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## IS AN INTERNATIONAL ZOOLOGICAL NOMENCLATURE PRACTICABLE?<sup>1</sup>

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AFTER an experience of about forty years in an attempt to standardize a code of international rules to govern zoological nomenclature, it will be well for zoologists to consider briefly the outstanding difficulties which at one time or another have inhibited the degree of success which it was hoped would attend the undertaking. Possibly a short review of the subject will indicate whether or not it is worth while to continue the effort.

At the First International Zoological Congress (Paris, 1889) R. Blanchard presented a proposed code of international rules, prepared by himself, after careful consideration of the world's literature on the subject, and naturally he was influenced to no slight

<sup>1</sup> Presented before the Biological Society of Washington, December 13, 1930.

degree by the existing French rules. This draft was discussed by the First and Second Congresses (Paris, 1889, and Moscow, 1892) and was formally adopted.

In 1894, the Deutsche Zoologische Gesellschaft adopted an independent code, thereby (at least inferentially) declining adherence to the international code.

In 1895, F. E. Schulze (Berlin, Germany) raised the point at the Third Congress (Leyden), that the Paris-Moscow code was essentially a French production, and he proposed the appointment of an international commission to study all the existing rules with a view to obtaining a really international code.

This proposition produced considerable bitter feeling which threatened to send the Third Congress on the rocks. Oil was poured on the troubled waters,

however, and a commission of five men, representing five different countries (four Old World, one New World), was appointed.

This commission worked hard for three years and attended the Fourth Congress (Cambridge, England, 1898), prepared to present its report. Unfortunately, but not unnaturally, this report was not unanimous in all details, and as a result it was referred back to the commission (which was then enlarged to fifteen members) for further study. In fact, the British administrative office of the congress declined to permit the report to be read, giving as reason the fact that the report was not unanimous.

Thus, Great Britain's administrative representative insisted upon the principle that international rules of nomenclature are not to be made subject to a majority report or a majority vote, but must be based on a unanimous agreement in commission.

Three years later, the commission appeared at the Fifth Congress (Berlin, Germany, 1901) with a more nearly unanimous but not absolutely unanimous report, and was given unambiguously to understand that the congress would not permit its general sessions to be turned into an open forum for the discussion of differences of opinion on rules of nomenclature and that unless the commission could present a unanimous report it would not be given a hearing before the general session. Thus the German presiding officer of the congress confirmed the principle insisted upon by the British office. Conferences were held between various members of the commission and various other As what promised to be a permanent zoologists. policy seemed to be formed, and as Germany had been the initiating factor in the appointment of the commission, it seemed logical to attach considerable importance to the reaction of the Deutsche Zoologische Gesellschaft. Accordingly, two foreign (French, American) representatives on the commission conferred with an officer of the Gesellschaft, explained to him some of the difficulties which the commission faced, and asked in how far the commission could rely upon the support of the Gesellschaft in case the commission could, by mutual concessions on various points, iron out some of the differences of opinion, even if the result were not generally popular. The reply was to the effect that the commission could rely absolutely upon the Gesellschaft to support it in the final results. This was confirmed by the three German representatives on the commission.

As one prominent German member of the congress [an officer of the German Zoological Society] stated in effect: "It is the duty of the commission to become unanimous in its vote; give us a definite set of rules, good, bad, or indifferent, but be unanimous in your report, and after you give us the rules, see that they are

carried out.'' The words of this prominent German savant were a fair reflection of the feeling we found at the Berlin meeting, so far as the secretary of the commission could discover.<sup>2</sup>

Further concessions were made and finally the commission was permitted to present a brief report to the General Session and the motion prevailed that the congress approve those portions of the report on which the commission was unanimous.

This general incident on *unanimity* is what has been known in the commission as the "Berlin Agreement." It has been accepted as a "gentlemen's agreement" to which the commission has rigidly adhered.

As a corollary to this gentlemen's agreement (requiring unanimous vote in commission preceding the adoption of the rules) follows the parliamentary principle that amendments are subject to the same system or by-laws as the original motion. This principle was definitely incorporated in the by-laws of the commission. Thus, according to parliamentary usage and to the by-laws of the commission, amendments to the original (1901) rules require a unanimous vote in commission.

At the Sixth Congress (Berne, 1904), some slight criticism of the Berlin report developed; this took the form that portions of the report were not entirely clear. These criticisms, emanating from Berlin, did not come to discussion in congress but only in the commission, in which friendly difference of interpretation existed in reference to one article in particular (a point which was made unambiguous at a later Congress). The code was then issued (1905) in French, English and German.

Shortly after the Berne (1904) Congress, there appeared in Germany a new proposition, by a Berlin zoologist, for a total revision of the wording of the code.

It is a recognized fact that courts exist not only for enforcing laws but also for interpreting laws and for settling controversies: "Interest rei publicae ut sit finis litium." The commission has no power to enforce the rules, but at the Seventh (1907) Congress, at Boston, the custom was introduced of issuing commission opinions, in the hope of contributing toward the solution of difficulties and (in case of difference of interpretation) of showing what the commission understood that the rules meant (thus "interpreting" the rules).

Zoologists in the United States, who had been very slow in accepting the international rules and many of whom had for years been working chiefly under the "A. O. U. Rules," now became gradually per-

<sup>2</sup> Report of the International Commission to the Congress, IX<sup>3</sup> Congrès int. Zool., Tenu à Monaco, 1913. Published 1914.

suaded that the "Berlin Agreement" was an established factor, that the rules were stable as they stood although they might be built out in various directions to meet new points. As a result, these zoologists rapidly gravitated toward the international rules. In the United States, up to this time, there had been misgivings lest the triennial congresses might adopt, by popular vote, some reactionary rule or policy. But, by 1907, the policy seemed to be generally accepted that a special commission on nomenclature was to guide the subject in the future, and that international unanimity, not local majority, agreement, not dissension, leading, not driving, true international cooperation, not local individualism, friendly discussion, not personal polemic, were to be the determining factors in the future.

In 1910, at the Eighth Congress (Gratz), dissension appeared from Vienna, but it did not make headway.

In 1913, at the Ninth Congress (Monaco), dissension became formulated in two phases in particular, one phase centering in Berlin, the other phase centering in Vienna.

The new secretary of the Deutsche Zoologische Gesellschaft headed a movement which was not in harmony with the assurances the commission had received from his predecessor.

From Vienna came three propositions which were not in harmony with the spirit of the Berlin Agreement on unanimity or with the Berlin, the Berne, and the Boston unanimous reports. The chief proponent of these three changes appeared before the commission to argue his case. In arranging for the hearing, in reply to the question as to how much time he desired to occupy, he said in effect: "If the commission adopts my views I shall not have to speak more than five or ten minutes, but if the Commission does not adopt my views I shall want to speak six or eight hours or until the Commission does adopt my views." The gentleman from Vienna must be given credit for standing by his statement, for seventeen years later (1930), at Padua, his same three propositions were covered by a report<sup>3</sup> he made to the commission and

3 1930K. "The Nomenklaturkommission des Verbandes Deutschsprachlicher Entomologenvereine has recently unanimously voted: 'Die Nomenklaturkommission des Verbandes Deutschsprachlicher Entomologenvereine empfiehlt der Internationalen Nomenklaturkommission, bei dem XI. Internationalen Nomenklaturkommission, bei dem XI. Internationalen Zoologenkongress die Annahme der von dem British National Committee on Entomological Nomenclature Vorgeschlagenen Revision der Nomenklaturregeln (Proc. Ent. Soc. London, 3, 1928, pp. 2R–13R) mit den von Poche, Ent. Anz. 7, 1927, Nr. 1ff., beantragten Änderungen & einigen weiteren Änderungen in den gegenüber dem ersten Entwurf dieses Committee (1925) gemachten Zusätzen zu befürworten. Sie empfiehlt dem XI. Internat. Zoologenkongress wärmstens, diese Revision mit den gedachten Änderungen anzunehmen.' I personally heartily endorse this resolution."

by a very inclusive motion he made in the Section on Nomenclature.

Thus in 1913 the Berlin (1901) policy of conservatism, conciliation, unity and unanimity was threatened by one of radicalism, dictation and dissension. The radicalism centering at Vienna has continued and has gained adherents (cf. the Union of German-speaking Entomological Societies). The commission declined, in 1913 and 1927, to desert the Berlin (1901) conservatism for the 1913 radicalism.

Again in 1930, these same three propositions from Vienna were lost in the vote taken by the commission:  $1930A^4$  obtained in commission (out of a possible 18 votes) only 1 vote, 1930D only 2, and  $1930F^5$  only 4 votes.

Then came an unexpected action by the Section on Nomenclature, meeting with the commission to hear the commission's report. After the commission had reported that propositions known as  $1930A^4$ , D, and  $F^5$  had failed in commission, a prominent entomologist (Horn) from Berlin came to the support of the defeated Vienna proposition,  $1930F^5$ , and introduced a resolution which presented the essential content of 1930F as a "definition" instead of as an "amend-

4 1930 A. "Wenigstens alle jene Anträge auf Abänderungen der, oder Zusätze zu den, Nomenklaturregeln, welche die absolute Majorität des jeweiligen Standes der Nomenklaturkommission und der Stimmen jener Kommissionsmitglieder erhalten haben, die an der Abstimmung über den bezüglichen Antrag teilnehmen, die innerhalb der Kommission am betreffenden Kongress selbst stattfindet, sind dem Plenum des Kongresses zur Beschlussfassung vorzulegen." A referendum on this proposition was conducted among American zoologists in 1927 with the result of 562 U. S. A. (+3 Canadian) votes against it to 4 votes for it. In reporting on this referendum to the 1927 (Budapest) Congress I said:

"(g) American zoologists hold that questions involving the principles and practices of nomenclature should be determined by a relatively small permanent organization, as exists at present in the international commission, and that they do not lend themselves to decision by a triennially temporary, essentially, and very likely, a geographically local majority such as the general meeting of the International Congress.

"(h) Accordingly, the American zoologists withhold

their consent to the radical departure from the wise policy which was established at the Cambridge (1898) and Berlin (1901) Congresses and which has been accepted by the succeeding Congresses of 1904, 1907, 1910, and 1913."

5 1930 F. "Veröffentlichungen, in denen der Autor gegen die Grundsätze der binären Nomenklatur verstösst, sind nomenklatorisch nicht zu berücksichtigen. Diese Grundsätze bestehen darin, dass der wissenschaftliche Name der Gattungen aus einem (einfachen oder zusammengesetzten), als lateinisches Substantivum gebrauchten Worte besteht, der der Arten dagegen aus zwei Teilen, nämlich dem Namen der betreffenden Gattung und einem auf diesen folgenden, der gleichfalls aus einem, als lateinisches Wort gebrauchten Worte (oder aus mehreren, einen Begriff bezeichnenden solchen im Sinne des Art. 15) besteht."

<sup>6</sup> Horn's resolution reads: "Der Kongress möge beschliessen, dass nur solche Publikationen als den Grund-

ment." Although the point was made by the secretary of the commission, that the "definition" amounted to an amendment, and that a formula (Suspension of the Rules) had been found and adopted and had been in force for seventeen years under which the difficult cases at issue could be handled under the existing rules, also that Europe and America could not be united on the plan now proposed by the Berlin entomologist, the "definition" was carried by a vote of 22 to 5. The four Americans present voted in the negative.

By all precedent, the resolution adopted by the meeting should have been referred to the commission. In fact this matter was discussed by the president of the Congress with the president and the secretary of the commission and it was understood by the secretary that this method was agreed upon. But instead of following precedent, the resolution was read in General Session, was put to immediate vote and, contrary to the agreement of 1901 and contrary to all precedents in nomenclature from 1898 to date, also out of harmony with the by-laws of the commission (in fact by totally ignoring the vote in commission), the resolution was carried in General Session by the procedure indicated in the proposed amendment 1930A4 which had been defeated in commission by a vote of 14 to 1.

About two years ago, in an address on "The Future of Zoological Nomenclature," I said:

Stability of the International Rules. By all odds, the greatest nomenclatorial question for the future, immediate and remote, is in regard to the stability of the international rules. . . . The immediate future of international rules depends primarily upon coming to a definite international understanding on the generic point as to how much importance is to be attached to the unanimous agreements of the past; and upon this understanding deductions can be based as to how much confidence is justified in majority (namely less than unanimous) agreements in the future. As compared with this fundamental generic point, all specific propositions for amendment to the international rules are secondary and relatively inconsequential.

The answer has been given by the Padua (1930) Congress which in its parliamentary procedure<sup>4</sup> has accepted the leadership of the zoologist from Vienna. While the commission still withheld acceptance to his views, the congress, overriding the report of the commission, voted for the essential content and intent of

sätzen der binären Nomenklatur entsprechend angesehen werden sollen, in denen der Gebrauch von einem einzigen Wort als Gattungsname und von einem einzigen Wort als Speziesname konsequent durchgeführt ist. Zusammengehörige Wörter wie cedo-nulli und noli me tangere gelten als ein Wort.''

one of his three propositions<sup>5</sup> by the procedure indicated in a second.<sup>4</sup>

The questions naturally arise as to how the European and especially the German zoologists came to vote in favor of the Horn resolution<sup>6</sup> and how they came to accept parliamentary technique even more radical than that suggested in proposed amendment 1930A, especially after the Berlin agreement of 1901, based upon a demand by German zoologists, speaking in their capacity as administrative officers, namely, the president of the Berlin Congress and the secretary of the German zoological society.

In addition to holding in mind the ever-present possibility of a misunderstanding somewhere, the answer to this question is to be found in the fundamental fact that from our American view-point people in continental Europe are not so punctilious in parliamentary procedure as is customary in Great Britain<sup>7</sup> and North America. We do not necessarily have to assume bad faith as explanation for the vote in Padua, but rather an outstanding difference in average parliamentary technique and psychology between continental Europe and North America.

The principle involved, as seen by Americans, is that known as the "continuity of treaties": Two countries, X and Y, conclude a treaty (say in 1830); fifty years later it may happen that the personnel in the governments X and Y has changed 100 per cent. therefore that no individual in these two governments, in 1880, was personally responsible for the treaty which was made in 1830; nevertheless the governmental personnel in both X and Y in 1880 inherited governmental (i.e., organization) responsibility to see that the treaty of 1830 is carried out-even if the individuals in question are personally opposed to the treaty provisions; usually treaties contain a provision that the high contracting parties may recede from the treaty after one year's formal notice that they intend to recede; but until that year is up the treaty is binding on the two governments, and any infraction against the terms of the treaty constitutes a violation of the treaty and according to its seriousness may be a causa belli: further, when one of the countries breaks the treaty the other country is thereby released from its provisions.

In the strict interpretation of the word, the international rules do not constitute a "treaty," for they have not been formally confirmed by the respective governments; but the fact remains that they were adopted by an international congress which assembled in Berlin at the invitation of the German government and that official delegates from the various governments, societies, museums, universities, etc., were in-

<sup>7</sup> Yet four zoologists representing Great Britain voted with the majority, a fact best explained by assuming a misunderstanding somewhere.

volved in the vote. They constitute, therefore, a quasi-treaty between scientific organizations or as older members of the commission have frequently termed it "a gentlemen's agreement." This is probably the nearest approach to an actual "treaty" which is possible in the matter of nomenclature.

Only two of the fifteen commissioners of 1901 are still members of the commission, and the two leaders (from Berlin and Vienna) back of the Horn resolution are not and never have been members of the commission. From the American point of view the responsibility for the unanimous report demanded by officers of the British (1898) and the German (1901) congresses and accepted by the commission is an organization responsibility; any member of the congress or the commission is at liberty of course to hold any view he wishes, but as a member of the organization he inherits the responsibility adopted by the organization in 1898 and 1901 and any deviation from the agreement of 1901 (later written into the by-laws of the commission) constitutes a breaking of that agreement regardless of the fact that the men voting for the break act in absolutely good faith.

The by-laws of the international congress itself are not very detailed. In 1927 a subcommittee of two members of the Permanent Committee was appointed to redraft the by-laws of the congress. This redraft was presented to the Permanent Committee at Padua in 1930 and will be submitted eventually to the prominent zoological societies of the world for consideration. This manuscript contains provisions which, if enforced, would absolutely prevent the action taken by the Padua Congress on the Horn resolution. In the absence of a set of by-laws for the congress (as distinguished from the commission) excluding the Padua vote on the Horn resolution, opinion will be divided as to the validity of the Padua vote.

Many Europeans will maintain that the congress was free to adopt any resolution proposed.

Zoologists in the United States will almost if not entirely unanimously contend that the action was (a)invalid from a parliamentary standpoint, (b) contrary to all precedents in nomenclature from 1898 to 1930, (c) contrary to the spirit and effect of the 1901 Berlin agreement, (d) contrary to the words of the same except that the Horn resolution was presented as a "definition" while in effect it amends, (e) contrary to the by-laws of the commission, (f) contrary to the Padua 1930 vote 14 to 1 in the Commission on Nomenclature against Proposition 1930A, (g) even more radical than Proposition 1930A which has been consistently opposed by American zoologists, (h) that it makes procedure in nomenclature subject to a chance majority vote (on any motion suddenly introduced from the floor, without international notice) determined by the geographical locality of the meeting

of the congress, and (i) makes the rules of nomenclature subject to sudden and recurrent (three to five year) changes, thus making them unstable and without reasonable protection to the views of the minority present or to the views of countries and specialties not represented or poorly represented at the congress.

For thirty-five years I have favored and worked for internationalism in nomenclature. It is now difficult for me to deny that I am disillusioned in view of the Padua vote. The question arises in my mind whether it is really worth while to spend further time discussing and rediscussing the same old problems and to make agreements in good faith only to learn later that some of our colleagues because of other premises and parliamentary technique different from that which we follow feel at liberty to disregard these early engagements of their predecessors because they themselves were not members of the commission when the agreement was actually made or for other reasons, and to whom a res judicata means so much less than it does to us.

If there has been any misunderstanding on either side, it is time this should be cleared up.

I unreservedly maintain that the Padua vote on the Horn resolution was unparliamentary and invalid, but I have grave doubts whether this point of view will be accepted by certain of my friends and colleagues in central Europe.

From the point of view based on the principle of the continuity of treaties and its application to a gentlemen's agreement I find it difficult to escape the conclusion that the action of the 1930 Padua Congress automatically releases (in fact divorces) from further cooperation with the International Congress or the International Commission on Nomenclature all zoologists who gave their adherence to these rules on basis of the Berlin, 1901, Agreement, or on basis of the by-laws of the commission, and who count permanency and stability of rules as one of the essentials in nomenclature.

American zoologists face the problem of defining their position as to the immediate future of nomenclature. It is not a question of the Americans deciding to revolt. The revolt has already taken place on the part of the Europeans under the leadership of Berlin following a seventeen-year preparatory propaganda from Vienna. The question before the Americans is whether they will submit to a modification of the principle on basis of which American zoologists allied themselves to the international rules (all other points are secondary in comparison), or whether they take the position that it is better policy for American and European zoologists to wish each other good luck and for each of these two groups to settle its own problems in nomenclature by its own methods.

The point is striking that so many divergent and different propositions emanate from Berlin. The question lies near as to how united the Germans really are on the principles and practices of nomenclature and how definitely they understand just what they want and how permanently they are disposed to carry out majority agreements in view of the fact that the history of nomenclature since 1910 has demonstrated that they no longer emphasize the importance to be attached to unanimous agreements. Frankfurt a.M. seems to be at least one center which has a united policy.

If, instead of arguing on the premise of the principle of continuity of treaties, one wishes to adopt the view that a member of the congress or of the commission, in 1930, who was not personally a party to the 1901 agreement is at liberty to disregard the existence of that agreement, certain conclusions seem to follow logically, i.e., (a) only the two surviving members of the 1901 commission bear any obligation to the 1901 agreement, (b) only those persons who voted in the affirmative on the Horn resolution bear any obligation to that resolution, (c) the international rules are, always have been, and always will be a scrap of paper, and (d) American zoologists should now determine whether they will accept this new interpretation and try to adhere to rules which Europe will nearly always be in a position to modify at will by a local geographical majority voting on a motion made from the floor in the Section on Nomenclature with right of vote by any person who has qualified by payment of the five dollar membership fee.

Whichever premise is followed, it is obvious that American zoologists should make their position unambiguous, for "silence gives consent."

To follow the early example of the A. O. U. in the hope of making more rapid and more lasting progress does not mean that the work of the past forty years will be thrown away because of nomenclatorial divorce. The subject of the theory and practice of nomenclature is more generally understood now than formerly and eight or nine sets of rules (national or international, general or special) will have been reduced essentially to two sets which differ from each other only in a few important features. Further the feasibility of a continuing international unity is not obvious under existing different view-points as to the importance to be attached to agreements, to methods of parliamentary procedure and to a res judicata.

The technical nomenclatorial question 1930F at issue in the 1930 Congress is trivial in comparison with the revolutionary and radical principle involved in  $1930A^{4,6}$  (of which it became a test case). 1930A

<sup>8</sup> Of the eleven congresses thus far held, ten have met in Europe, one in the United States.

(accepted in an even more radical form by the congress) makes the rules subject to change every few years by a chance majority vote in the Section on Nomenclature (even in opposition to the vote in the Commission on Nomenclature) and the General Session, determined by the geographical center in which the congress meets and not safeguarded by the conservatism of a permanent commission. To this the American zoologists will never consent if I interpret correctly their votes of 1927 and 1930 which have reached my office. If the action of the 1930 Congress stands (and I see no chance to revise it for five years to come) a nomenclatorial split between Europe and the United States seems inevitable—in fact it has already been brought about by the Padua vote.

1930F, Binary vs. Binomial: The question of binary vs. binomial, the point on which the Padua Congress voted, has a long and somewhat tedious history which need not be reviewed here.

The issue as based on  $1930A^{4,6}$  is clear cut and need not be complicated at present by discussion of other points. Suffice it to say that the commission has passed upon the principles of  $1930F^{5}$  by unanimous vote, that it later (in Opinion 20) clearly illustrated the meaning of its vote, and that propositions to revise the vote have failed in the commission on no less than four occasions.

Conclusion: I recommend that a meeting of American zoologists interested in nomenclature be called at an early date. If a preliminary meeting be held in Washington, D. C., many members of committees on nomenclature are immediately available. This will include not only members of Washington committees but also some of the members of practically every American national committee on zoological nomenclature. This joint committee can canvass the entire situation and make recommendations to the Washington societies which they represent, and members of national committees who are present can report to their national committees as to the action taken by the Washington joint meeting. The national committees can then report to their societies with recommendations.

The foregoing plan can crystallize American opinion very rapidly.

I pledge myself to abide by the decision of the American zoological profession thus represented as to whether I remain with or resign from the international commission—regardless of my own personal views. But if Americans accept the Padua vote, I shall feel it necessary to resign at least as Secretary to the Commission on the ground that some person in harmony with the major and fundamental policies of the commission should shoulder the responsibilities necessarily connected with the very unenviable and unpopular position as its Capra hircus.