males; 13 males to 38 females, *i. e.*, 25.49 per cent. males to 74.51 per cent. females (sex ratio 34.21).

To determine further whether the sex-tendency of males showed any inclination to change from mating to mating the records were counted in the following manner:

Taking the matings of given males following matings that produced only female young, it was found that the product of such matings consisted of 22 males to 27 females, *i. e.*, 44.90 per cent. males to 55.10 per cent. females (sex ratio 81.48).

Taking the matings of given males following matings that produced only male young, it was found that the product of such matings consisted of 28 males to 24 females, *i. e.*, 53.84 per cent. males to 46.16 per cent. females (sex ratio 116.66).

This result is therefore the reverse of that shown by the females. Whereas the females show an opposite tendency following each litter, the males always maintain the same tendency.

Only those litters which were purely male or female were used in the above consideration. After a mixed litter of males and females, which is more common under natural conditions, there is not a pure, but also a mixed sex tendency. This fact renders the recognition of the "C" factor extremely difficult.

Such a characteristic change in tendency from birth to birth also seems to occur in other animals. The daphnids, for instance, seem to have some such regulation very definitely expressed.[1] In these organisms also the sex tendency changes from generation to generation as well as from birth to birth in such a way that not after each generation and each birth, but after a number of generations and births, differing with different species, the exclusive production of parthenogenetic female ceases and the first males appear. Doubtless we have in this an example of a change of the sex tendency, but its expression is quite different from that in the guinea-pigs.

From a theoretical standpoint, it is very important that coincidentally with the change of sex tendency in the summer eggs from female to male in *Moina rectirostris* var. *Lilljeborgii*, there is also a change in the color of these eggs from violet to blue.[2] This fact probably indicates that some chemical change occurs in the eggs at the same time that the change in the sex tendency takes place.

At the present time I am endeavoring to complete my observations and to determine statistically the relative value of the three factors in different combinations. Since, however, the animals at my disposal are designed especially for the study of the degenerative influence of alcohol, it will, no doubt, require a long period of time to collect hundreds of selected cases, since so few animals of the generations later than the third are capable of reproduction.

This preliminary report is published with the hope that other investigators, having a large stock of different animals at their disposal, may further contribute to the solution of this problem in all its details.

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[1] Papanicolaou, G., "Experimentelle Untersuchungen über die Fortpflanzungsverhältnisse der Daphniden," *Biol. Zentralbl.*, 30, 1910.

[2] *Ibid.*

The American Association for the Advancement of Science

Section C

The first session was held on the afternoon of Thursday, December 31, at the John Harrison Laboratory of Chemistry, Vice-president Edgar F. Smith in the chair, with an attendance of about 75. The following officers were elected:

Vice-president—William McPherson, Ohio State University.

Member of Council—W. T. Taggart, University of Pennsylvania.

Member of General Committee—L. W. Jones, University of Cincinnati.

Member of Sectional Committee—E. C. Franklin, Stanford University.

The section passed a resolution to the following effect: That the committee of Section C endeavor

to arrange its program so as to center round some definite topic or group of topics, the choice and treatment of which should preferably be such that they prove interesting and useful, even to any one not especially conversant with chemistry; and that Section C favors the relegation to the Chemical Society of unrelated papers of interest only to chemists, though this would in no wise preclude the holding of joint meetings with a local section of the Chemical Society or with any other society.

The following papers were read:

The Densities and Degrees of Dissociation of the Saturated Vapors of the Ammonium Halides:[1] ALEXANDER SMITH AND ROBERT H. LOMBARD.

The Entropy of Vaporization of Normal Liquids: J. H. HILDERBRAND.

A discussion of the value of the quotient Q/T (Q is the latent heat, T the temperature, of vaporization) and of its variations.

Chemical Preservation of Manure: P. A. MAIGNEN.

A plea for the better conservation of the valuable material at present going largely to waste as sewage.

A Rapid Lime Requirement Method for Soils without the Use of a Factor: THOS. F. MANNS.

A description of the method, illustrated by examples of the results attained.

On the Universal Application of the Molecular Theory. A Question: H. E. MORROW.

Suggests the possibility of dispensing with the conception of molecules in the case of complex colloids, such as proteins; that a conception of continuous atomic linkings serves to account for some of the properties which such complex substances exhibit.

On the forenoon of January 1, in the laboratory of hygiene of the University of Pennsylvania, Section C held a joint session with Section K and with the Society of American Bacteriologists, devoted to a symposium on "The Lower Organisms in Relation to Man's Welfare." The attendance was about 200. The list of speakers and titles follows; the papers will be published in full later.

Theories of Fermentation: C. L. ALSBERG.

The general mechanism of the action of ferments.

Enzyme Action: C. S. HUDSON.

A discussion of the chemical changes involved in the action of enzymes.

Rôle of Microorganisms in the Intestinal Canal: A. I. KENDALL.

Microorganisms in their Application to Agriculture: C. E. MARSHALL.

JOHN JOHNSTON,
Secretary of Section C

[1] See *J. Am. Chem. Soc.*, 37: 38, 1915.

THE FEDERATION OF AMERICAN SOCIETIES FOR EXPERIMENTAL BIOLOGY

THE second annual meeting of the Federation, comprising the American Physiological Society, the American Society of Biological Chemists, the American Society for Pharmacology and Experimental Therapeutics, and the American Society for Experimental Pathology, was held at St. Louis on December 28, 29 and 30, 1914, in the laboratories of the Washington University Medical School.

Three joint sessions of all of the above societies were held at which twenty-eight communications were presented. The titles of these papers have already appeared in the account of the meetings of the Physiological Society.[1]

At the first session the following memorial addresses were delivered:

"S. Weir Mitchell," by E. T. Reichert, read by W. B. Cannon.

"C. S. Minot," by F. S. Lee.

The following resolution was presented and unanimously adopted:

WHEREAS, various of the European nations with which many of our members are related by birth, descent or intellectual friendship are now at war,

Resolved, that we extend to the scientific men within these nations the hope of an early and enduring peace, which will leave the nations with no permanent cause of rancor towards each other, and which will insure to each the glories of scientific and humanitarian achievement in accordance with its own conception of these ideals.

Printed copies of this resolution, suitable for mailing, have been prepared and may be obtained from Professor Graham Lusk, Cornell Medical College, New York City. It is hoped that members of the Federation will send such copies with their compliments to their scientific friends in the countries now at war.

Executive Committee for the Year 1915.—Chairman, Torald Sollmann; *Secretary,* John Auer, for the Pharmacological Society; W. B. Cannon, C. W. Greene, the Physiological Society; Walter Jones, P. A. Shaffer, the Biochemical Society; Theobald Smith, Peyton Rous, the Pathological Society.

P. A. SHAFFER,
Secretary of the Executive Committee, 1915
WASHINGTON UNIVERSITY MEDICAL SCHOOL,
February 9, 1915

[1] SCIENCE, January 22, 1915, p. 142.