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THE A. O. U. CHECK-LIST—ITS HISTORY AND ITS FUTURE.<sup>1</sup>

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AT THE first Congress of the American Ornithologists' Union, held in September, 1883, a committee was appointed on the 'Classification and Nomenclature of North American Birds.' Committee was charged with the duty of preparing a Check-List of the birds found in North America north of Mexico. It was a task requiring much labor, and nearly three years passed before the results of its work were made public, in the form of a volume of 400 pages, entitled 'The Code of Nomenclature and Check-List of North American Birds, adopted by the American Ornithologists' Union, being the Report of the Committee of the Union on Classification and Nomenclature.' This work was published in 1886. Seven supplements to the Check-List were issued during the years 1889 to 1895. In 1895 a second edition of the Check-List, without the 'Code,' was issued, which embodied the changes and additions made in the supplements, and considerable modification of the matter relating to the geographical distribution of the species and subspecies. Since that date four additional supplements have been issued, the eleventh of the series having been published in July of the present year.

<sup>&</sup>lt;sup>1</sup> Read at the Twentieth Congress of the American Ornithologists' Union, Washington, D. C., Nov. 19, 1902.

The present Congress being the twentieth anniversary of the appointment of the 'Committee on the Classification and Nomenclature of North American Birds,' this seems an opportune occasion to review briefly the history of its work, noting statistically the number of changes that have been made in the nomenclature of the Check-List, and the number of additions made to it; and also to attempt to forecast in the light of the past, its prospective modifications.

First as to the past, which may be considered under the two heads of (1) Additions, and (2) Changes in Nomenclature, noting in each case their nature and number.

## I. Additions.

Subfamilies											3⋅
Genera						•					7.
Subgenera											3⋅
Species				•							54.
Subspecies											181.
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II. CHANGES OF NOMENCLATURE.											
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Family names changed .											Ι.
Generic names changed .											26.
Subgenera raised to genera											18.
Total changes in generic names											44.
Subgeneric names changed											2.
Specific names changed											38.
Subspecific names changed											25.
Binomials changed to trinomials 1											15.
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The numerous additions to the Check-List denote the progress of our knowledge of North American ornithology during the last sixteen years, as regards the constituents of the North American avifauna, the increase representing a total addition of 235 species and subspecies and 7 genera. This is a net increase of 24.7 percent, or nearly two percent a year.

<sup>&</sup>lt;sup>1</sup> These relate mainly to forms found along our Mexican border which were originally entered as species, but have since been separated from the more southern type form as subspecies. While this effects a change in nomenclature, these changes neither add nor subtract any form from the Check-List.

The changes in nomenclature have been due to two causes: (1) the discovery of some older available name than the one originally adopted; (2) that the name originally adopted was preoccupied and therefore untenable. The number of changes in generic and subgeneric names, including three corrections of orthography, number less than 30 out of a total of 423,—340 generic names and 83 subgeneric names,—or about 7.3 percent.

The number of changes in specific and subspecific names is 63, or less than six-tenths of one percent.

But these changes, while relatively so few, necessitate a large number of modifications in the designations of species and subspecies; the change of a generic name, or the raising of a subgenus to a genus, affects all the species and subspecies of the genus thus involved. Also the change of a single specific name may entail a modification in the names of quite a number of subspecies.

The changes in generic names affect the names of 90 species and 25 subspecies, or a total of 115 names. These changes are additional to the 63 changes in specific and subspecific names. In other words about one in every ten of the specific and subspecific designations in the Check-List have been modified to some extent.

As already said, the first edition of the Check-List was published in 1886, and a second edition in 1895, since which date there have been issued four supplements. The history of the Check-List thus falls into two periods, the first of nine years, from 1886 to 1895, and the second of seven years, from 1895 to 1902. It may be of interest to compare statistically these two periods.

The first Check-List contained 768 species and 183 subspecies, or a total of 951 named forms; the second contained 802 species and 268 subspecies, or a total of 1070; the net gain in nine years having been 34 species and 85 subspecies.

In July, 1902, the Check-List and supplements contained 822 species and 364 subspecies, or a total of 1186 forms, the net gain in seven years having been 20 species and 96 subspecies. There was thus practically an equal increase in these two unequal periods, with a rather greater ratio of increase in the subspecies as compared with the species in the second period.

The total net gain for the whole seventeen years is, as tabulated above, 54 species and 181 subspecies. Of the 54 species added, it is noteworthy that 21, or nearly one-half, have come into the list merely as stragglers and form no essential part of the fauna. The number of such forms is now 93, or nearly eleven percent. Excluding these waifs and strays, which reach us in about equal numbers from the Old World and from tropical America, we have as proper components of the fauna 730 species and 362 subspecies.

Other changes of some interest, but of only slight importance, are the reduction of three species to subspecies, and the raising of two subspecies to specific rank; also the elimination of five species and two subspecies. Four species have been added to the Hypothetical List, and three removed from the Hypothetical List to the Check-List proper.

In comparing the two periods into which we have divided the history of the Check List, the second period of seven years shows far more changes in names than marked the first period of nine years. During the first period only 14 changes were made in generic names as against 34 in the second, these changes affecting only 14 species and three subspecies; while in the second period 76 species and 22 subspecies were thus affected. During the first period the names of 16 species and 5 subspecies were changed, in addition to the modifications due to the changes in generic names, as against 22 and 20, respectively, for the second period. Of the total of 178 changes that have been made in the names of species and subspecies, only 38 were made in the first period and 140 in the second. As the increase has been in a constantly accelerated ratio, this does not seem to present an encouraging outlook for the future.

What is the explanation of the accelerated increase, both in additions to the Check-List and in name changes? In a word, the great increase in the number of workers during the last five or six years. When the Check-List was compiled and published, and for quite a number of years after, the number of prominent investigators who really had much hand in describing new forms or were meddling to any great extent with questions of nomenclature, could almost be numbered on the fingers of one hand. Five, or at most seven, would include all properly to be included in this

Taking the same standard of activity as a basis, we can now count at least three times this number, some of the most active of whom had hardly appeared above the ornithological horizon as late even as the publication of the second edition of the Check-List. Some of the new contingent are especially diligent in the search for new forms, others in bibliographical research, and still others in both lines of activity. Field work has been pushed with unprecedented energy, and along well planned lines, resulting in the thorough exploration of much previously little known territory, and the accumulation of large series of specimens from many before unrepresented localities. It is this, in the main, healthy and praiseworthy activity that is slowly revolutionizing our Check-List of North American birds. When the first edition was issued, doubtless many consoled themselves with the hope that we had at last reached a stable nomenclature. and that our troubles with names and new forms were practically over. Even the authors of the Check-List, it is safe to say, little dreamed of the developments the short period of sixteen years has brought forth.

What, it may be asked, is the outlook for the future? Are we not nearly at the end of these changes and additions? While the future is a 'sealed book,' in North American ornithology as in other affairs, 'coming events cast their shadows before,' and it is not difficult to forecast the general drift of ornithological events for the next few years.

Doubtless a few more waifs and strays from foreign lands will be added to the list of species, — a feature not very disturbing nor very important, — but probably very few, if any, bona fide species remain to be discovered within our Check-List limits. As field work is carried on with more thoroughness into the still many neglected areas, and it becomes possible to compare the birds of such areas with proper material from other regions, there will doubtless be some surprises through the discovery of local forms which have thus far been overlooked. But the numerical increase from this source will depend largely upon the fineness of our ornithological net, and the trouble will be to keep out of the Check-List forms undeserving of recognition.

There is hope of soon reaching the end of the overturning of

familiar names, if the present activity in bibliographical research continues at its present pace. That there will be an end is certain and the more intense the temporary inconvenience thus occasioned the sooner will stability be attained.

There is one element of disturbance that is imminent, and should be early met, and which is unfortunately the result of a little misguided conservatism, or lack of foresight, on the part of the original Check-List Committee. This is the long list of subgenera which, to conform to the usages of the day in such matters, should be raised to genera, and thereby entail a long list of changes in the Check-List as regards the generic element in the names of species and subspecies. Thirty-six such cases were listed at the end of the Tenth Supplement, action on which has already been twice deferred by the Committee, in view partly of the great temporary inconvenience their adoption would incur, and partly to make these changes at one time. Probably two thirds of these subgenera are well entitled to recognition as genera and are so recognized by a large part of ornithologists.

A few other changes in generic names are pending, and — if we are to follow not only the A. O. U. Code, but also the hitherto uniform ruling of the Committee - should be adopted. these there is trouble brewing, due to a proposed new departure in reference to such names. This is the new so-called 'one letter rule,' which has not as yet received the sanction of any body of code makers but which will soon have to be officially faced by the Union as well as by the A. O. U. Committee. It is not my purpose to discuss the merits or demerits of the proposed new rule in this connection, but simply to state that while to adopt it would save three or four impending changes of generic names, its adoption would also require the changing of a greater number of other generic names which now form a part of the Check-List. Under present rules, names which are etymologically the same, but which vary slightly in construction, only that form of the word having priority can be used in zoölogical nomenclature. proposes that any number of variants of the same name are available, if they vary by only a single letter, even if the letter be merely a connectent vowel, or depend on gender, as indicated by the terminal syllable.

There has been so much discontent expressed over the constant changes in the Check-List that it is perhaps proper to consider for a moment whether it is really worth while to try to have an up to-date Check-List of North American birds. Only the older members of the Union can remember why an attempt was ever made to have an authoritative Check-List. It is perhaps a familiar matter of history, however, to all, that at the time of the founding of the American Ornithologists' Union there were two rival checklists, each by an eminent authority, which differed at many points. Each of the authors of the two lists had a nearly equal following, and there was consequent confusion and lack of uniformity in the names currently in use for many of our birds. This was recognized as a serious evil, likely to increase with the lapse of time. On the founding of the Union it was conceived that if a Committee on the nomenclature of North American birds were appointed by the Union, to consist of five of the then leading authorities on the subject, that this Committee could discuss and harmonize all points of difference and formulate a check-list that should be a uniform standard, and be endorsed as such by the Union. Most fortunately this was the happy result of the very extended labors of this Committee, whose first work was to formulate and agree upon a set of rules for its guidance in compiling the check-list. rules were published as the A. O. U. 'Code of Nomenclature,' and, though containing a number of radical departures from previous similar codes, have received wide acceptance and have had very great influence in shaping present nomenclatorial usage in all departments of zoölogy, and even in botany.

The Code and Check-List were not expected nor intended to set bounds to the progress of North American ornithology. It was presumed that new light might show the necessity of changing a few names, and that new material might modify our conceptions of the status of a number of species and subspecies, and add some new forms to the list. This has happened, and to a much greater extent than was anticipated. Hence it became desirable to continue the Committee, whose function it has since been to revise all proposed changes in names and all proposed additions to the Check-List. The eleven supplements that have been issued constitute the published record of its work.

The Committee has, of course, no absolute power; it can only suggest or recommend, or give its opinion. But to the rank and file of the A. O. U. its opinion has fortunately the force of law.

Let us suppose, now, that after the publication of the first Check-List, the Committee had been permanently discontinued and things ornithological had been allowed to drift, and each one left to form his own opinion as to the merits of new forms or proposed emendations of nomenclature. Where would have been our hoped-for uniformity of nomenclature? While a Committee of five, or seven, members selected from the more experienced and best informed workers in technical ornithology may not be infallible in its rulings, its combined opinion is certainly entitled to respect, and may be considered as a rather important balance wheel in the ornithological machine, and it is generally welcomed as affording a tangible hitching-post for current opinion on matters where only experts are competent to decide. Its function of arbitrator is not always an agreeable duty, and is certainly undertaken with the utmost conscientiousness. Its labors are not limited to the few days or weeks spent in annual or semiannual sessions; its work is apportioned in advance among subcommittees who often spend weeks in careful investigation of the work assigned them. Material is assembled from all available sources, including the types of the new forms involved, and also as much as possible of the original material used by the describer of the forms. In many cases the material required is not available, or at least not available in sufficient quantity for a satisfactory decision, and the case is then deferred for final action later.

We have seen how much the Check-List has been modified by changes and additions. We may now consider how many proposed changes and proposed additions the Committee has declined to approve. First, as to proposed additions which have been disapproved. These number 1 genus, 11 species, and 48 subspecies, of which two-thirds have been proposed within the last six years. Second, proposed changes in nomenclature and in the status of species and subspecies disapproved. These include 13 names of genera, 21 names of species, 10 names of subspecies and 28 proposed changes of status, or about half as many as have been adopted. Besides this, the cases deferred and still pending in-

clude the names of 6 genera, 8 species, and 4 subspecies, and the status of 8 species and 30 subspecies. In other words, only 52 percen tof the modifications proposed have been endorsed by the Committee. If there had been no Committee to which these 500 or more questions could have been referred for a formal verdict it is perhaps easier to imagine than to describe what would have been the condition of the nomenclature of North American birds in 1902. Of course some tender corns have been trodden on, and the owners of some of them still prefer their own opinion to that of the Committee, and possibly in some cases their action is warranted. But doubtless all will admit that a few errors are The chief departure from the Committee's better than chaos. rulings relate to certain groups retained in the Check-List as subgenera, contrary to the general consensus of opinion; the tendency to their recognition as genera doubtless only anticipates the final action of the Committee, these questions being among its deferred cases.

A word, in conclusion, in reference to the 'hair-splitting' tendencies of the day, of which complaint is more or less preva-The degree of difference necessary for formal recognition in nomenclature is ever likely to be a bone of contention, its decision being, in the nature of the case, more or less a matter of temperament as well as of opinion. The danger of excessive splitting is greater now than ever before, since we have reached a point where comparatively few strongly marked local forms remain to be discovered and named, while the number of enthusiastic young workers is steadily increasing. Plainly, not every degree of differentiation that can be recognized by the trained expert needs recognition by name, and not every slightly differentiated form that can be distinguished readily on comparison of large series of specimens should be considered as entitled to a place in a list of North American birds. The trinomial system unfortunately lends itself readily to abuse, and can easily be made to bring the whole system of naming subspecies into dis-Whether or not the differentiation is so readily distinguishable as to warrant its recognition in nomenclature is a question that may very fittingly be left to a Committee of experts, whose combined opinion is more likely to be right than that of a single authority, however cautious and experienced.