sation is experienced on finding every common weed under foot to be what would have been a greenhouse plant at home. But he heard our soldiers say: "We would rather go out and pick a dandelion once more."

EDWARD S. BURGESS,
Secretary.

THE NEW YORK SECTION OF THE AMERICAN CHEMICAL SOCIETY.

THE May meeting of the New York Section of the American Chemical Society was held on the 5th at the Chemists' Club, 108 West Fifty-fifth Street.

Mr. A. H. Allen, of Sheffield, England, well known as the author of the 'Commercial Organic Analysis,' was present as the Society's guest and was warmly welcomed. In response he made a short address expressing keen appreciation of his reception by the Section and his pleasure of being able to attend this meeting.

The papers of the evening were by:

1. W. S. Myers: 'On the Alcoholic Content of Some Temperance Drinks.'

2. J. H. Stebbins: 'Upon the Action of Diazo Compounds upon Thymol para-sulpho-Acids.'

3. J. H. Stebbins: 'Note upon the Reichert Figure of Butter.'

4. L. L. Van Slyke, Geneva, N. Y.: 'Some Facts and Fictions about Milk.'

5. Martin L. Griffin, Mechanicsville, N. Y.: 'Comparative Value of certain Reagents for removing Lime and Magnesia from Natural Waters for Industrial Uses.'

6. Charles F. McKenna: 'A New Laboratory Valve.'

DURAND WOODMAN,
Secretary.

DISCUSSION AND CORRESPONDENCE.

LARVAL STAGE OF THE EEL.

TO THE EDITOR OF SCIENCE: Mr. Eugene Blackford's 'Note on the Spawning Season of the Eel' in SCIENCE (p. 741–742) is interesting as well as important. As Mr. Blackford has indicated, almost "the only known instance of the taking of a sexually matured eel has been in waters of [nearly] one hundred or more fathoms in depth." Others are rare. It is probable, however, that our east-coast eels generally spawn in water of less depth. The occurrence of an eel with well-developed eggs in water only two or three fathoms deep in May is, however, truly exceptional. The question then arises whether the eel had matured eggs 'many months later than in the Mediterranean' or earlier. I am disposed to believe that the individual noticed had wandered beyond its breeding ground and abnormally retained its eggs on account of its uncongenial environment. As Mr. Blackford also remarks about New York, "it has always been supposed that the spawning season takes place within a month or so of the" descent of the eels in November and December, and that 'the elvers (*montées*) which ascend the rivers' in the next ensuing 'early spring' are the young of those that had entered the sea a few months before. For a long time I have been of a different opinion. Inasmuch as (1) the sea-going eels do not mature their ova till the winter season, (2) the leptocephalus young are found from February to September, or later, and (3) the transitional form between the leptocephalus stage and the cylindrical stage has been found in January, it appears tolerably certain that the elvers which ascend the rivers in the early spring are the progeny of eels that descended therefrom *not later* than winter of the *penultimate* (and not last) year before.

It may be of interest to add that brief notices and figures have been published of the development of the eel in a readily accessible journal—*Nature*—for March 18, 1897 (Vol. 55, pp. 467–468), and for May 27, 1897 (Vol. 56, p. 85).

THEO. GILL.

WASHINGTON, May 26, 1899.

SCIENTIFIC NOTES AND NEWS.

AT a general meeting of the members of the Royal Institution of Great Britain on May 22d the following scientific men were elected honorary members in commemoration of the centenary of the Institution, which is being celebrated this week: Professor S. Arrhenius, (Stockholm), Professor C. Barus (Brown University), Professor H. Becquerel (Paris), Professor G. L. Ciamician (Bologna), Professor N. Egorof (St. Petersburg), Professor A. P. N.

Franchimont (Leiden), Professor A. E. Gautier (Paris), Professor H. G. Kayser (Bonn), Professor W. Korner (Milan), Mr. S. P. Langley (Washington), Professor G. Van der Mensbrugghe (Ghent), Professor A. A. Michelson (Chicago), Professor H. Moissan (Paris), Professor R. Nasini (Padua), Professor W. Nernst (Göttingen), Professor W. Ostwald (Leipzig), Dr. E. Solvay (Brussels), Professor R. H. Thurston (Cornell), Professor E. Villari (Naples), Professor J. L. G. Vielle (Paris), Dr. E. Ador (Geneva), Dr. L. Bleekrode (The Hague), Professor J. S. Ames (John Hopkins University), Professor G. F. Barker (University of Pennsylvania), Geheimrath Professor Dr. Liebreich (Berlin), and President W. L. Wilson (Washington and Lee University).

As part of the exercises of the jubilee of Professor Stokes, Cambridge University has conferred the degree of Doctor of Science on the following delegates: Albert Abraham Michelson, professor of experimental physics in the University of Chicago; Marie Alfred Cornu, member of the Institute of France, professor of experimental physics in the École Polytechnique of Paris; Jean Gaston Darboux, member of the Institute of France, professor of higher geometry in the University of Paris; Friedrich Wilhelm Georg Kohlrausch, member of the Academy of Sciences of Berlin, Director of the Physikalisch-technische Reichsanstalt, Charlottenburg; Magnus Gustaf Mittag-Leffler, professor of pure mathematics at Stockholm; Georg Hermann Quincke, professor of experimental physics in the University of Heidelberg; Woldemar Voigt, professor of mathematical physics in the University of Göttingen.

THE President of the Dover meeting of the British Association will as we have already announced, be Professor Michael Foster. The Presidents of the various Sections are to be: Mathematical and Physical Science, Professor J. H. Poynting; Chemistry, Mr. Horace T. Brown; Geology, Sir Archibald Geikie; Zoology, Mr. Adam Sedgwick; Geography, Sir John Murray; Economical Science, Mr. Henry Higgs; Mechanical Science, Sir William White; Anthropology, Mr. C. H. Read; Physiology, Mr. J. N. Langley; Botany, Sir George King. The local committee have already collected £1,500 toward the expenses of the meeting.

THE honors conferred by Queen Victoria on her eightieth birthday included a baronetcy for Professor J. S. Burdon-Sanderson, the well-known physiologist, regius professor of medicine at Oxford University, and the K. C. B. for Professor Michael Foster, professor of physiology at Cambridge University, and to Mr. W. H. Preece, President of the Institution of Civil Engineers.

PROFESSORS WILLIAM JAMES (philosophy), J. E. Wollf (petrography and mineralogy) and W. F. Osgood (mathematics), of Harvard University, will be abroad on a leave of absence next year. Dr. Dickinson S. Miller will take the work of Professor James, and Professor James Pierpont, of Yale University, the work of Professor Osgood.

PROFESSOR S. P. THOMPSON, F.R.S., has been nominated for the presidency of the British Institution of Electrical Engineers.

WE learn from *Nature* that at the last meeting of the Midland Malacological Society, held in Mason University College, Birmingham, on May 12th, Mr. H. A. Pillsbury, of Philadelphia, and Mr. Henry Fischer, of Paris, were elected honorary members.

THE gold medal of the Paris Geographical Society has been presented to General Galliéni.

PROFESSOR C. JUDSON HERRICK, who holds the chair of biology in Denison University, has received the Cartwright Prize ($500) of the College of Physicians and Surgeons, Columbia University.

MR. JOHN S. LORD, of Springfield, Ill., has been appointed Chief of Division in the Department of Statistics of the Census Bureau. Mr. Lord has been Chief of the Illinois State Labor Bureau and held a position in the Eleventh Census.

DR. WILLIAM Z. RIPLEY, of the Massachusetts Institute of Technology and Columbia University, has been elected a corresponding member of the Società Romana di Antropologia.

EFFORTS are being made to collect £5,000 to erect a monument on the spot in Africa where Livingstone died.

MISS ELIZABETH M. BARDWELL, professor of

astronomy in Mount Holyoke College, died on May 28th at the age of 67 years.

Mr. G. F. Lyster, a well-known English engineer, has died at the age of 76 years.

The British Association will, at its Dover meeting, not only exchange visits with the French Association, but will also entertain the Belgian Geological Society.

The United States Weather Bureau, which was opened at Colon, Colombia, last September, has finally been closed, its site being out of the track of the hurricanes. The instruments are to be transferred to Jamaica.

King Humbert opened at Como on May 20th the International Electrical Exhibition organized to celebrate the centenary of Volta.

The Biological Survey of the Department of Agriculture has sent Mr. W. H. Osgood and Mr. L. B. Bishop to study the geographical distribution of animals in Alaska.

The scientific expedition visiting Alaska on the invitation of Mr. Edward H. Harriman, to which we have already called attention, left Seattle on May 31st. It is expected that the expedition will return about August 1st.

The Entomological Society of Albany has recently been organized with an initial membership of about twenty, under the following officers: Dr. E. P. Felt, President; Professor Charles S. Gager, Vice-President; Mr. Charles S. Banks, Recording Secretary; Miss Margaret F. Boynton, Corresponding Secretary; Professor H. M. Pollock, Treasurer. The headquarters of the Society will be, for the present, at the office of Dr. Felt, the State Entomologist, where the regular meetings will be held the second Friday in each month. The objects of the organization are the promotion of interest in entomological seience and the furtherance of fellowship, among those interested, for their mutual benefit and enjoyment.

The Institution of Civil Engineers, London, is holding a conference during the present week. According to the program Mr. W. H. Preece, the President, makes an address, and various engineering subjects will be taken up in seven sections. The subjects for discussion range over the whole field of engineering service and practice, and include railways, harbors docks, canals, machinery, shipbuilding, mining and metallurgy, water works, gas works, sewerage and electricity. It is proposed that each subject be introduced by a short paper, to be read by the author and discussed by the meeting.

Nature states, in reference to the scientific commission which was appointed a short time ago by the Colonial Office and the Royal Society to investigate the mode of dissemination of malaria, with a view to devising means of preventing the terrible mortality which now takes place among Europeans resident in tropical and subtropical climates, that Dr. Patrick Manson, chief medical adviser to the Colonial Office, has made a statement to a representative of the Exchange Telephone Company. Dr. Manson states that Dr. C. W. Daniels, of the Colonial Medical Service, British Guiana (who first proceeded to Calcutta to familiarize himself with the work which had been carried on by Surgeon-Major Ross for determining the relation of mosquitoes to the dissemination of malaria), has now arrived at Blantyre, in the Central African Protectorate, where he has been joined by Dr. J. W. W. Stephens and Dr. R. S. Christophers. At Blantyre all the resources of the Protectorate will be placed at the disposal of the commissioners, who, before their return to London, will probably pay a visit to the west coast of Africa.

The State Board of Health of Pennsylvania has passed resolutions in view of the attempt of the Health Department of Philadelphia to conceal the presence of contagious diseases in that city. As the matter is one of scientific importance from several points of view, we quote the resolutions:

Resolved, That the State Board of Health and Vital Statistics earnestly deprecates the declared intention of the Director of Public Safety of the city of Philadelphia to conceal the presence and number of cases of smallpox, or any other communicable disease in that city, and for the following reasons:

First. Attempts of this kind invariably end disastrously, defeating their own object. Rumor always magnifies danger, creating suspicion, anxiety and panic. The publication of the exact truth indicates that the authorities are vigilant, possessing full

knowledge of the facts of the case, and have control of the situation, thus engendering a sense of security and dispelling alarm.

Second. The policy of concealment prevents those living in the immediate neighborhood of infected houses, or who may desire to visit such neighborhoods, from taking necessary precautions for their own protection, and in this way facilitates the spread of the infection.

Third. This course would vitiate the vital statistics of the city and State, impairing their accuracy and value, and destroying the confidence of the national health authorities and of those of other States and cities in the trustworthiness of our returns. The latter will, therefore, hesitate to advise their citizens to visit a community which adopts the ostrich-like policy of burying its head in the sand in the presence of a danger, instead of frankly acknowledging and bravely facing it.

Resolved, That the Board, however, desires to express its belief that the danger at present existing is not of a character to excite serious apprehension, its entire confidence in the ability and intelligence of the Health Department of the city, and its assurance that the efficient measures which have been inaugurated will speedily terminate this merely localized outbreak.

ACCORDING to the London *Times* the committee which is organizing the German Antarctic expedition has decided that the expedition is to be composed of one ship only, any possible disadvantages being compensated for by greater independence and mobility. The vessel is to be built entirely of wood. The committee are confirmed in this decision by Nansen's experience with the *Fram*, and by their desire to eliminate all possible causes of error in their magnetic observations. The ship is to be laid down this autumn, and the expedition is to be ready to start in the autumn of 1901. It is to be away two years altogether. After touching at the Cape the expedition is to make for the Antarctic Continent south of the Kerguelen Islands, and there establish a scientific station at some point suitable for wintering. A pack of Siberian dogs is to be taken, and dashes will be made on sledges towards the South Pole and the south magnetic pole. Meteorological observations will also be made from a captive balloon. After the breaking-up of their winter quarters the expedition will attempt to make as complete a survey as possible of the coast line of the Antarctic Continent. The leader of the expedition is to be Dr. von Drygalski, who conducted the German exploration of Greenland in the years 1891–93. The committee expresses great satisfaction that the English Antarctic expedition has at last been definitely decided on, and points out that the value of the two sets of meteorological observations will be greatly enhanced by their being carried on simultaneously. According to their information, the English expedition is to make the attempt to penetrate southward from the South Pacific. The meeting of the International Geographical Congress in Berlin in October will give an opportunity for deciding on the details of the scheme of cooperation.

OWING to the public improvements in the neighborhood of Parliament-street the Royal Meteorological Society has been obliged to vacate its offices in Great George-street, and find accommodation elsewhere. The Council ultimately took rooms at Prince's Mansions, 10, Victoria Street, which have been fitted up to meet the requirements of the Society. On the evening of May 16th the President, Mr. F. C. Bayard, held an 'at home' in these new rooms, which was largely attended by the Fellows. An exhibition of instruments, photographs, etc., was arranged in the various rooms, and there were also several demonstrations by the lantern.

A BLUE book has been issued by the British government, giving a report prepared by Professors Thorpe and Oliver and Dr. Cunningham on the use of phosphorus in lucifer matches. According to an abstract in *Nature* Professor Thorpe deals with the questions from the chemical standpoint, and enters into such matters as the differences between the allotropic forms of phosphorus, the composition of phosphorus fumes, their solvent action on teeth, and the composition of the various pastes, etc., used in the manufacture of matches. Full and illustrated accounts of the process of manufacture are given, both in Great Britain and in other countries, and the precautions taken to minimize the danger of the workpeople. Dr. Oliver, whose work in connection with other dangerous trades is so well known, approaches the question from the medical standpoint, and

the portion of the report for which he is responsible is clear, concise and practical. Dr. Cunningham's report contains a full account of phosphorus necrosis, and is illustrated by diagrams showing various stages of the diseases in the teeth and jaws. This condition is the most frequent and most obvious of the poisonous effects of the phosphorus; it is not by any means the only one. He also gives in full the precautions which should be adopted in all factories for combating the injurious effects of the poisonous fumes. There are various appendices which give in detail the facts upon which the main body of the report is founded. In the match industry two forms of phosphorus are used: *yellow phosphorus*, which is highly poisonous, and gives off poisonous fumes which consist mainly of low oxides of phosphorus; and *red phosphorus*, which does not fume, and is hardly poisonous even if swallowed. Then, as is well known, there are two principal varieties of matches used: 'safety matches,' which are tipped with a composition free from phosphorus; the surface on which they strike is covered with a composition of which red phosphorus forms a part. The 'strike anywhere' matches are tipped with a paste containing yellow phosphorus in a proportion which varies from 3 to 30 per cent. It is in the making of such matches only that danger arises. In regard to them the commission reports: "So far as the home consumption is concerned, it does not seem that the prohibition of the use of yellow phosphorus would involve any serious hardship, and this course has already been adopted by Denmark, and decided upon by Switzerland, care being taken at the same time to prohibit the use or importation of yellow phosphorus matches. But neither of these countries has or had any export trade to lose. The United Kingdom, Belgium, Sweden and Japan manufacture largely for export, and it is feared that immediate prohibition of yellow phosphorus would at once divert that portion of our trade to other countries, unless international agreement upon the subject was arrived at. If grave injury to the health of the workpeople were inevitable the loss of the trade might well be regarded as the smaller sacrifice of the two, but the result of the inquiry points to a different conclusion. With due selection of workpeople, strict medical and dental supervision, proper structural and administrative conditions, and substitution of machinery for hand labor, it seems that the dangers hitherto attending the use of yellow phosphorus can be overcome."

UNIVERSITY AND EDUCATIONAL NEWS.

Mrs. Jane L. Stanford has executed deads conveying to Stanford University the greater part of her property.

Washington University has received a further gift of $150,000 from Mr. Samuel Cupples for the support of the department of Civil, Mechanical and Electrical Engineering and Architecture for five years, and a dormitory to cost $100,000 from Mrs. John E. Liggett, in memory of her late husband.

Mr. Andrew Carnegie has given $50,000 to the Stevens Institute, Hoboken, for the erection of an engineering laboratory.

The quarter of a million pounds required to inaugurate the University of Birmingham has been collected. The anonymous donor who has already subscribed liberally towards the fund has offered to give £12,500 if the total amount be raised to £300,000.

Mount Holyoke College has received a gift of $10,000 from James Talcott, of New York, to complete the botanical gardens and plant-houses which are now under way at the institution.

A College of Comparative Medicine is about to be established at Harvard University. A chair of comparative pathology has been endowed by the fund given by Mr. George Fabian, and appropriations have been made from the bequest of the late Henry L. Pierce for a chair of comparative physiology and for laboratories. It is intended that the college shall perform the functions of the Pasteur Institute, of Paris, and the Jenner Institute, of London.

The Rev. W. H. P. Faunce, pastor of the Fifth Avenue Baptist Church, New York City, has been elected President of Brown University.

Professor Henry G. Jesup, who has held the chair of botany at Dartmouth College for twenty-two years, has resigned.