tice them. It must be further remembered that all those whose studies are with nature—the geologists, botanists, zoologists, anthropologists and others—use the summer for their expeditions, so that for many of them attendance at summer meetings is impossible.

On the other hand, there has grown up within the last dozen or fifteen years the custom of holding meetings of learned societies during the brief Christmas holidays. The first society to adopt this time for its gathering was the American Society of Naturalists, which held its first December meeting in New York, in 1883. Since then a number of other societies, more or less national in scope, have been formed and hold their meetings during the same period. We may mention among scientific societies the following:

The American Society of Naturalists.
The American Morphological Society.
The Association of American Anatomists.
The American Bacteriological Society.
The American Physiological Society.
The American Psychological Association.
The American Folklore Society.
The American Society of Plant Morphology and Physiology.
The Anthropological Section of the American Association.
The Geological Society of America.
The American Chemical Society.
The American Mathematical Society.
The American Physical Society.

All these societies, we think, without exception, have found from experience that the Christmas holidays are a convenient time for their meetings, except in one respect—that the time is too short, especially when Christmas day falls on a Wednesday or Thursday, for then Sunday falling half way between Christmas and New Year, it is impracticable to get more than two days for a meeting, and two days, as we have all learned, is far too brief a time for our needs.

These circumstances point obviously to the lengthening of the Christmas vacation past New Year as the remedy, hence the selection of the week in which the first of January falls as 'convocation week.'

Should the proposition be carried out, it will afford an opportunity for the elevation of science in America of inestimable value and will be a contribution to the advancement of learning in all its branches, well worthy to initiate the progress of the new century.

THE NATIONAL ACADEMY OF SCIENCES.

THE annual stated session of the National Academy of Sciences was held in Washington, April 16 to 18 inclusive. The following papers were read:

'The Climatology of the Isthmus of Panama': HENRY L. ABBOT.

'The Effects of Secular Cooling and Meteoric Dust on the Length of the Terrestial Day': R. S. WOODWARD.

'The Use of Formulæ in demonstrating the Relations of the Life History of an Individual to the Evolution of its Group': ALPHEUS HYATT.

'Artificial Parthenogenesis and its Relation to Normal Fertilization': E. B. WILSON.

'Simultaneous Volumetric and Electric Graduation of the Condensation Tube': CARL BARUS.

'Table of Results of an Experimental Enquiry regarding the Nutritive Action of Alcohol, prepared by Professor W. O. Atwater, of Middletown, Conn.': Presented by J. S. BILLINGS.

'The Significance of the Dissimilar Limbs of the Ornithopodous Dinosaurs': THEO. GILL.

'The Place of Mind in Nature': J. W. POWELL.

'The Foundation of Mind': J. W. POWELL.

'Conditions Affecting the Fertility of Sheep and the Sex of their Offspring': ALEXANDER GRAHAM BELL.

'The New Spectrum': S. P. LANGLEY.

Mr. Alexander Agassiz, of Cambridge, Mass., was elected president of the Acad-

emy; Professer Ira Remsen, Baltimore, Md., foreign secretary; Mr. Arnold Hague, Washington, D. C., home secretary—each for a term of six years. The following were elected additional members of the council for the ensuing year: J. S. Billings, G. J. Brush, H. P. Bowditch, Arnold Hague, Simon Newcomb, L. P. Langley.

Five new members were elected as follows:

George F. Becker, U. S. Geological Survey, Washington, D. C.

J. McKeen Cattell, Professor of Psychology, Columbia University, New York City.

Eliakim H. Moore, Professor of Mathematics, University of Chicago, Chicago, Ill.

Edward L. Nichols, Professor of Physics, Cornell University, Ithaca, N. Y.

T. Mitchell Prudden, Professor of Pathology, College of Physicians and Surgeons, Columbia University.

The following were elected foreign associates:

J. Janssen, Director of the Observatoire d'Astronomie Physique, Meudon, France.

Mr. Loewy, Director of the Observatoire de Paris, Paris.

E. Bornet, of the Section of Botany of the Paris Academy of Sciences.

Hugo Kronecker, Professor of Physiology in the University of Bern.

A. Cornu, Professor of Physics, École polytechnique, Paris.

F. Kohlrausch, Professor of Physics at the University of Berlin.

Sir Archibald Geikie, recently Director of the Geological Survey of Great Britain.

J. H. van't Hoff, Professor of Chemistry in the University of Berlin.

The Henry Draper medal was awarded to Sir William Huggins, of London, for his investigations in astronomical physics.

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*THE SOCIAL SERVICE OF SCIENCE.**

The extent to which society may be considered as an organism is still, I understand, a matter of controversy with sociologists, but without awaiting its adjudication, we may surely make use of a simile as ancient as that of the Apostle who spoke of individual Christians as members of one body, or as that of the wise old Roman who taught the mutinous plebs the parable of the body politic, all of whose members were nourished by the well-fed patrician belly, and consider together this evening the special function of science in the body social.

It may at least supply a convenient means of classifying the various services of science to the common weal, if we consider it not as a distinct corporal member, but rather as a growth force, ever accelerating the evolution of society, providing it with organs of defense, increasing its muscular energy, and perfecting its systems of circulation and communication. And if to these services we add the reaction upon the social mind of the physical environment which science has provided, and the direct influence of scientific truth, we shall then have sketched at least the main functions of science in social evolution.

Among the first services to society which our biologic analogues suggest is that of defense. Under the growth force of science the body social has accomplished an evolution similar to that which brought the vertebrates, assumed to have been at first naked and defenseless, to the stage of the armored fishes of the Devonian, and which in the Tertiary changed tooth to tusk, nail to claw, and frontal boss to horn and antler.

Prescientific society was destroyed largely because it had attained no adequate means of defense. It is safe to say that had the Roman legionaries been equipped with Maxims and Mausers, the episode of the Hun and Vandal invasions of Southern Europe would have been indefinitely postponed.

Modern society, which science has armed with the most terrible of death-dealing weapons, whose explosives are brought from the laboratory of the chemist, whose im-

*Address of the retiring President, Iowa Academy of Science. Des Moines, December 26, 1900.