to sixteen points of the compass, although the observations are actually made with reference to the thirty-two points. The readings of the barometers at the high-level and the low-level stations, when reduced to sea-level, exhibit marked differences dependent upon the direction of the wind. The investigation extends over the period of nine months commencing in August, 1890. During that time, all the very high winds have been from the east-south east and the south-east, these being the directions in which the wind blows freely along the top of the mountain to the observatory. In eleven cases the wind from these directions attained a speed of 120 miles an hour or more; and the (reduced) barometer at the high-level station read about one-sixth of an inch lower than the instrument at the low-level station. In no other direction was a higher velocity than 70 miles an hour noted; and in the directions from west to north north-west, east, and east-north-east, the velocity was never greater than 30 miles an hour. With northerly winds the instruments at the top of the mountain record a much lower speed than that which, from observations of the drift of the clouds, is seen to be reached at a small height above the top of the mountain. The cause of this comparative calm immediately at the top is the impact of the air upon the face of the cliff which lies to the north of the observatory. The stream lines are thus suddenly deflected upwards. In such cases the depression of the barometer is about three times as great as that which occurs with an equally strong wind from other directions, and indicates the formation of a region of low pressure around the observatory. A peculiar result which is observed with other

directions of the wind is that the (reduced) high-level barometric reading exceeds the (reduced) low-level reading when the wind blows at about the rate of 5 miles an hour. The reverse is always true when the speed of the wind exceeds that rate, on the one hand, or is extremely small, on the other. This seems to indicate an increase of pressure in air-currents which ascends the mountain, and so may explain the fact that the top of the mountain is frequently clear, while dense cloud is being constantly formed at a short distance above it.

— On June 27 a scientific expedition, headed by Professor Lee, instructor in biology at Bowdoin College, sailed from Rockland, Me., for Labrador. Of the seventeen members of the party with Professor Lee, nearly all are undergraduates of Bowdoin. The intention is to land four of the party at Hamilton Inlet for a tour of exploration inland, following the inlet and Grand River. The rest of the party will go as far north as Cape Chudleigh.

— The formal transfer of the Weather Bureau from the War Department to the Department of Agriculture took place on July 1. The first official act after the transfer was the appointment of the new chief, Professor Mark W. Harrington of Michigan. Professor Harrington is now and has been for the last twelve years professor of astronomy in the University of Michigan, at Ann Arbor, and editor of the *American Meteorological Journal*. He is about 43 years old. Acting Secretary Grant signed an order on the last day of June discharging the 162 employees of the signal service then engaged in the Weather Bureau. The list is headed by Professor Abbe and ends with the first-class sergeants. Under the law the Secretary of Agriculture is bound to give preference to these men in making appointments for the new Weather Bureau, and, with the exception of a few men who elected to remain in what will hereafter be the purely military branch of the signal service, all of the employees who were engaged in the Weather Bureau will be reappointed.

— According to Professor Elihu Thompson, says *Engineering*, it is not the extra resistance at the break that gives rise to the heating in electric welding. The imperfect contact there no doubt hastens the heating at the joint, but a solid bar placed between the clamps of an electric welding machine can also be raised to the welding temperature, and the bar may be upset there. The real cause of the concentration of the heating between the clamps is the relatively greater conductivity of other portions of the welding circuit, which is usually composed of massive copper conductors kept cool in the case of large work by the circulation of water. By keeping the conductors cool in this way their resistance is maintained constant, and there follows an accentuation of heating effect at the joint, where the rise in temperature increases the resistance. In large works it has been found that hydraulic power can be advantageously employed both for clamping and making contact with the pieces to be welded or worked. In dealing with metals such as lead, tin, and zinc, the temperature required for welding is so low that the metal never glows, and the progress of the heating cannot be watched with the eye. By properly shaping the ends leaden water pipes can easily be welded together end to end. The meeting edges should be thinned so as to reduce the surface of contact below the area of the pipe wall. Joints thus made are very good and sound. Most metals can be welded without the use of a flux, but for good work a flux is often desirable.

— The supplement to the Pilot Chart of the North Atlantic for July illustrates graphically and by means of a tabular statement the drift of every bottle-paper (showing the drift of floating bottles) returned to the hydrographic office at Washington since April, 1889. A small chart of this kind was published last November, but the present supplement is complete up to date. The number of bottle-papers received was 134, of which 119 were from the North Atlantic. The total number of miles drifted by these 119 papers is 103,444, giving an average of 869 miles. There are 113 papers that contain the date of commencement and end of journey, from which the total number of days can be calculated. For these 113 papers the total number of days is 16,969, giving an average of 150 days to each paper. Dividing the average drift by the average number of days, it is found that 5.8 miles per day is the average drift. This figure, it should be remembered, is of necessity less than the true average rate per day, because every day that a bottle lies undiscovered on the beach counts on its time of drift, the apparent elapsed time being thus too great and the average drift per day too small. It is proposed to continue the publication of bottle papers as often as possible, not only for the Atlantic but for other oceans, and masters of vessels and others interested are urged to co-operate with the hydrographic office in collecting as complete data as possible regarding this general subject. Any reliable reports of long drifts of bottle-papers, or any other floating objects, will be of interest in this connection, and the accumulation of such data may add considerable useful information to our knowledge of the general drift of ocean currents.

— On Thursday, May 21, says the *Lancet*, the body of an Arab, found dead on one of the ships in the Albert Docks, was taken to the Seamen's Hospital, name unknown. A necropsy was ordered by the coroner, and made by Dr. F. Croucher, house surgeon to the branch hospital. There were no signs of disease in the brain or the chest, except a few old adhesions in the left pleural cavity. The gall bladder was very distended and full. Three small ulcers existed on the anterior coat of the stomach. Several patches of inflammation were found in the small intestine. In the cæcum were found twenty buttons, three cog-wheels (apparently out of a watch, two of them one inch in diameter, and doubled), one two-inch steel screw bent double, and one one-inch screw, six pieces of a lock (the biggest piece one and a half inch long and one and a half inch broad), a circular piece of brass (one and three-quarter inch in diameter folded into four), several pieces of iron wire (four were one and a half inch in length), brass, and lead, and two key tallies on a ring, one inch in length. In the ascending colon, about five inches from the cæcum, were found a piece of steel wire one eighth of an inch in diameter, and three inches and a half in length, bent double, and one small cog-wheel. The weight of these bodies together amounted almost exactly to half a pound. The body was much emaciated; no subcutaneous fat was present in chest or abdominal walls, or any fat round the kidneys. The deceased was quite unknown ; no particulars could be discovered by the police employed to obtain evidence for the purposes of the inquest. There was no perforation of intestines, nor any sign of disease in the colon.

— Dr. Roland Thaxter has received an appointment as assistant professor of cryptogamic botany and Mr. J. G. Jack as arboretum lecturer for 1891–92 at Harvard University.

— Dr. J. F. Williams of the Geological Survey of Arkansas has been appointed assistant professor of geology at Cornell University. He has in press a volume upon the igneous rocks of Arkansas.

— J. M. Stedman, formerly of Cornell University, now of the United States Department of Agriculture, has just accepted an invitation to the chair of biology in Trinity University, Durham, N.C. This institution has been completely reorganized, and will open in September, with the following new departments : medical college; law school; schools of arts, literature, political and social science, and divinity; and a college of the sciences.

— Mr. John M. Barr, well known as a member of the American Society of Mechanical Engineers, and now professor of mechanical engineering at the University of Minnesota, has resigned his position to accept a call to Sibley College, Cornell University, where he will have special charge of the whole line of junior work in machine-design lately conducted by Professor A. W. Smith. Professor Smith goes to the University of Wisconsin for the present, with the expectation that he may go to the Stanford University a year later.

— Mr. C. H. Tyler Townsend some time ago resigned his position in the Division of Entomology, United States Department of Agriculture, to accept the post of entomologist to the State experiment station of New Mexico. By a competitive civil service examination his place has been filled by Mr. F. H. Chittenden of New York, formerly editor of *Entomologica Americana*, and curator and corresponding secretary of the Brooklyn Entomological Society. Mr. A. B. Cordley, formerly entomologist of the Agricultural experiment station of Vermont, has also been appointed to a position in the division.