

rangements for the entertainment and social intercourse of members were a banquet on Tuesday evening at the Arlington and a 'Smoker' given by the Cosmos Club on Thursday evening.

On Wednesday afternoon a statue of the late eminent surgeon, Samuel D. Gross, was unveiled on the Smithsonian grounds near the Army Medical Museum. The statue was presented to the United States Government in a speech by Dr. C. N. Mastin, and was received by Surgeon-General George M. Sternberg. An address was made by Professor W. W. Keen, the successor of Gross at the Jefferson Medical College. It is to be hoped that many statues of men who have contributed to the advancement of science may ultimately find their place in the grounds of the Smithsonian Institution.

Reports of the proceedings of the American Physiological Society and of the Association of American Anatomists will be published in this journal. The papers presented before the various medical societies were so numerous that it is not possible to present a report of them, even though many of the contributions were not merely of interest to the medical specialist, but were also valuable contributions to science. The societies taking part in the Congress, their presidents and the numbers of papers offered before each, were as follows:

The American Otological Society,

Dr. Arthur Mathewson, Brooklyn, N. Y. 6 papers.

The American Neurological Association,

Dr. M. Allen Starr, New York City. 27 papers.

The American Gynecological Society,

Dr. James R. Chadwick, Boston, Mass. 21 papers.

The American Dermatological Association,

Dr. James C. White, Boston, Mass. 26 papers.

The American Laryngological Association,

Dr. Charles H. Knight, New York City. 18 papers.

The American Surgical Association,

Dr. John Collins Warren, Boston, Mass. 21 papers, including six subjects, followed by special discussion.

The American Climatological Association,

Dr. E. Fletcher Ingalls, Chicago, Ills. 26 papers.

The Association of American Physicians,

Dr. J. M. DaCosta, Philadelphia, Pa. 36 papers.

The American Association of Genito-Urinary Surgeons,

Dr. Francis S. Watson, Boston, Mass. 20 papers.

The American Orthopedic Association,

Dr. Samuel Ketch, New York City. 45 papers.

The American Physiological Society,

Dr. Russell H. Chittenden, New Haven, Conn. 22 papers.

The Association of American Anatomists,

Dr. Frank Baker, Washington, D. C. 10 papers.

The American Pediatric Society,

Dr. Samuel S. Adams, Washington, D. C. 33 papers.

The American Ophthalmological Society,

Dr. George C. Harlan, Philadelphia, Pa. 38 papers.

ZOOLOGICAL NOTES.

COLOR CHANGE IN THE PLUMAGE OF BIRDS. UNACCOMPANIED BY MOULT.

NOT long ago SCIENCE noticed two papers, one by Dr. J. A. Allen and one by Mr. F. M. Chapman, in which the possibility of any change of color taking place in a feather after it was fully developed was emphatically denied. Now Dr. Arthur E. Chadbourne comes forward in the *Auk* for April, 1897, with facts which seem to make it evident that this alleged impossibility does take place. The author kept a pet Bobolink from January until the breeding plumage was complete, and writes as follows: "The bird always seemed well and strong, and the color change was NOT accompanied by any increase in feather loss, i. e., not greater than during the winter, and often for several days in succession there were no cast-off feathers at all to be found. The total during the three weeks that the change was in progress was *thirteen*—namely, two broken rectrices and eleven contour feathers. It is hardly possible that any stray specimens were unnoticed, for even had they fallen outside of the cage they would have been found in the room, and a wire netting protected the window. 'Pin-feathers' could hardly have been overlooked, if present; for I often held the bird in my hand and

carefully examined it, blowing back the plumage until the skin could be seen. It is also safe to say, doubtless, that the cast-off feathers were not eaten by the bird itself. Hence it follows that unless the previous plumage was made up of only two tail and eleven body feathers, both of the former on the same side—which was certainly not the case—my *Bobolink* was unquestionably an instance of color-change in the plumage without moult."

Dr. Chadbourne had already presented evidence tending towards the same end in the *Auk* for October, 1896, and January, 1897, wherein he discusses change of color in the Screech Owl, *Megascops asio*.

In *The Ibis* for October, 1896, Mr. John G. Millais also discusses the problem of color-change without moult, describing and figuring feathers from the Eared Grebe, *Colymbus auritus*, and Sanderling, *Calidris arenaria*, showing the great probability of such change taking place. The word *probability* is used advisedly, for Mr. Millais figures feathers in different stages from different birds, and while this evidence may be very strong it can not in the nature of things be so conclusive as change of color in the plumage of a bird kept under observation day after day.

In spite of all that has been written, the moulting and change of color in birds is comparatively little known, and it remains a fine field of research for the investigator who is willing to spend his time in the patient and careful collection of facts.

F. A. L.

NOTES ON INORGANIC CHEMISTRY.

FOR some time past there has been a tendency on the part of an increasing number of chemists to attack the problems of inorganic chemistry, profiting by the light which the study of organic chemistry has thrown upon the carbon and nitrogen atoms. This is an encouraging tendency from the

standpoint of theoretical chemistry, for while the devotion of by far the largest proportion of chemists, for several decades down to the present time, to organic chemistry has widened vastly our knowledge of organic compounds and the carbon atom, yet the study of all other atoms is even more necessary for the theory of chemistry. Relatively very few inorganic compounds have been studied and some of our most familiar reactions are illy understood. So far from the inorganic field having been long ago worked out and exhausted, it is here that the chemistry of the future will find its most prolific harvest. Yet the field is far harder to till and less productive of immediate results.

THE *Berichte* of the German Chemical Society might almost seem to be devoted to organic chemistry, so large is the preponderance, yet we find that the inorganic field is not wholly neglected. In the last number Muthmann and Seitter contribute an investigation of the sulfid of nitrogen, which is in part a development of earlier work of Demarçay. When nitrogen sulfid N_4S_4 is treated with chlorine a theachlorid $N_4S_4Cl_4$ is formed, as shown by Andreocci. When sulfur chlorid is used, a compound of the formula N_3S_4Cl is obtained, and from this a series of derivatives, including the bromid, iodid, nitrate and thiocyanate. There thus appears to be a comparatively stable univalent group, N_3S_4 , which the authors believe to have a ring formula analogous to that of benzene.

IN the same *Berichte*, Pawlewski, of Lemberg, gives a careful study of the physical properties of sulfuryl chloride, SO_2Cl_2 , and some of its chemical reactions. Professor Söderbaum, of Gothenburg, in the same number describes a reaction between acetylene and cupric salts. The cuprous acetylid has been long known, but that acetylene gives a precipitate with cupric salts has