familiar with the various methods of hardening, cutting, and staining. Pathological structures are now carefully studied. This includes the study of inflammation and its results, the study of diseased organs and tissues, and of the non-inflammatory new formations.

Embryology. — A study of the development of the chick, including microscopic sections of the same.

Urinalysis. — A course of six weeks in the chemical analysis of the urine, including the use of the microscope in determining the character of the various deposits and crystals.

NOTES AND NEWS.

Dr. H. Newell Martin, professor of biology in Johns Hopkins university, has been appointed Croonian lecturer of the Royal society of London for the current year. The Croonian lecture was founded by Lady Sadlier, in fulfilment of a plan of her former husband, Dr. Croone, one of the founders and the first registrar of the Royal society. By her will, made in 1701, she devised "one-fifth of the clear rent of the King's-Head Tavern, in or near Old Fish Street, London, at the corner of Lambeth Hill, to be vested in the Royal society, for the support of a lecture and illustrative experiment on local motion." For many years past there has been no formal delivery of the lecture. The council of the Royal society select from the papers presented to them during the preceding twelve months that one dealing with animal motion which they think most noteworthy, and publish it as the Croonian lecture, sending to the author the sum derived from Lady Sadlier's bequest. The amount of money is trivial, but the appointment as Croonian lecturer is a highly prized distinction. The paper by Professor Martin, which is to be printed as the Croonian lecture for 1883, is on the Effect of changes of temperature on the beat of the heart. It is interesting to note that the first Croonian lecture, delivered by Dr. Stuart in 1738, was on the Motion of the heart.

— *Nature* of Aug. 2 prints the following telegram from the Swedish party which wintered at Spitzbergen, and was last heard from in October. "Cape Thordsen, July 4, 1883. This message will be forwarded to-morrow to Capt. Startschin, with the boat fetching our first mail this year. The wintering of the expedition has in every respect been attended with success, particularly as the scientific researches have throughout been carried on exactly in accordance with the regulations formulated by the International polar commission. Hydrographical and magnetic studies have also been pursued on the ice in the Ice Fjord, as well as parallax measurements of clouds, and observations as to the temperature of the air, the snow, and the earth. The winter has, on the whole, been mild; the greatest cold occurring on Jan. 2, when the thermometer registered 35.5° C. below freezing-point. Storms have been few. Since September last the following buildings have been erected: a hut on a mountain at an elevation of 270 metres, containing the anemometer and the wind-fan, which were read by a self-registering electrical apparatus; two astronomical observatories; another magnetic hut; a bath-house, a forge, and a wood storehouse. The dwelling-house and working-room have also been enlarged. The following game was shot during the winter: 61 ptarmigans, 9 reindeer, 18 wild geese, 20 foxes, and some wild fowl. With continuous labor, plenty of food and drink, and frequent baths, the members of the expedition have throughout enjoyed excellent health. Descriptions of the nature of our labor and life here during the wintering will follow."

— The new biological laboratory of the Johns Hopkins university, which will be opened next September, has been especially constructed with reference to providing opportunity for advanced work in experimental physiology. It contains two large rooms for general advanced work in animal physiology, in addition to others specially designed for work with the spectroscope, with the myograph, for electro-physiological researches, and for physiological chemistry. It also contains a special room constructed for advanced histological work, and well supplied with apparatus and reagents, a room for microphotography, and rooms for advanced work in animal morphology.

Prof. C. H. F. Peters of Clinton, N.Y., announces to Harvard college observatory the discovery of a new planet by him on the night of Aug. 12. Its position at time of discovery was as follows: Aug. 12, 13 hours, 49 minutes, 27 seconds, Clinton mean time; right ascension, 21 hours, 20 minutes, 48.17 seconds; declination, south, 12 degrees, 29 minutes, 8.2 seconds. The daily motion of the object is — 36 seconds in right ascension, and in declination 20 minutes and 50 seconds south. It is unusually bright for an asteroid, being of the ninth magnitude.

— The *Nation* for Aug. 2 calls attention to a very interesting feature of the table of ages (table XLII.) in the compendium of the tenth census. The table exhibits an astonishing preponderance of persons whose age is a 'round number,' i.e., a multiple of five or ten. One of the instances mentioned is, that while, according to the table, there are 1,094,324 persons at the age of 30, there are only 621,852 persons of 29 years, and only 492,530 persons of 31 years. There is a less powerful but still very marked and constant attraction to even numbers as compared with odd: for example, 42 claims 458,949, while 43 is content with 384,259; 47 is credited with 349,512, but 48 with 400,549. These are from the table of aggregates for the United States. The peculiarities are, of course, much more strongly marked in the columns referring to the classes and localities where there is most ignorance. Thus the number of the colored females in Mississippi who are put down as 30 years of age is 10,619, while the years immediately preceding and following are given only 2,253 and 1,236 respectively.

The writer of the interesting note in the *Nation* attributes the phenomenon to conjectural statements

by people who did not know their own ages; but probably only a small part of it is due to that cause, at least in the more intelligent portions of the population. In so intelligent a state as Rhode Island, for instance, we find for the years 29, 30, 31, the numbers 3,965, 6,550, 3,112; which is not much better than in the aggregate of the United States. How much is due to guessing by relatives, servants, masters, etc., and especially to suggestions and guesses by the census-gatherers themselves, — who, of course, do not regard the exact ages as important, and most of whom have probably no strong views on the subject of the 'personal equation,' — no one can tell, but probably very much more than to people's ignorance of their own ages. An examination and comparison of the original note-books of the various census-takers would furnish materials for an interesting exercise, if nothing more, in statistical research, and might reveal approximately the extent to which the personal qualities of the census-takers has affected the result; while a comparison of the table with well-established tables of mortality might enable us to estimate the force of the tendency to understate age which would doubtless be found to exist. The whole thing makes a very pretty problem, and serves to illustrate in a rather gross and exaggerated way the complexity of statistical investigations.

— We learn from *Nature* that a meeting which may have an important result upon science and art instruction in England has been inaugurated at Manchester. An association has been established to effect the general advancement of the profession of science and art teaching by securing improvements in the schemes of study, and the establishment of satisfactory relations between teachers and the Science and art department, the city and guilds of London institute, and other public authorities. It proposes also to collect such information as may be of service to teachers professionally; and it will endeavor, by constant watchfulness, to advance the status and material interests of science and art teachers in all directions. The president of the new association is Professor Huxley, and the vice-presidents are Dr. H. E. Roscoe, Mr. Norman Lockyer, Professor Boyd Dawkins, Professor Gamgee, Professor Ayrton, Professor Silvanus Thompson, Dr. John Watts, Mr. S. Leigh-Gregson, Mr. John Angell, Mr. W. Lockett Agnew, Mr. C. M. Foden, and Mr. J. H. Reynolds. Mr. W. E. Crowther, of the Technical school and mechanic's institution, Manchester, is the honorary secretary; and all communications should be addressed to him, especially by those who are desirous of forming affiliated unions in other districts. We believe that branches are already being established at Newcastle-upon-Tyne and Liverpool.

— The attorney-general of the United States has approved the title to the proposed site of the fish-commission establishments at Wood's Holl, Mass.; and the contracts for the work on the breakwater, pier, and basin, will, it is expected, soon be made.

— King's Dictionary of Boston, after the manner of Dickens's Dictionary of London, has recently been published. Edwin M. Bacon is the editor. A short introduction is written by George E. Ellis, D.D. The brief notices of the libraries and scientific associations of Boston are satisfactory, and well brought down to date.

— For the last two years a couple of buck mountain sheep have been running with the flock of Mr. Bailey of Bull Run Basin, Nevada; and there are now between twenty and thirty half-breed lambs in the lot. According to the Tuscarora mining news, they are mostly covered with hair, although there is some wool amongst it. They carry their heads high, like the wild sheep, but are as easily herded as those of pure domestic blood. They are of no value for shearing, but are said to make excellent mutton.

— The subsidence of land in the Cheshire salt-districts of England is again becoming alarming. The bed of the river Weaver has widened out below Northwich, forming a lake of about two miles square, called the Flashes. Crater-like holes suddenly fall in, forming in a day or two deep ponds of saltish water. In one instance, two years ago, the river itself flowed backwards into the subsidence for the space of two minutes, filling up several old rock-salt mines in the neighborhood: from these the water is now pumped, and used as brine. Land-owners in the neighborhood brought a bill into Parliament during the session of 1882, to obtain compensation for the damage done by the salt-works; but it was argued that subsidence would occur by natural filtration, even if the brine were unworked, and the bill was thrown out.

— Mr. Albert Marth, F.R.A.S., has succeeded Dr. W. Doberck as astronomer at Col. Cooper's observatory, Markree, Ireland.

RECENT BOOKS AND PAMPHLETS.

Albert-Levy. Les nouveautés de la science. Paris, *Hachette*, 1883. 192 p. 18°.

Alvarez, Llanos, C. Electricidad estática. Madrid, *libr. militar*, 1883. 238 p., illustr. 8°.

Bell, A. Melville. Visible-speech reader for the nursery and primary school. Cambridge, *King*, 1883. 4+52 p. 16°.

Bernimolin, H. Catalogues des plantes spontanées et cultivées du Tournaisis, avec indication des localités où on les rencontre. Tournai, *Vasseur-Delmée*, 1883. 133 p. 12°.

Beringer, A. Kritische vergleichung der elektrischen kraftübertragung mit den gebräuchlichsten mechanischen kraftübertragungssystemen. Berlin, 1883. 8°.

Brandza, D. Prodromul florei romane san enumeratiunea plantelor pana astade cunoscute in Moldova si Valachia. Bucuresci, 1883. 652 p. 8°.

Bureau, Th. Technologie des matières textiles. Gand, 1883. 235 p., 17 pl. et figures. *autogr.* 4°.

Carnoy, J. B. Biologie cellulaire; étude comparée de la cellule dans les deux règnes, au triple point de vue anatomique, chimique et physiologique. Lierre, 1883. illustr. 8°.

Centralbureau der europäischen gradmessung. Verhandlungen der vom 11 bis zum 15 September, 1882, im Haag vereinigten permanenten commission der europäischen gradmessung, redigirt von den schriftführen A. Hirsch, und Th. von Oppolzer, zugleich mit dem generalbericht für die jahre 1881 und 1882. Berlin, *Reimer*, 1883. 6+155 p., 2 maps. 4°.

Cervera Bachiller, J. Creencias y supersticiones, tradiciones, leyendas, consejas, historias místicas y preocupaciones populares de todos los siglos y de todos los pueblos. Madrid, *impr. Riva*, 1883. 304 p. 8°.

Chamberland, C. Le charbon et la vaccination charbonneuse d'après les travaux récents de M. Pasteur. Paris, 1883. 324 p. 8°.