

DR. F. R. MILLER has been appointed lecturer in physiology in McGill University.

MR. R. E. STONE has been appointed lecturer in the botanical department of the Ontario Agricultural College.

MR. W. H. MILLS, M.A., of Jesus College, has been appointed demonstrator to the Jacksonian professor of natural experimental philosophy at Cambridge University in place of the late Mr. H. O. Jones.

DISCUSSION AND CORRESPONDENCE

"THEORETICAL ASTRONOMY"

TO THE EDITOR OF SCIENCE: Referring to Professor MacMillan's review of Buchholz's Klinkerfues's "Theoretische Astronomie," in SCIENCE for September 6:

Professor MacMillan objects to Klinkerfues's limitation of the title "Theoretical Astronomy" to the theory and practise of orbit determinations, and the great majority of astronomers will certainly agree that this is illogical and unfortunate; but is not Professor MacMillan's application of the term "Computational Astronomy" to the same field even more illogical and unfortunate? The computational side in many other branches of astronomical endeavor is as extensive, both relatively and absolutely, as in that of orbit determinations. To illustrate: Studies of the solar corona, of atmospheric refraction, of the motion of the solar system, of Algol variable stars, of the evolution of double stars, of cosmogony in general, and so on almost indefinitely, have both theoretical and computational sides; and who is wise enough to say which side in any of the subjects mentioned will be the predominant one in the future?

Can we do better at present than to continue the already extensive use of Gauss's title, "Theorie der Bewegung der Himmelskörper," and of Oppolzer's title, "Lehrbuch zur Bahnbestimmung"?

Again, does not Professor MacMillan's characterization of this subject as the "book-keeping" of astronomical science convey an unfortunate impression? The subject received the best efforts of Kepler, Gauss, Olbers, Op-

polzer, and many others; and advances made during the present generation give promise that this field is worthy of the highest abilities of astronomers to come. Could we not, with equal justification, include in the "bookkeeping" of astronomy essentially all studies of double stars, of variable stars, of spectroscopic binary stars, of stellar positions and proper motions, of stellar radial velocities, of sunspot spectra, and so on through a long list?

W. W. CAMPBELL

MT. HAMILTON,
September 18, 1912

THE UNANIMOUS VOTE RULE IN THE INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

THE central branch of the American Society of Zoologists unanimously adopted the report of its committee on nomenclature¹ containing the following:

All propositions for amendments to rules on nomenclature which are approved by a majority of the International Commission on Nomenclature shall be submitted to the International Congress for decision by vote in open meeting.

It is not the purpose of the present communication to influence any person's mind for or against the foregoing resolution, which is practically identical with a proposition that has recently arisen in Austria. A brief statement of the origin of the present method of procedure may, however, be interesting to some zoologists who desire a change in the methods.

The International Commission on Zoological Nomenclature was appointed in 1895. For three years it studied the subjects submitted to it, its members coming together at their own expense from five different countries in a meeting of nearly a week's duration some months prior to the meeting of the Congress. The Commission was unanimous upon a number of propositions, but was divided upon several others. Upon the latter propositions majority and minority reports were submitted.

At the next meeting of the Zoological Congress the Commission was prepared to submit its formal report, but learned that no place on

¹ See SCIENCE, 1912, June 14, pp. 933-934.

the program had been reserved for this purpose. As secretary of the commission I inquired into the reason, and was informed that the committee of the congress had decided that unless the report of the commission were unanimous, its submission to the general meeting would jeopardize the success of the congress, and would turn the general meeting into long-drawn-out discussions on very dry and technical points in nomenclature upon which very few of the members were well informed.

Accordingly, the first three years' work of the commission was not acted upon.

The commission was, however, granted a few minutes at one of the meetings to make a general report of progress and to request that the size of the commission be increased.

Three years later the commission had by mutual concessions obtained unanimous vote on most of its propositions, but there still remained several with divided vote. Repeated conferences were held with many different prominent zoologists, and the consensus of opinion was that the congress would not listen to any report that was not unanimous.

In order not to take up the time of the general meeting with technical discussions on nomenclature, the plan was instituted of having an open session when any person interested in nomenclature could present any point to the commission, and could discuss the commission's report. This open meeting is held prior to the date when the commission reads its report to the congress. The report is read, however, at this open meeting, and if any one present objects to any portion of it, he has to convince only one member of the commission that the portion in question should be stricken out. That one commissioner has the power to prevent the portion in question from going before the congress.

By this method of procedure the general meetings are safeguarded from being turned into discussions on nomenclature. Further, sudden and unwise changes in the rules are avoided. The theory is that if fifteen specialists on nomenclature can agree upon any one point, the mathematical probabilities are that

that point is correct. Obtaining a unanimous vote thus assures the presentation of an amendment to the congress, and a failure to obtain a unanimous vote protects the rules from any sudden innovation and from vacillating changes that might be carried through with a vote of eight to seven, this vote changing from one side to another in successive congresses. At the Berlin Congress the motion was carried that the congress adopt and approve all of the propositions in the report that had been accepted unanimously by the commission, and that all propositions upon which there was a divided vote be referred back to the commission. The commission was also given thoroughly to understand that the congress did not care for any but unanimous reports in the future.

From the foregoing it will be seen that the present mode of procedure developed not upon the initiative of the commission, but of the congress itself, and in view of the experience the commission has had before two congresses, it seems that the commission can not be expected to report divided votes unless specifically instructed to do so by the congress.

An interesting point arises. A great many questions in nomenclature have been settled, and in not a few instances reports have been obtained only by mutual concessions after long conferences. When a commissioner has been outvoted in any given proposition, namely, when he has failed to obtain a unanimous vote for his proposition, it has been customary for him not to bring the matter forward a second time.

Assuming now that the recommendation of the central branch of the American Society of Zoologists is adopted by the congress, and that the commission is instructed to report divided votes in the future, the interesting point arises as to whether the large number of questions that have been definitely disposed of since 1896 under the present method of procedure will be reopened, and will be allowed before the general session of the congress.

C. W. STILES,
*Secretary, International Commission
on Zoological Nomenclature*