

following problems remain to be solved. What is the relation of our chestnut-blight fungus to the *Endothia* on chestnuts in Italy? What species related to or identical with the chestnut fungus grow on other trees in this country, and how do they affect such trees? Is it possible to determine authoritatively whether *Sphæria gyrosa* and *Sphæria radicalis* Schweinitz are identical or distinct species, and are European botanists justified in believing that the *Endothia* of Europe is identical with either of the species of Schweinitz? Some of these questions mycologists may be expected to answer hereafter. Others may never be answered except by those in whom the power of observation does not exclude the exercise of a vivid imagination.

W. G. FARLOW

MORE TROUBLE FOR THE SYSTEMATIST¹

ON a former occasion, in an address as retiring chairman of Section F of the American Association for the Advancement of Science, your speaker had occasion to bid for the sympathy of his zoological colleagues, the immediate cause of distress being a prediction on the part of Dr. C. B. Davenport that "the future systematic work will look less like a dictionary and more like a table of logarithms."

In the ten years that have passed since that time, this particular specter has not reappeared, and the systematists have placidly gone on their way, apparently oblivious to the existence of logarithmic functions. This, however, may be due to their general belatedness and ultra conservatism; and it is not impossible that the threat of Dr. Davenport may still disturb the placidity of their dreams.

There are other troubles, however, that have arisen in the meanwhile, that are not a whit less disturbing than the one just mentioned.

A serious and most important effort to meet

some of the difficulties of nomenclature has been made in the formation of the International Commission on Zoological Nomenclature, a thoroughly dignified and able body of zoologists, of which Dr. C. W. Stiles is the accomplished secretary and most influential American member. In the formation of this commission great pains were taken to make it truly international and representative. It was formally appointed by the most dignified body of zoologists in the world, the International Zoological Congress, and has striven earnestly and faithfully to perform its herculean task. It has been confronted with almost unsurmountable obstacles, and is certainly deserving of praise for its efficiency and courage.

That this commission would meet with serious difficulties was to have been predicted. In the attempt to formulate general laws it is inevitable that there should result individual cases of hardship and injustice, particularly when the law is inflexibly administered. Zoologists, like other men, are apt to be more or less restive under restraint, and consistency in applying the law of priority enacted by the International Commission was bound to involve irritating consequences.

These consequences are felt not only by the relatively small number of systematists, but even more keenly by the morphologists, embryologists and others who have to use zoological names, although they are spared the pains of making them, and are much inclined to cling fondly to those which have been rendered familiar by usage.

These men are naturally exasperated when they are required to call a holothurian a "bohadschioidean," and find it hard to recognize an actinian under the guise of "Dagysidæ."

Systematists have always, however, been subject to the execrations of their fellow zoologists along these lines, and at times deservedly so. It is inevitable, on the one hand, that classifications and hence names must change with the increase of knowledge and, on the other hand, it is equally certain that pedantic systematists and hair-splitting pur-

¹ Read before the Central Section of the American Society of Zoologists, at Urbana, Ill., on April 5, 1912.

ists will arise and, with more zeal than judgment, create havoc with existing and revered classification. These men have no exemption from the common quota of error which afflicts mankind in general, but their mistakes are apt to be more than ordinarily disturbing. There is such a thing as excessive pedantry in every class of students, as there are men who crucify the spirit of the law in order to maintain the letter.

But, to return to the International Committee on Zoological Nomenclature, it must be conceded that it has unraveled skillfully and patiently many knotty problems in nomenclature, and has performed a function which is surely an important one.

But it has aroused a more or less active spirit of opposition by its strict application of the priority law, a rule that is at the very foundation of many of its decisions. This law reads as follows:

Art. 25. The valid name of a genus or species can be only that name under which it was first designated on the condition (*a*) that this name was published and accompanied by an indication, or a definition, or a description; and (*b*) that the author has applied the principles of binary nomenclature.

While there have been individual zoologists who have vigorously objected to the rigid enforcement of the priority rule, it remained for the Scandinavian and Finnish zoologists to make the first formal and organized protest. There was published in the *Annals and Magazine of Natural History* for December, 1911, an article entitled "A Vote against the Strict Application of the Priority Rule in Zoological Nomenclature, with an Introduction by Dr. Th. Mortensen."

This introduction is interesting reading for the insurgents. It reviews the efforts that have been made to induce the International Commission to agree to the recommendation that "certain very commonly used zoological names should be excepted from the law of priority," and states that the Commission on Zoological Nomenclature has shown no inclination to accept the recommendation, claiming that such a desire for exceptions to the

rule is not indicated by any great number of zoologists.

It seems that there was published in the number of the *Annals and Magazine of Natural History* for December, 1910, a portion of an advanced copy of the Report of the International Commission in which the commission invites all zoologists to send in, prior to *November 1, 1910*, a list of 100 zoological names. All systematists are invited, moreover, to send a separate list of 50 or 100 generic names in their specialty which they look upon as most important and most generally used, each name to be accompanied by the full and complete bibliographic reference, by the name of the type species and the name of the order and family to which the genus belongs.

This proposition Dr. Mortensen regards as "not very far from an absurdity." Perhaps this language is too strong to apply to a request from the International Commission on Zoological Names; but it is nevertheless exceedingly frank. It would be interesting, moreover, to know how many systematists there are in this body who are so situated that they could drop their ordinary work and supply, on short notice, such a list, with proper bibliographic references.

Dr. Mortensen, with the help of some of his colleagues, secured a vote from 122 professional zoologists in Scandinavia and Finland, and found that all but two of them were ready to sign the following statement:

The undersigned Scandinavian and Finnish zoologists protest against the strict application of the law of priority in all cases, and express the desire that the most important and generally used names should be protected against any change on nomenclatorial grounds.

The names and official positions of the signers are appended. Dr. Mortensen concludes as follows:

It is to be hoped that the zoologists of other countries will follow the example given here. When this has been done, and it has been definitely proved that the great majority object to the strict application of the priority rule, it may perhaps be expected that the tyranny of that notorious law, which has already done so much harm to

science, will be thrown off; and then, perhaps, the International Commission will see that it is rather its duty to arrange for the codification of the desired names in accordance with the wishes of the zoologists.

Upon looking up all of the evidence at hand, and also communicating directly with the secretary of the International Commission, I am forced to the conclusion that there is no disposition on the part of that commission to except any names whatever from the mandate of the priority rule.

It should be said here that prior to the protest from the Scandinavian and Finnish zoologists, the British Association and the American Society of Zoologists had recommended "that certain very commonly used zoological names should be excepted from the law of priority," and, aside from these formal actions there has been developed a considerable amount of individual hostility to the strict application of the law; and in some cases there is open revolt.

The practical working systematist is now confronted with a very serious and perplexing dilemma. He is forced to ask himself which of two courses he should pursue. Shall he adopt the ruling of the commission and adhere strictly to the law of priority, in which he will not be followed by a large and important class of his colleagues? Or, shall he use his judgment in each particular case which comes up for decision, and thus bring down upon himself and his work the criticism of another important class and have both condemned by the International Commission on Zoological Nomenclature, a body created by the International Congress, and having plenary powers to enforce this rule? And it must be remembered that a large number of active systematists are thoroughly in accord with the commission.

It surely seems as if the systematist here finds himself placed squarely between the Devil and the deep sea. It is, of course, not within the province of this paper to designate which is which.

Now it must be confessed that there is much to be said in favor of the attitude taken by

the commission in this matter. In the first place, there is great virtue in a clear-cut and definite law, one without any "ifs" nor "ands" about it; and this advantage is undoubtedly possessed by the law in question. And it is clearly to the advantage of the commission, as court of last resort, to have such a rule at its back. A law of this kind is administered with much more facility than a looser one, and the consistent administration of such a rule can bring no efficient criticism upon the commission, *provided* that the priority rule has been legally enacted!

As a matter of fact, the International Congress of Zoologists, although perhaps not a strictly legal body, is presumably the most thoroughly representative, indeed the only international body of zoologists in a broad sense, that exists, or has existed.

This body formally adopted the code, as formulated by the duly authorized International Commission on Zoological Nomenclature, at the Berlin meeting, in 1901. The commission itself was formally appointed in 1895 at the Leyden meeting.

Further amendments were submitted by the commission, and adopted by the International Congress at the Boston meeting in 1907. Meanwhile a number of zoologists expressed the wish that the commission serve as a court for the interpretation of the code, and it has consented to act in that capacity.

A careful review of the records and history of the commission has forced upon the writer the conviction that the priority rule has as thorough a sanction in law as can be given by the International Congress of Zoologists, and that there is nothing in the records which authorizes the commission to deviate from that law. Moreover, it appears that the commission is correct in declaring that it "has no legislative power," and it is difficult to see how it could assume the right to practically amend the priority rule.

If ordinary parliamentary usages are to be followed, it seems to be plainly indicated that the only power that can amend or abolish this rule is the International Congress itself, either on its own motion, or in response to a recom-

mentation of the International Commission. But the congress itself has decreed that "no proposition for change in the code is permitted to come before the congress unless it is presented to the Permanent Commission at least one year before the meeting of the congress."

A letter from Dr. Stiles, the secretary of the commission, informs me that the congress has gone on record to the effect that it demands "a unanimous vote of the commission before any matter will be considered by the congress."

It is interesting to speculate at this point whether there is any conceivable method by which a dignified body of scientists could more completely and finally tie its own hands than the one here solemnly consummated by the International Congress of Zoologists. The method, in brief, is as follows:

1. Appoint a commission with power to formulate a code.
2. Formally adopt that code.
3. Forbid any amendment to be introduced except through the commission.
4. Declare that nothing will be considered unless brought before the congress with the unanimous vote of the commission.

I submit, most respectfully, that nothing more perfect of its kind has every been perpetrated by any political machine or autocrat.

All that the commission has to do is to "stand pat." The congress has done the rest.

C. C. NUTTING

HENRY JAMES CLARK: TEACHER AND INVESTIGATOR¹

HENRY JAMES CLARK, or H. James-Clark as he often wrote his name, sometimes called, not inaptly, the first professor of natural history at this college, was the first trained zoologist to occupy a chair here. But hardly had he

¹ An address delivered at the dedication of the building for entomology and zoology at the Massachusetts Agricultural College, November 11, 1910. In the preparation of this sketch I am indebted to Dr. Edward S. Morse and Professor A. E. Verrill for much valuable information.

entered upon its duties when he was called from this life in the flower of his age.

Born at Easton, Massachusetts, on the twenty-second of June, 1826, the son of a clergyman, his father moved to Brooklyn, N. Y., where he lived many years and where the son received much of his early training and was fitted for college. After completing his preparatory studies, he entered the University of the City of New York, and was graduated thence in 1848. From college he went as a teacher to White Plains, and while engaged in the study of botany, made observations upon the structure of *Chimaphila* and *Mimulus*, which he communicated to Dr. Gray. These and subsequent observations upon the flora of the neighborhood attracted to him the favorable notice of the latter, who invited him to Cambridge. Thither he went in 1850, and enjoyed for a time the advantages of a pupil and private assistant at the botanic garden. While a student there he taught, for a single term, the academy at Westfield, achieving much success as a teacher. Soon after this a taste for zoological studies, developed by the lectures of Professor Agassiz and frequent visits to the zoological laboratory, led him to abandon botany for what appeared the more fascinating study of animal life. Graduating from the Lawrence Scientific School in 1854, he became immediately after the private assistant of Professor Agassiz. Three years later Agassiz spoke of him enthusiastically, remarking to a friend, "Clark has become the most accurate observer in the country." In June, 1860, he was appointed assistant professor of zoology in the Scientific School at Harvard University, a position he held until the expiration of his term of office.

A few weeks following his appointment he went abroad, mainly for his health, traveling in England, France, Germany and Switzerland, often on foot, and visiting the leading universities and museums. He met many scientific workers, including Allman, Alexander Braun, Gegenbaur, Haeckel, Huxley, Leuckart, von Martius, Milne-Edwards, Schleiden, but especially Owen, whose guest