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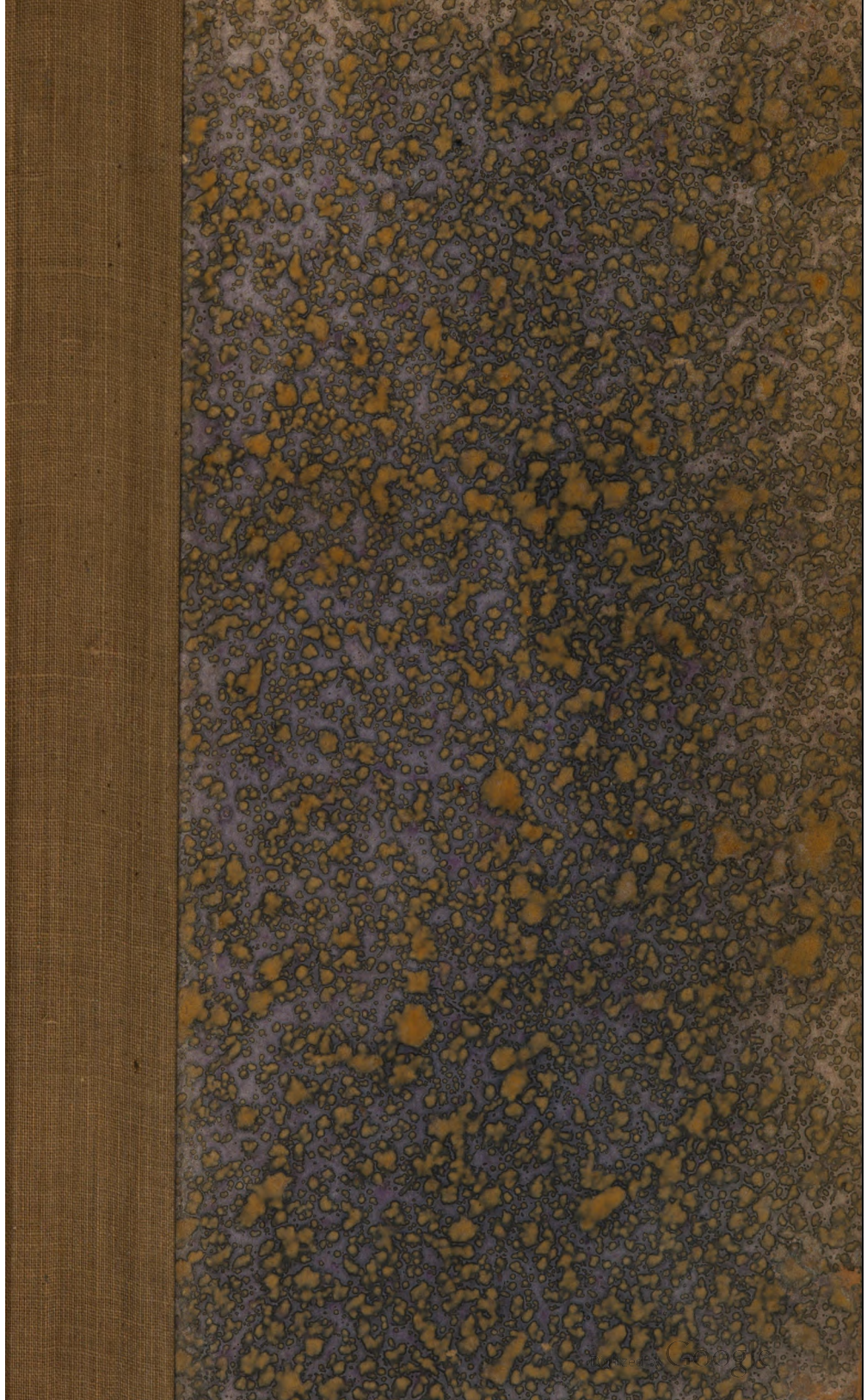
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May 20, 1941

RULES

FOR

ZOOLOGICAL NOMENCLATURE

DRAWN UP BY THE LATE

H. E. STRICKLAND, M.A., F.R.S.

(ASSISTED BY MANY ZOOLOGISTS, BRITISH AND FOREIGN),

AT THE INSTANCE OF THE

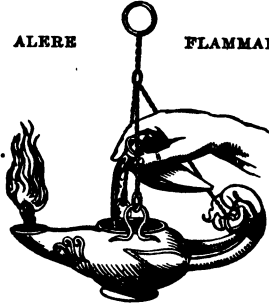
BRITISH ASSOCIATION.

LONDON:
JOHN MURRAY, ALBEMARLE STREET.
1878.

Museum of Comparative
Zoology
MAY 20 1941

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PRINTED BY TAYLOR AND FRANCIS,
RED LION COURT, FLEET STREET.

EDITOR'S PREFACE.

At the request of the General Committee of the British Association for the Advancement of Science, as expressed in a resolution adopted at their late Meeting at Plymouth*, I have had great pleasure in preparing for publication a new edition of the Rules for Zoological Nomenclature drawn up by the late Mr. H. E. Strickland, at the request of the Association, in 1842, after consultation with many Zoologists, British and Foreign†. To this is added the Report of the Committee appointed in 1860 to consider these rules and to report on the changes which they might think it desirable to make in them. It is proper to call special attention to the fact that a few slight changes were considered necessary by the Committee of 1860, to be introduced into the code as originally prepared by Mr. Strickland (see p. 5), and that the rules thus amended were finally adopted by Section D of the British Association at their Meeting at Birmingham, on the 19th September, 1865.

The rules originally prepared by Mr. Strickland were first printed in the Report of the British Association for 1842 (pp. 108 *et seqq.*). A certain number of separate copies of them were struck off and distributed by their author amongst his brother Naturalists. In 1863 the rules were reprinted by Sir William Jardine, under the authority and at the expense of the Association, as mentioned in his report given below (see p. 22). The rules were again printed along with Sir William Jardine's report in the Report

* "That the 'Rules for Zoological Nomenclature,' drawn up by the late Mr. H. E. Strickland, and adopted by Section D, be reprinted and published at the cost of the Association, and that Mr. Solater be requested to edit the New Edition."

† For List of the Naturalists consulted see Appendix, p. 25.

of the Association for 1865. But as the separate copies of these various editions have been exhausted, and as there is no possibility of obtaining a copy of them without purchasing the whole volumes of the Reports in which they have appeared, it has been thought advisable by the General Committee of the Association, in view of the great importance of the rules to Zoological Science and their general usage by Naturalists, to reprint and publish them at the cost of the Association in such a form that they may for the future be easily accessible to every one.

In superintending the issue of this edition I have to say that, as regards the rules, I have thought it best to adhere closely to the original text of 1842, adding to it the Report of 1865, in which the proposed alterations are given, the text of 1865 never having been properly revised so as to make it accord with the proposed alterations.

P. L. SCLATER.

11 Hanover Square, London,
March 1st, 1878.

RULES

OF

ZOOLOGICAL NOMENCLATURE.

PART I.

RULES FOR RECTIFYING THE PRESENT NOMENCLATURE.

[*Limitation of the Plan to Systematic Nomenclature.*]

In proposing a measure for the establishment of a permanent and universal zoological nomenclature, it must be premised that we refer solely to the Latin or systematic language of zoology. We have nothing to do with vernacular appellations. One great cause of the neglect and corruption which prevails in the scientific nomenclature of zoology, has been the frequent and often exclusive use of vernacular names in lieu of the Latin binomial designations, which form the only legitimate language of systematic zoology. Let us then endeavour to render perfect the Latin or Linnæan method of nomenclature, which, being far removed from the scope of national vanities and modern antipathies, holds out the only hope of introducing into zoology that grand desideratum, an universal language.

[*Law of Priority the only effectual and just one.*]

It being admitted on all hands that words are only the conventional signs of ideas, it is evident that language can only attain its end effectually by being permanently established and generally recognized. This consideration ought, it would seem, to have checked those who are continually attempting to subvert the established language of zoology by substituting terms of their own coinage. But, forgetting the true nature of language, they persist in confounding the *name* of a species or group with its *definition*; and because the former often falls short of the fulness of expression found in the latter, they cancel it without hesitation, and introduce some new term which appears to them more characteristic, but which is utterly unknown to the science, and is therefore devoid of all authority*. If these persons were to object to such names of men as *Long*, *Little*, *Armstrong*, *Golightly*, &c., in cases where they fail to apply to the individuals who bear them, or should complain of the names *Gough*, *Lawrence*, or *Harvey*, that they were devoid of meaning, and should hence propose to change them for more characteristic appellations, they would not act more unphilosophically or inconsiderately than they do in the case before us; for, in truth, it matters not in the least by what conventional sound we agree to designate an individual object,

* Linnæus says on this subject, "Abstinendum ab hac innovatione quæ nunquam cessaret, quin indies aptiora detegerentur ad infinitum."

provided the sign to be employed be stamped with such an authority as will suffice to make it pass current. Now in zoology no one person can subsequently claim an authority equal to that possessed by the person who is the first to define a new genus or describe a new species; and hence it is that the name originally given, even though it may be inferior in point of elegance or expressiveness to those subsequently proposed, ought as a general principle to be permanently retained. To this consideration we ought to add the injustice of erasing the name originally selected by the person to whose labours we owe our first knowledge of the object; and we should reflect how much the permission of such a practice opens a door to obscure pretenders for dragging themselves into notice at the expense of original observers. Neither can an author be permitted to alter a name which he himself has once published, except in accordance with fixed and equitable laws. It is well observed by Decandolle, "L'auteur même qui a le premier établi un nom n'a pas plus qu'un autre le droit de le changer pour simple cause d'impropriété. La priorité en effet est un terme fixe, positif, qui n'admet rien, ni d'arbitraire, ni de partial."

For these reasons, we have no hesitation in adopting as our fundamental maxim, the "law of priority," viz. :—

§ 1. The name originally given by the founder of a group or the describer of a species should be permanently retained, to the exclusion of all subsequent synonyms (with the exceptions about to be noticed).

Having laid down this principle, we must next inquire into the limitations which are found necessary in carrying it into practice.

[*Not to extend to authors older than Linnæus.*]

As our subject matter is strictly confined to the *binomial system of nomenclature*, or that which indicates species by means of two Latin words, the one generic, the other specific, and as this invaluable method originated solely with Linnæus, it is clear that, as far as species are concerned, we ought not to attempt to carry back the principle of priority beyond the date of the 12th edition of the 'Systema Naturæ.' Previous to that period, naturalists were wont to indicate species not by a *name* comprised in one word, but by a *definition* which occupied a sentence, the extreme verbosity of which method was productive of great inconvenience. It is true that one word sometimes sufficed for the definition of a species, but these rare cases were only binomial by accident and not by principle, and ought not therefore in any instance to supersede the binomial designations imposed by Linnæus.

The same reasons apply also to generic names. Linnæus was the first to attach a definite value to genera, and to give them a systematic character by means of exact definitions; and therefore, although the names used by previous authors may often be applied with propriety to modern genera, yet in such cases they acquire a new meaning, and should be quoted on the authority of the first person who used them in this secondary sense. It is true, that several of the old authors made occasional approaches to the Linnæan exactness of generic definition, but still these were but partial attempts; and it is certain that if in our rectification of the binomial nomenclature we once trace back our authorities into the obscurity which preceded the epoch of its foundation, we shall find no resting-place or fixed boundary for our researches. The nomenclature of Ray is chiefly derived from that of Gesner and Aldrovandus, and from these authors we might proceed backward to

Ælian, Pliny, and Aristotle, till our zoological studies would be frittered away amid the refinements of classical learning*.

We therefore recommend the adoption of the following proposition :—

§ 2. The binomial nomenclature having originated with Linnæus, the law of priority in respect of that nomenclature, is not to extend to the writings of antecedent authors.

[It should be here explained, that Brisson, who was a contemporary of Linnæus and acquainted with the ‘Systema Naturæ,’ defined and published certain genera of birds which are *additional* to those in the twelfth edition of Linnæus’s works, and which are therefore of perfectly good authority. But Brisson still adhered to the old mode of designating species by a sentence instead of a word, and therefore while we retain his defined genera, we do not extend the same indulgence to the titles of his species, even when the latter are accidentally binomial in form. For instance, the *Perdix rubra* of Brisson is the *Tetrao rufus* of Linnæus; therefore as we in this case retain the generic name of Brisson and the specific name of Linnæus, the correct title of the species would be *Perdix rufa*.]

[*Generic names not to be cancelled in subsequent subdivisions.*]

As the number of known species which form the groundwork of zoological science is always increasing, and our knowledge of their structure becomes more complete, fresh generalizations continually occur to the naturalist, and the number of genera and other groups requiring appellations is ever becoming more extensive. It thus becomes necessary to subdivide the contents of old groups, and to make their definitions continually more restricted. In carrying out this process, it is an act of justice to the original author that his generic name should never be lost sight of; and it is no less essential to the welfare of the science, that all which is sound in its nomenclature should remain unaltered amid the additions which are continually being made to it. On this ground we recommend the adoption of the following rule :—

§ 3. A generic name, when once established should never be cancelled in any subsequent subdivision of the group, but retained in a restricted sense for one of the constituent portions.

[*Generic names to be retained for the typical portion of the old genus.*]

When a genus is subdivided into other genera, the original name should be retained for that portion of it which exhibits in the greatest degree its essential characters as at first defined. Authors frequently indicate this by selecting some one species as a fixed point of reference, which they term the “type of the genus.” When they omit doing so, it may still in many cases be correctly inferred that the *first* species mentioned on their list, if found accurately to agree with their definition, was regarded by them as the type. A specific name or its synonyms will also often serve to point out the particular species which by implication must be regarded as the original type of a genus. In such cases we are justified in restoring the name of the old genus to its typical signification, even when later authors have done otherwise. We submit therefore that

§ 4. The generic name should always be retained for that portion of the original genus which was considered typical by the author.

* “Quis longo ævo recepta vocabula commutaret hodie cum patrum?”—Linnæus.

Example.—The genus *Picumnus* was established by Temminck, and included two groups, one with four toes, the other with three, the former of which was regarded by the author as typical. Swainson, however, in raising these groups at a later period to the rank of genera, gave a new name, *Asthenurus*, to the former group, and retained *Picumnus* for the latter. In this case we have no choice but to restore the name *Picumnus*, Temm., to its correct sense, cancelling the name *Asthenurus*, Sw., and imposing a new name on the three-toed group which Swainson had called *Picumnus*.

[When no type is indicated, then the original name is to be kept for that subsequent subdivision which first received it.]

Our next proposition seems to require no explanation :—

§ 5. When the evidence as to the original type of a genus is not perfectly clear and indisputable, then the person who first subdivides the genus may affix the original name to any portion of it at his discretion, and no later author has a right to transfer that name to any other part of the original genus.

[A later name of the same extent as an earlier to be wholly cancelled.]

When an author infringes the law of priority by giving a new name to a genus which has been properly defined and named already, the only penalty which can be attached to this act of negligence or injustice, is to expel the name so introduced from the pale of the science. It is not right, then, in such cases to restrict the meaning of the later name so that it may stand side by side with the earlier one, as has sometimes been done. For instance, the genus *Monaulus*, Vieill. 1816, is a precise equivalent to *Lophophorus*, Temm. 1813, both authors having adopted the same species as their type, and therefore, when the latter genus came in the course of time to be divided into two, it was incorrect to give the condemned name *Monaulus* to one of the portions. To state this succinctly,

§ 6. When two authors define and name the same genus, both making it exactly of the same extent, the later name should be cancelled in toto, and not retained in a modified sense*.

This rule admits of the following exception,

§ 7. Provided, however, that if these authors select their respective types from different sections of the genus, and these sections be afterwards raised into genera, then both these names may be retained in a restricted sense for the new genera respectively.

Example.—The names *Edemia* and *Melanetta* were originally co-extensive synonyms, but their respective types were taken from different sections which are now raised into genera, distinguished by the above titles.

[No special rule is required for the cases in which the later of two generic names is so defined as to be less extensive in signification than the earlier, for if the later includes the type of the earlier genus, it would be cancelled by the operation of § 4; and if it does not include that type, it is in fact a distinct genus.]

But when the later name is more extensive than the earlier, the following rule comes into operation :—

* These discarded names may, however, be tolerated, if they have been afterwards proposed in a totally new sense, though we trust that in future no one will knowingly apply an old name, whether now adopted or not, to a new genus. (See proposition g, p. 16.)

[*A later name equivalent to several earlier ones is to be cancelled.*]

The same principle which is involved in § 6 will apply to § 8.

§ 8. If the later name be so defined as to be equal in extent to two or more previously published genera, it must be cancelled in toto.

Example.—*Psarocolius*, Wagl. 1827, is equivalent to five or six genera previously published under other names, therefore *Psarocolius* should be cancelled.

If these previously published genera be *separately adopted* (as is the case with the equivalents of *Psarocolius*), their original names will of course prevail; but if we follow the later author in combining them into one, the following rule is necessary:—

[*A genus compounded of two or more previously proposed genera whose characters are now deemed insufficient, should retain the name of one of them.*]

It sometimes happens that the progress of science requires two or more genera, founded on insufficient or erroneous characters, to be combined together into one. In such cases the law of priority forbids us to cancel all the original names and impose a *new* one on this compound genus. We must therefore select some one species as a type or example, and give the generic name which it formerly bore to the whole group now formed. If these original generic names differ in date, the oldest one should be the one adopted.

§ 9. In compounding a genus out of several smaller ones, the earliest of them, if otherwise unobjectionable, should be selected, and its former generic name be extended over the new genus so compounded.

Example.—The genera *Accentor* and *Prunella* of Vieillot not being considered sufficiently distinct in character, are now united under the general name of *Accentor*, that being the earliest. So also *Cerithium* and *Potamides*, which were long considered distinct, are now united, and the latter name merged into the former.

We now proceed to point out those few cases which form exceptions to the law of priority, and in which it becomes both justifiable and necessary to alter the names originally imposed by authors.

[*A name should be changed when previously applied to another group which still retains it.*]

It being essential to the binomial method to indicate objects in natural history by means of *two words* only, without the aid of any further designation, it follows that a generic name should only have one meaning—in other words, that two genera should never bear the same name. For a similar reason, no two species in the same genus should bear the same name. When these cases occur, the later of the two duplicate names should be cancelled, and a new term, or the earliest synonym, if there be any, substituted. When it is necessary to form new words for this purpose, it is desirable to make them bear some analogy to those which they are destined to supersede, as where the genus of birds, *Plectorhynchus*, being preoccupied in Ichthyology, is changed to *Plectorhamphus*. It is, we conceive, the bounden duty of an author when naming a new genus, to ascertain by careful search that the name which he proposes to employ has not been previously adopted

in other departments of natural history*. By neglecting this precaution he is liable to have the name altered and his authority superseded by the first subsequent author who may detect the oversight; and for this result, however unfortunate, we fear there is no remedy, though such cases would be less frequent if the detectors of these errors would, as an act of courtesy, point them out to the author himself, if living, and leave it to him to correct his own inadvertencies. This occasional hardship appears to us to be a less evil than to permit the practice of giving the same generic name *ad libitum* to a multiplicity of genera. We submit, therefore, that

§ 10. A name should be changed which has before been proposed for some other genus in zoology or botany, or for some other species in the same genus, when still retained for such genus or species.

[*A name whose meaning is glaringly false may be changed.*]

Our next proposition has no other claim for adoption than that of being a concession to human infirmity. If such proper names of places as Covent Garden, Lincoln's Inn Fields, Newcastle, Bridgewater, &c. no longer suggest the ideas of gardens, fields, castles, or bridges, but refer the mind with the quickness of thought to the particular localities which they respectively designate, there seems no reason why the proper names used in natural history should not equally perform the office of correct indication, even when their etymological meaning may be wholly inapplicable to the object which they typify. But we must remember that the language of science has but a limited currency, and hence the words which compose it do not circulate with the same freedom and rapidity as those which belong to every-day life. The attention is consequently liable in scientific studies to be diverted from the contemplation of the thing signified to the etymological meaning of the sign, and hence it is necessary to provide that the latter shall not be such as to propagate actual error. Instances of this kind are indeed very rare, and in some cases, such as that of *Monodon*, *Caprimulgus*, *Paradisea apoda* and *Monoculus*, they have acquired sufficient currency no longer to cause error, and are therefore retained without change. But when we find a Batrachian reptile named in violation of its true affinities *Mastodonsaurus*, a Mexican species termed (through erroneous information of its habitat) *Picus cafer*, or an olive-coloured one *Muscicapa atra*, or when a name is derived from an accidental monstrosity, as in *Picus semirostris* of Linnæus, and *Helix disjuncta* of Turton, we feel justified in cancelling these names, and adopting that synonym which stands next in point of date. At the same time we think it right to remark that this privilege is very liable to abuse, and ought therefore to be applied only to extreme cases and with great caution. With these limitations we may concede that

§ 11. A name may be changed when it implies a false proposition which is likely to propagate important errors.

[*Names not clearly defined may be changed.*]

Unless a species or group is intelligibly defined when the name is given, it cannot be recognized by others, and the signification of the name is consequently lost. Two things are necessary before a zoological term can acquire

* This laborious and difficult research will in future be greatly facilitated by the very useful work of M. Agassiz, entitled "Nomenclator Zoologicus."

any authority, viz. *definition* and *publication*. Definition properly implies a distinct exposition of essential characters; and in all cases we conceive this to be indispensable, although some authors maintain that a mere enumeration of the component species, or even of a single type, is sufficient to authenticate a genus. To constitute *publication*, nothing short of the insertion of the above particulars in a printed book can be held sufficient. Many birds, for instance, in the Paris and other continental museums, shells in the British Museum (in Dr. Leach's time), and fossils in the Scarborough and other public collections, have received MS. names which will be of no authority until they are published*. Nor can any unpublished description, however exact (such as those of Forster, which are still shut up in a MS. at Berlin), claim any right of priority till published, and then only from the date of their publication. The same rule applies to cases where groups or species are published, but not defined, as in some museum catalogues, and in Lesson's 'Traité d'Ornithologie,' where many species are enumerated by name, without any description or reference by which they can be identified. Therefore,

§ 12. A name which has never been clearly defined in some published work should be changed for the earliest name by which the object shall have been so defined.

[*Specific names, when adopted as generic, must be changed.*]

The necessity for the following rule will be best illustrated by an example. The *Corvus pyrrhacorax*, Linn., was afterwards advanced to a genus under the name of *Pyrrhacorax*. Temminck adopts this generic name, and also retains the old specific one, so that he terms the species *Pyrrhacorax pyrrhacorax*. The inelegance of this method is so great as to demand a change of the specific name, and the species now stands as *Pyrrhacorax alpinus*, Vieill. We propose therefore that

§ 13. A new specific name must be given to a species when its old name has been adopted for a genus which includes that species †.

N.B.—It will be seen, however, below, that we strongly object to the further continuance of this practice of elevating specific names into generic.

[*Latin orthography to be adhered to.*]

On the subject of orthography it is necessary to lay down one proposition,—

§ 14. In writing zoological names the rules of Latin orthography must be adhered to.

In Latinizing Greek words there are certain rules of orthography known to classical scholars which must never be departed from. For instance, the names which modern authors have written *Aipunemia*, *Zenophasia*, *poiocephala*, must, according to the laws of etymology, be spelt *Epycnemia*, *Xenophasia*, and *pœocephala*. In Latinizing modern words the rules of classic usage do not apply, and all that we can do is to give to such terms as classical an appearance as we can, consistently with the preservation of their

* These MS. names are in all cases liable to create confusion; and it is therefore much to be desired that the practice of using them should be avoided in future.

† As regards this rule see Recommendation IV., Report, p. 24.

etymology. In the case of European words whose orthography is fixed, it is best to retain the original form, even though it may include letters and combinations unknown in Latin. Such words, for instance, as *Woodwardi*, *Knighti*, *Bullocki*, *Eschscholtzi*, would be quite unintelligible if they were Latinized into *Vudvardi*, *Cnichti*, *Bulloci*, *Essolzi*, &c. But words of barbarous origin, having no fixed orthography, are more pliable; and hence, when adopted into the Latin, they should be rendered as classical in appearance as is consistent with the preservation of their original sound. Thus the words *Tockus*, *awsuree*, *argoondah*, *kundoo*, &c., should, when Latinized, have been written *Toccus*, *ausure*, *argunda*, *cundu*, &c. Such words ought, in all practicable cases, to have a Latin termination given them, especially if they are used generically.

In Latinizing proper names, the simplest rule appears to be to use the termination *-us*, genitive *-i*, when the name ends with a consonant, as in the above examples; and *-ius*, gen. *-ii*, when it ends with a vowel, as *Latreille*, *Latreillii*, &c.

In converting Greek words into Latin the following rules must be attended to:—

Greek.	Latin.		Greek.	Latin.
<i>ai</i>	becomes <i>æ</i> .		<i>θ</i>	becomes <i>th</i> .
<i>ei</i>	„ <i>i</i> .		<i>φ</i>	„ <i>ph</i> .
<i>os</i>	terminal* <i>us</i> .		<i>χ</i>	„ <i>ch</i> .
<i>ov</i>	„ <i>um</i> .		<i>κ</i>	„ <i>c</i> .
<i>ou</i>	becomes <i>u</i> .		<i>γχ</i>	„ <i>nch</i> .
<i>oi</i>	„ <i>œ</i> .		<i>γγ</i>	„ <i>ng</i> .
<i>v</i>	„ <i>y</i> .		„	<i>h</i> .

When a name has been erroneously written and its orthography has been afterwards amended, we conceive that the authority of the original author should still be retained for the name, and not that of the person who makes the correction.

PART II.

RECOMMENDATIONS FOR IMPROVING THE NOMENCLATURE IN FUTURE.

The above propositions are all which in the present state of the science it appears practicable to invest with the character of laws. We have endeavoured to make them as few and simple as possible, in the hope that they may be the more easily comprehended and adopted by naturalists in general. We are aware that a large number of other regulations, some of which are hereafter enumerated, have been proposed and acted upon by various authors who have undertaken the difficult task of legislating on the subject; but as the enforcement of such rules would in many cases undermine the invaluable principle of priority, we do not feel justified in adopting them. At the same time we fully admit that the rules in question are, for the most part, founded

on just criticism, and therefore, though we do not allow them to operate retrospectively, we are willing to retain them for future guidance. Although it is of the first importance that the principle of priority should be held paramount to all others, yet we are not blind to the desirableness of rendering our scientific language palatable to the scholar and the man of taste. Many zoological terms, which are now marked with the stamp of perpetual currency, are yet so far defective in construction, that our inability to remove them without infringing the law of priority may be a subject of regret. With these terms we cannot interfere, if we adhere to the principles above laid down; nor is there even any remedy, if authors insist on infringing the rules of good taste by introducing into the science words of the same inelegant or unclassical character in future. But that which cannot be enforced by law may, in some measure, be effected by persuasion; and with this view we submit the following propositions to naturalists, under the title of *Recommendations for the improvement of Zoological Nomenclature in future.*

[*The best names are Latin or Greek characteristic words.*]

The classical languages being selected for zoology, and words being more easily remembered in proportion as they are expressive, it is self-evident that—

§ A. The best zoological names are those which are derived from the Latin or Greek, and express some distinguishing characteristic of the object to which they are applied.

[*Classes of objectionable names.*]

It follows hence that the following classes of words are more or less objectionable in point of taste, though, in the case of *genera*, it is often necessary to use them, from the impossibility of finding characteristic words which have not before been employed for other genera. We will commence with those which appear the least open to objection, such as

a. *Geographical names.*—These words being for the most part adjectives can rarely be used for *genera*. As designation of *species* they have been so strongly objected to, that some authors (Wagler, for instance) have gone the length of substituting fresh names wherever they occur; others (e. g. Swainson) will only tolerate them where they apply *exclusively*, as *Lepus hibernicus*, *Troglodytes europæus*, &c. We are by no means disposed to go to this length. It is not the less true that the *Hirundo javanica* is a Javan bird, even though it may occur in other countries also, and though other species of *Hirundo* may occur in Java. The utmost that can be urged against such words is, that they do not tell the *whole truth*. However, as so many authors object to this class of names, it is better to avoid giving them, except where there is reason to believe that the species is chiefly confined to the country whose name it bears.

b. *Barbarous names.*—Some authors protest strongly against the introduction of exotic words into our Latin nomenclature; others defend the practice with equal warmth. We may remark, first, that the practice is not contrary to classical usage; for the Greeks and Romans did occasionally, though with reluctance, introduce barbarous words in a modified form into their respective languages. Secondly, the preservation of trivial names which animals bear in their native countries is often of great use to the traveller in aiding him to discover and identify species. We do not therefore consider, if such

words have a Latin termination given to them, that the occasional and judicious use of them as scientific terms can be justly objected to.

c. *Technical names*.—All words expressive of trades and professions have been by some writers excluded from zoology, but without sufficient reason. Words of this class, *when carefully chosen*, often express the peculiar characters and habits of animals in a metaphorical manner, which is highly elegant. We may cite the generic terms *Arvicola*, *Lanius*, *Pastor*, *Tyrannus*, *Regulus*, *Mimus*, *Ploceus*, &c. as favourable examples of this class of names.

d. *Mythological or historical names*.—When these have no perceptible reference or allusion to the characters of the object on which they are conferred, they may properly be regarded as unmeaning and in bad taste. Thus the generic names *Lesbia*, *Leilus*, *Remus*, *Corydon*, *Pasiphae*, have been applied to a Humming bird, a Butterfly, a Beetle, a Parrot, and a Crab respectively, without any perceptible association of ideas. But mythological names may sometimes be used as generic with the same propriety as technical ones, in cases where a direct allusion can be traced between the narrated actions of a personage and the observed habits or structure of an animal. Thus when the name *Progne* is given to a Swallow, *Clotho* to a Spider, *Hydra* to a Polyp, *Athene* to an Owl, *Nestor* to a grey-headed Parrot, &c., a pleasing and beneficial connexion is established between classical literature and physical science.

e. *Comparative names*.—The objections which have been raised to words of this class are not without foundation. The names, no less than the definitions of objects, should, where practicable, be drawn from positive and self-evident characters, and not from a comparison with other objects, which may be less known to the reader than the one before him. Specific names expressive of comparative size are also to be avoided, as they may be rendered inaccurate by the after discovery of additional species. The names *Picoides*, *Emberizoides*, *Pseudoluscinia*, *rubeculoides*, *maximus*, *minor*, *minimus*, &c. are examples of this objectionable practice.

f. *Generic names compounded from other genera*.—These are in some degree open to the same imputation as comparative words; but as they often serve to express the position of a genus as intermediate to, or allied with, two other genera, they may occasionally be used with advantage. Care must be taken not to adopt such compound words as are of too great length, and not to corrupt them in trying to render them shorter. The names *Gallopavo*, *Tetraogallus*, *Gypaetos*, are examples of the appropriate use of compound words.

g. *Specific names derived from persons*.—So long as these complimentary designations are used with moderation, and are restricted to persons of eminence as scientific zoologists, they may be employed with propriety in cases where expressive or characteristic words are not to be found. But we fully concur with those who censure the practice of naming species after persons of no scientific reputation, as curiosity dealers (e. g. *Caniveti*, *Boissonneaui*), Peruvian priestesses (*Cora*, *Amazilia*), or Hottentots (*Klassi*).

h. *Generic names derived from persons*.—Words of this class have been very extensively used in botany, and therefore it would have been well to have excluded them wholly from zoology, for the sake of obtaining a *memoria technica* by which the name of a genus would at once tell us to which of the kingdoms of nature it belonged. Some few personal generic names have, however, crept into zoology, as *Cuvieria*, *Mulleria*, *Rossia*, *Lessonia*, &c.; but they are very rare in comparison with those of botany, and it is perhaps desirable not to add to their number.

i. *Names of harsh and inelegant pronunciation.*—These words are grating to the ear, either from inelegance of form, as *Huhua*, *Yuhina*, *Craxirex*, *Eschscholtzi*, or from too great length, as *chirostrongylostinus*, *Opetiorhynchus*, *brachypodioides*, *Thecodontosaurus*, not to mention the *Enaliolimnosaurus crocodilocephaloides* of a German naturalist. It is needless to enlarge on the advantage of consulting euphony in the construction of our language. As a general rule it may be recommended to avoid introducing words of more than five syllables.

k. *Ancient names of animals applied in a wrong sense.*—It has been customary, in numerous cases, to apply the names of animals found in classic authors at random to exotic genera or species which were wholly unknown to the ancients. The names *Cebus*, *Callithrix*, *Spiza*, *Kitta*, *Struthus*, are examples. This practice ought by no means to be encouraged. The usual defence for it is, that it is impossible now to identify the species to which the name was anciently applied. But it is certain that if any traveller will take the trouble to collect the vernacular names used by the modern Greeks and Italians for the Vertebrata and Mollusca of southern Europe, the meaning of the ancient names may in most cases be determined with the greatest precision. It has been well remarked that a Cretan fisher-boy is a far better commentator on Aristotle's 'History of Animals' than a British or German scholar. The use, however, of ancient names, *when correctly applied*, is most desirable; for "in framing scientific terms, the appropriation of old words is preferable to the formation of new ones"*.

l. *Adjective generic names.*—The names of genera are, in all cases, essentially substantive, and hence adjective terms cannot be employed for them without doing violence to grammar. The generic names *Hians*, *Criniger*, *Cursorius*, *Nitidula*, &c., are examples of this incorrect usage.

m. *Hybrid names.*—Compound words, whose component parts are taken from two different languages, are great deformities in nomenclature, and naturalists should be especially guarded not to introduce any more such terms into zoology, which furnishes too many examples of them already. We have them compounded of Greek and Latin, as *Dendrofalco*, *Gymnatorvus*, *Monoculus*, *Aborophila*, *flavigaster*; Greek and French, as *Jacamaralcyon*, *Jacamerops*; and Greek and English, as *Bullockoides*, *Gilbertso-crinites*.

n. *Names closely resembling other names already used.*—By Rule 10 it was laid down that when a name is introduced which is *identical* with one previously used, the later one should be changed. Some authors have extended the same principle to cases where the later name, when correctly written, only approaches in form, without wholly coinciding with the earlier. We do not, however, think it advisable to make this law imperative, first, because of the vast extent of our nomenclature, which renders it highly difficult to find a name which shall not bear more or less resemblance in sound to some other; and, secondly, because of the impossibility of fixing a limit to the degree of approximation beyond which such a law should cease to operate. We content ourselves, therefore, with putting forth this proposition merely as a recommendation to naturalists, in selecting generic names, to avoid such as too closely approximate words already adopted. So with respect to species, the judicious naturalist will aim at variety of designation, and will not, for example, call a species *virens* or *virescens* in a genus which already possesses a *viridis*.

* Whewell, Phil. Ind. Sc. vol. i. p. lxvii.

o. Corrupted words.—In the construction of compound Latin words, there are certain grammatical rules which have been known and acted on for two thousand years, and which a naturalist is bound to acquaint himself with before he tries his skill in coining zoological terms. One of the chief of these rules is, that in compounding words all the radical or essential parts of the constituent members must be retained, and no change made except in the variable terminations. But several generic names have been lately introduced which run counter to this rule, and form most unsightly objects to all who are conversant with the spirit of the Latin language. A name made up of the first half of one word and the last half of another, is as deformed a monster in nomenclature as a Mermaid or a Centaur would be in zoology; yet we find examples in the names *Corcorax* (from *Corvus* and *Pyrrhocorax*), *Cypsnagra* (from *Cypselus* and *Tanagra*), *Merulaxis* (*Merula* and *Synallaxis*), *Loxigilla* (*Loxia* and *Fringilla*), &c. In other cases, where the commencement of both the simple words is retained in the compound, a fault is still committed by cutting off too much of the radical and vital portions, as is the case in *Bucorvus* (from *Buceros* and *Corvus*), *Ninox* (*Nisus* and *Noctua*), &c.

p. Nonsense names.—Some authors having found difficulty in selecting generic names which have not been used before, have adopted the plan of coining words at random without any derivation or meaning whatever. The following are examples: *Vivalva*, *Xema*, *Azeca*, *Assimineca*, *Quedius*, *Spisula*. To the same class we may refer *anagrams* of other generic names, as *Dacelo* and *Cedola* of *Alcedo*, *Zapornia* of *Porzana*, &c. Such verbal trifling as this is in very bad taste, and is especially calculated to bring science into contempt. It finds no precedent in the Augustan age of Latin, but can be compared only to the puerile quibblings of the middle ages. It is contrary to the genius of all languages, which appear never to produce new words by spontaneous generation, but always to derive them from some other source, however distant or obscure. And it is peculiarly annoying to the etymologist, who, after seeking in vain through the vast storehouses of human language for the parentage of such words, discovers at last that he has been pursuing an *ignis fatuus*.

q. Names previously cancelled by the operation of § 6.—Some authors consider that when a name has been reduced to a synonym by the operations of the laws of priority, they are then at liberty to apply it at pleasure to any new group which may be in want of a name. We consider, however, that when a word has once been proposed in a given sense, and has afterwards sunk into a synonym, it is far better to lay it aside for ever than to run the risk of making confusion by re-issuing it with a new meaning attached.

r. Specific names raised into generic.—It has sometimes been the practice in subdividing an old genus to give to the lesser genera so formed, the names of their respective typical species. Our Rule 13 authorizes the forming a new specific name in such cases; but we further wish to state our objections to the practice altogether. Considering as we do that the original specific names should as far as possible be held sacred, both on the grounds of justice to their authors and of practical convenience to naturalists, we would strongly dissuade from the *further continuance* of a practice which is gratuitous in itself, and which involves the necessity of altering long-established specific names.

We have now pointed out the principal rocks and shoals which lie in the path of the nomenclator; and it will be seen that the navigation through them is by no means easy. The task of constructing a language which shall

supply the demands of scientific accuracy on the one hand, and of literary elegance on the other, is not to be inconsiderately undertaken by unqualified persons. Our nomenclature presents but too many flaws and inelegancies already; and as the stern law of priority forbids their removal, it follows that they must remain as monuments of the bad taste or bad scholarship of their authors to the latest ages in which zoology shall be studied.

[*Families to end in idæ, and Subfamilies in inæ.*]

The practice suggested in the following proposition has been adopted by many recent authors, and its simplicity and convenience is so great that we strongly recommend its universal use.

§ B. It is recommended that the assemblages of genera termed families should be uniformly named by adding the termination *idæ* to the name of the earliest known, or most typically characterized genus in them; and that their subdivisions, termed subfamilies, should be similarly constructed, with the termination *inæ*.

These words are formed by changing the last syllable of the genitive case into *idæ* or *inæ*, as *Strix*, *Strigis*, *Strigidæ*, *Buceros*, *Bucerotis*, *Bucerotidæ*, not *Strixidæ*, *Buceridæ*.

[*Specific names to be written with a small initial.*]

A convenient *memoria technica* may be effected by adopting our next proposition. It has been usual, when the titles of species are derived from proper names, to write them with a capital letter; and hence when the specific name is used alone it is liable to be occasionally mistaken for the title of a genus. But if the titles of *species* were *invariably* written with a *small* initial, and those of *genera* with a *capital*, the eye would at once distinguish the rank of the group referred to, and a possible source of error would be avoided. It should be further remembered that all species are *equal*, and should therefore be written all *alike*. We suggest, then, that

§ C. Specific names should always be written with a small initial letter, even when derived from persons or places, and generic names should be always written with a capital*.

[*The authority for a species, exclusive of the genus, to be followed by a distinctive expression.*]

The systematic names of zoology being still far from that state of fixity which is the ultimate aim of the science, it is frequently necessary for correct indication to append to them the name of the person on whose authority they have been proposed. When the same person is authority both for the specific and generic name, the case is very simple; but when the specific name of one author is annexed to the generic name of another, some difficulty occurs. For example, the *Muscicapa crinita* of Linnæus belongs to the modern genus *Tyrannus* of Vieillot; but Swainson was the first to apply the specific name of Linnæus to the generic one of Vieillot. The question now arises, Whose authority is to be quoted for the name *Tyrannus crinitus*? The expression *Tyrannus crinitus*, Linn., would imply what is untrue, for Linnæus did not use the term *Tyrannus*; and *Tyrannus crinitus*, Vieill., is equally incorrect, for Vieillot did not adopt the name *crinitus*. If we call it

* As regards this recommendation see Report, p. 24.

Tyrannus crinitus, Sw., it would imply that Swainson was the first to describe the species, and Linnæus would be robbed of his due credit. If we term it *Tyrannus*, Vieill., *crinitus*, Linn., we use a form which, though expressing the facts correctly, and therefore not without advantage in particular cases where great exactness is required, is yet too lengthy and inconvenient to be used with ease and rapidity. Of the three persons concerned with the construction of a binomial title in the case before us, we conceive that the author who *first* describes and names a species which forms the groundwork of later generalizations, possesses a higher claim to have his name recorded than he who afterwards defines a genus which is found to embrace that species, or who may be the mere accidental means of bringing the generic and specific names into contact. By giving the authority for the *specific* name in preference to all others, the inquirer is referred *directly* to the original description, habitat, &c., of the species, and is at the same time reminded of the date of its discovery; while genera, being less numerous than species, may be carried in the memory, or referred to in systematic works without the necessity of perpetually quoting their authorities. The most simple mode then for ordinary use seems to be to append to the original authority for the species, when not applying to the genus also, some distinctive mark, such as (*sp.*) implying an exclusive reference to the *specific* name, as *Tyrannus crinitus*, Linn. (*sp.*), and to omit this expression when the same authority attaches to both genus and species, as *Ostrea edulis*, Lin.* Therefore,

§ D. It is recommended that the authority for a specific name, when not applying to the generic name also, should be followed by the distinctive expression (*sp.*).

[*New genera and species to be defined amply and publicly.*]

A large proportion of the complicated mass of synonyms which has now become the opprobrium of zoology, has originated either from the slovenly and imperfect manner in which species and groups have been originally defined, or from their definitions having been inserted in obscure local publications which have never obtained an extensive circulation. Therefore, although under § 12 we have conceded that mere insertion in a printed book is sufficient for *publication*, yet we would strongly advise the authors of new groups always to give in the first instance a full and accurate definition of their characters, and to insert the same in such periodical or other works as are likely to obtain an immediate and extensive circulation. To state this briefly,

§ E. It is recommended that new genera or species be amply defined, and extensively circulated in the first instance.

[*The names to be given to subdivisions of genera to agree in gender with the original genus.*]

In order to preserve specific names as far as possible in an unaltered form, whatever may be the changes which the genera to which they are referred may undergo, it is desirable, when it can be done with propriety,

* The expression *Tyrannus crinitus* (Linn.) would perhaps be preferable from its greater brevity.

to make the new subdivisions of genera agree *in gender* with the old groups from which they are formed. This recommendation does not, however, authorize the changing the gender or termination of a genus already established. In brief,—

§ F. It is recommended that in subdividing an old genus in future, the names given to the subdivisions should agree in gender with that of the original group.

[*Etymologies and types of new genera to be stated.*]

It is obvious that the names of genera would in general be far more carefully constructed, and their definitions would be rendered more exact, if authors would adopt the following suggestion :—

§ G. It is recommended that in defining new genera the etymology of the name should be always stated, and that one species should be invariably selected as a type or standard of reference.

REPORT OF A COMMITTEE

APPOINTED BY THE BRITISH ASSOCIATION AT ITS MEETING IN BATH, 1864, TO
REPORT ON THE CHANGES

WHICH THEY MAY CONSIDER DESIRABLE TO MAKE, IF ANY, IN THE

RULES OF ZOOLOGICAL NOMENCLATURE

DRAWN UP BY MR. H. E. STRICKLAND.

REFORM of the Nomenclature of Zoology was a subject which occupied much of the time of the late Hugh E. Strickland*. It was his object that this reform should be brought forward under the auspices of the British Association, and at a meeting of the Council of that body, held in London upon 11th of February, 1842, it was resolved—"That with a view of securing attention to the following important subject, a Committee, consisting of Mr. C. Darwin, Professor Henslow, Rev. L. Jenyns, Mr. W. Ogilby, Mr. J. Phillips, Dr. Richardson, Mr. H. E. Strickland (reporter), Mr. J. O. Westwood, be appointed to consider of the rules by which the nomenclature of zoology may be established on a uniform and permanent basis; the Report to be presented to the Zoological Section, and submitted to its committee at the Manchester Meeting"†.

This Committee met at various times in London, and the following gentlemen were added to it, and assisted in its labours:—W. J. Broderip, Professor Owen, W. E. Shuckard, G. R. Waterhouse, and W. Yarrell. An outline of the proposed code was drawn up and circulated, and many valuable suggestions were received from eminent zoologists at home and abroad. The "plan" was further considered by the Committee during the Meeting at Manchester, "and the Committee having thus given their best endeavours to maturing the plan, beg now to submit it to the approval of the British Association under the title of—'Series of Propositions for rendering the nomenclature of zoology uniform and permanent'"‡.

The propositions were printed in the Reports of the British Association, and a grant of money was voted to print copies for circulation. The rules thus laid down were very generally adopted by zoologists, both in this country and abroad; but in Great Britain, having been printed only in the volumes of the British Association, 'Annals of Natural History,' and 'Philosophical Magazine'§, or depending on private circulation, it was deemed advisable that greater publicity should be given to them, and at the

* See Memoirs of Hugh Edwin Strickland, by Sir W. Jardine, Bart., pp. clxxv and 375.

† Report of Twelfth Meeting of the British Association held at Manchester, June 1842.

‡ Report of Twelfth Meeting, 1842, p. 106.

§ At the Scientific Congress held in 1843 at Padua, the late Prince C. L. Buonaparte submitted to the meeting an Italian translation of the 'British Association's Code of Rules,' which was generally approved of. A French translation of the Report appeared in the scientific journal 'L'Institut,' in which paper much stress was laid on the importance of the measure. A review of it was also printed in the 'American Journal of Science.'

Meeting at Oxford in 1860 it was resolved, that "The surviving members of the Committee appointed in 1842, viz. Mr. C. Darwin, Rev. Professor Henslow, Rev. L. Jenyns, Mr. W. Ogilby, Professor Phillips, Sir John Richardson, Mr. J. O. Westwood, Professor Owen, Mr. W. E. Shuckard, and Mr. G. R. Waterhouse, for the purpose of preparing rules for the establishment of a Uniform Zoological Nomenclature, be reappointed, with Sir W. Jardine, Bart., and Dr. Sclater. That Sir W. Jardine, Bart., be the Reporter, and that the sum of £10 be placed at their disposal for the purpose of revising and reprinting the Rules"*.

From the difficulty of bringing such a Committee together, nothing was done since the time of its appointment; but the resolution and a grant of money were again renewed at the late meeting in Newcastle, as follows:— "That Sir W. Jardine, A. R. Wallace, J. E. Gray, Professor Babington, Dr. Francis, Dr. Sclater, C. Spence Bate, P. P. Carpenter, Dr. J. D. Hooker, Professor Balfour, H. T. Stainton, J. Gwyn Jeffreys, A. Newton, Professor T. H. Huxley, Professor Allman, and G. Bentham, be a Committee, with power to add to their number, to report on the changes, *if any*, which they may consider it desirable to make in the Rules of Nomenclature drawn up at the instance of the Association by Mr. H. E. Strickland and others, with power to reprint these Rules, and to correspond with foreign naturalists and others on the best means of ensuring their general adoption, and that the sum of £15 be placed at their disposal for the purpose."

Accordingly the Rules, as originally approved of, were reprinted, and zoologists were requested "to examine them carefully, and to communicate any suggestions for alteration or improvement, on or before the 1st of June, 1864, to *Sir William Jardine, Bart., Jardine Hall, by Lockerby, N. B.*, who will consult with the members of the Committee, and report upon the subject at the next Meeting of the British Association appointed to be held at Bath."

From the press of business at Bath the Committee did little there to complete further the code of Zoological Nomenclature, and I was directed to take some opportunity while in London to call together as many members of the Committee as possible. Accordingly in the month of June last I sent a circular to the following members that I considered were within comparatively easy reach, and who I thought might be able to attend in London without much inconvenience, viz. Mr. Gwyn Jeffreys, Mr. Wallace, Dr. Gray, Professor Babington, Dr. Francis, Dr. Sclater, Dr. J. Hooker, Mr. Stainton, Professor Huxley, Mr. A. Newton, and Mr. G. Bentham. Mr. Gwyn Jeffreys kindly permitted this meeting to be held at his house in Devonshire-place, and it was attended by myself, Mr. Gwyn Jeffreys, Mr. Wallace, and Dr. Sclater; the other gentlemen who had been invited sending apologies that from various causes they were unable to come up to London or to attend. They, however, expressed themselves generally favourable to some code of rules being adopted.

Professor Babington having returned his printed copy of the rules with his observations written on the margin, the Committee were fully in possession of his views. Mr. Wallace had brought with him a written memorandum containing notes of what he thought could be altered or modified with advantage. The members present then read over the printed rules and recommendations one by one, and carefully compared them with the memoranda above mentioned, as well as with many letters from other naturalists,

* Reports of the British Association held at Oxford, 1860, p. xlvi.

and the observations made upon each were taken down at the time. The recommendations of the Committee, which I shall presently read to you, have been based upon these observations, and upon the conferences and discussions held at Birmingham during the present Meeting.

Since the time that Mr. H. E. Strickland's Rules and Recommendations were printed in the Reports of the British Association, zoological nomenclature has not been improved. Whether it is from the Rules and recommendations not being sufficiently well known, or from an *idea* that no one has any right to interfere with or make rules for others, many gentlemen appear to cast them away, and do not recognize them at all, while others accept or reject just what pleases themselves; in consequence many very objectionable names have been given, and a very base coinage and spurious combinations have been going on. The Committee does not allude to very long or harsh sounding names, though they are much to be deprecated even when classically compounded; but they object to *indelicate names*, or to such compounds as *Malherbipicus*, *Kaupifalco*, *Zebraipicus*, &c.; or, when a new form in the genus *Procellaria* is thought to be discovered, and honour is intended to be done to a distinguished navigator, such a word as *Cookilaria* is proposed; or, when provincial names are attempted to be Latinized, as in the case of a fish commonly known as the "*Tom Cod*," which is entered in our systems under the scientific (?) name of *Morrhua tomcodus*. These may be said to be extreme examples, but hundreds might be given, and it is the opinion of the Committee that the only way to deal with such names is to reject them altogether.

In this condition of our zoological nomenclature, then, it is of the greatest importance that some general code of rules should be adopted and acted upon. The Committee were perfectly agreed upon this point, but on calling them together during the present Meeting of the British Association, the botanists arrived at the conclusion that, having long acted in concert upon the rules laid down by Linnæus in the '*Philosophia Botanica*,' and by Sir James E. Smith, Decandolle, and others, it was unnecessary for them to have Botany included in the Stricklandian code; at the same time they were sensible that some generally recognized code would be of the utmost importance to zoology. The Committee therefore are of opinion and recommend:—

- I. That Botany should not be introduced into the Strickland rules and recommendations.
- II. That the permanency of names and convenience of practical application being the two chief requisites in any code of rules for scientific nomenclature, it is not advisable to disturb by any material alterations the rules of zoological nomenclature which were authorized* by Section D at the Meeting of the British Association at Manchester in 1842.
- III. The Committee are of opinion, after much deliberation, that the XIIth edition of the '*Systema Naturæ*' is that to which the limit of time should apply, viz. 1766. But as the works of Artedi and Scopoli have already been extensively used by ichthyologists and entomologists, it is recommended that the names contained in or used from these authors should not be affected by this provision. This is particularly requisite as regards the generic names of Artedi, afterwards used by Linnæus himself.

* This is not quite a correct statement, for the fact is that no such authorization as is spoken of ever took place in 1842.—P. L. S.

In Mr. H. E. Strickland's original draft of these Rules and Recommendations the edition of Linnæus was left blank, and the XIIth was inserted by the Manchester Committee. This was done not as being the first in which the Binomial nomenclature had been used, as it commenced with the Xth, but as being the last and most complete edition of Linnæus's works, and containing many species the Xth did not. For these reasons it is now confirmed by this Committee, and also because these rules having been used and acted upon for twenty-three years, if the date were altered now, many changes of names would be required, and in consequence much confusion introduced.

IV. In Rule 13th, "*Specific names, when adopted as generic, must be changed.*" The Committee agree that it is exceedingly injudicious to adopt a specific name as a generic name, but they are of opinion that where this has been done, it is the *generic name* which must be thrown aside, not the old specific name, and that this rule should be so altered as to meet this.

V. The recommendations under "*Classes of objectionable names,*" as already pointed out, cannot be too carefully attended to. *Specific names* from persons have already been sufficiently prostituted, and personal *generic names* have increased to a large and undeserving extent. The handing down the name of a naturalist by a genus has always been considered as the highest honour that could be given, and should never be bestowed lightly*.

VI. The recommendation, "*Specific names to be written with a small initial.*" The Committee propose that this recommendation should be omitted. It is not of great importance, and may be safely left to naturalists to deal with as they think fit.

These are the chief alterations and modifications the Committee have to suggest. It is scarcely possible to make any code of rules for a subject so extensive as zoology either perfect in itself or such as will meet the opinions of every one. It must be a matter of compromise, and as working by *no rules* is creating great confusion and an immense increase in synonymy, the Committee would ask this Section to approve their present report or finding, and to give their sanction to these Rules and Recommendations as now proposed to be modified.

Signed on the part of the members of Committee
present at Birmingham † by

WM. JARDINE, Reporter.

On the preceding Report being read to Section D, upon Tuesday, 19th September, 1865, the following motion was made and carried unanimously:—

Moved by Mr. Gwyn Jeffreys, seconded by Dr. Sclater,—*That the Report now read be approved of and adopted by the Section, and that the Rules or propositions, as thereby altered and amended, be printed in the Reports of the British Association and recommended for the general use of zoologists.*

* "Hoc unicum et summum præmium laboris, sancte servandum, et caste dispensandum ad incitamentum et ornamentum Botanices."—Phil. Botan., p. 171.

† The Members of the Committee present at Birmingham were A. E. Wallace, Professor Babington, Dr. Francis, Dr. Sclater, C. Spence Bate, P. P. Carpenter, Professor Balfour, H. T. Stainton, J. Gwyn Jeffreys, A. Newton, G. Bentham, and Sir W. Jardine, Bart. (Reporter).

APPENDIX.

List of British and Foreign Naturalists and Societies to whom copies of the proposed Rules of Nomenclature were sent by Mr. Strickland, inviting criticism and amendment.*

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|--------------------------------------|-------------------------------------|
| Adams, Mr. A. | Bronn, Prof., Heidelberg. |
| Agassiz, L., Neufchatel. | Broullé M. |
| Alder, Joshua, Newcastle. | Brown, Capt., Manchester. |
| American Phil. Soc., Philadelphia. | Brussels, Royal Academy of Sciences |
| Asiatic Society of Bengal, Editor of | of. |
| Journal of. | Buch, M. le Baron von, Berlin. |
| Audubon, J. J. | Buckland, Rev. W. |
| Austin, Col., Bristol. | Bunbury, E. H. (Sec. Geol. Soc.). |
| | Burton, E., Fort Pitt. |
| Babington, C. C., Cambridge. | |
| Bachman, Dr. | Canino, Prince of, Florence. |
| Baer, M., St. Petersburg. | Canton, Dr., Penang. |
| Baker, Barwick. | Charlesworth, E. |
| Ball, R., Dublin. | Chevrolat, M. |
| Bassi, Cavaliere. | Conrad, Mr. |
| Bean, W., Scarborough. | Copenhagen, Royal Society of |
| Beck, Dr., Copenhagen. | Sciences. |
| Bell, Prof. T. | Coulon, M. Louis, Neufchatel. |
| Berlin, Royal Academy of Sciences. | Couthouy, Mr. |
| Blackwall, J. | Cuming, H. |
| Blainville, M. de. | Curtis, J. |
| Blyth, E., Calcutta. | |
| Boston, Phil. Society of. | Darwin, C. |
| Bowerbank, J. S. | Daubeny, Dr. |
| Brandt, M., St. Petersburg. | De Filippi, Sig. F. |
| Bremer, Count. | Delabeche, Sir H. |
| Broderip, W. J. | Denny, H., Leeds. |

* This list has been kindly furnished to me by Mrs. Strickland from the MSS. and correspondence in her possession, and is given here in order to show how large a number of authorities were consulted in the preparation of the Stricklandian Code, and how great were the pains taken by its author in its elaboration.—P. L. S.

Derby, Lord.
 Deshayes, M., Paris.
 Diesing, Dr., Vienna.
 D'Orbigny, M. A., Paris.
 Doubleday, E.
 Drontheim, Royal Society of Sciences.
 Dubus, M. le Vicomte.
 Duméril, M.

Edinburgh, Royal Society of.
 Egerton, Sir P.
 Ehrenberg, M.
 Ekström, H. C. U., Gothenburg.
 Élie de Beaumont, M.
 Elliot, Mr. W., Madras.
 Enniskillen, Lord.
 Ewing, T. J., Van Diemensland.
 Eyton, T. C.

Featherstonhaugh, G.
 Fischer de Waldheim, M., Moscow.
 Fleming, Dr., Aberdeen.
 Florence, Grand Ducal Museum.
 Forbes, Edward.
 Fox, G. T., Durham.
 Fries, Prof.

Gaskoin, J. S.
 Geneva, Society of Sciences of.
 Geological Society of London.
 Geological Society of Paris.
 Gervais, M.
 Goldfuss, M.
 Gould, Dr. Augustus, Boston.
 Gould, John, F.R.S.
 Grant, Dr.
 Gray, G. R.
 Gray, J. E.
 Greenhough, G. B.
 Griffith, W., Calcutta.
 Guérin-Ménéville, M.
 Haan, M. De, Leyden.
 Hanley, Sylvanus.
 Harlan, Dr.
 Henslow, Rev. J. S.
 Hodgson, B. W.
 Holme, Dr., Manchester.
 Holme, F.
 Hope, Rev. F. W.
 Horsfield, Dr.
 Hutton, R.

Irish Academy, Royal.

Isis, The Editor of the.

Jameson's Edinb. Journal, Editor of.
 Jamieson, W. M. D., Bengal.
 Jardin des Plantes, Librarian of the.
 Jardine, Sir W., Bt.
 Jay, J. C., New York.
 Jenyns, Rev. L.
 Jerdon, T. C., Madras.
 Johnstone, Dr., Berwick.
 Jonas, Dr., Homburg.
 Jourdain, M.

Kaup, Dr., Darmstadt.
 Keyserling, Count.
 Kinberg, Hr. J. G., Lund.
 Krantz, M.
 Kunze, Dr.

Lafresnaye, M. le Baron de.
 Lankester, Dr.
 Lea, Isaac, Philadelphia.
 Lesson, M.
 Leyden, Librarian of the Museum.
 Lichtenstein, M., Berlin.
 Linnean Society of London.
 Lloyd, G., M.D.
 Lloyd, Horton.
 Lovén, Dr., Stockholm.
 Lyell, Charles.

Maclelland, John.
 Macgillivray, W.
 Macklin, Hr. G., Upsala.
 Madras Journal, Editor of.
 Manchester, Dean of.
 Massena, Prince.
 Meneghini, Prof. G.
 Ménétrés, M.
 Milne-Edwards, M.
 Modena, Italian Society of Sciences.
 Moretti, Sig.
 Moricand, M. S., Geneva.
 Morris, John.
 Müller's Archiv, Editor of.
 Murchison, R. I.

Natterer, M.
 Neuchatel, Society of Sciences of.
 New York, Philos. Society of.
 Nilsson, M.
 Northampton, Lord.
 Nuttall, Thomas, U.S.A.

Ogilby, W.
Owen, R.

Parlatore, Prof.
Parnell, Dr., Edinburgh.
Passerini, Sig. Carlo, Florence.
Patterson, R., Belfast.
Philippi, Dr. R. A.
Pfeiffer, Dr. L., Cassel.
Phillips, J.
Philosophical Magazine, Editor of.
Poepfig, Dr., Leipzig.
Porro, Conte.
Presl, Dr. C. B., Prague.
Prevost, M. Florent.

Radcliffe Library, Oxford, Librarian
of.

Rathke, Prof., Christiania.
Reeve, Lovell.
Richardson, Dr., Haslar Hospital.
Roget, Dr.
Rüppell, Dr. E., Frankfort.

Sabine, Col.
St.-Hilaire, M. Isidore.
St. Petersburg, Imperial Academy
of Sciences.
Savi, M., Pisa.
Schlegel, Prof., Leyden.
Schönherr, Hr. C. J., Skåne.
Sedgwick, Prof.
Selby, P. J.
Shuckard, W. E.
Silliman's Journal, Editor of.
Smith, Dr. Andrew, Fort Pitt.
Société Philomathique, Paris.
South African Quarterly Journal,
Editor of.
Sowerby, G. B.
Spinola, Marchese.

Stockholm, Royal Academy of
Sciences.

Strickland, Arthur.
Stuchbury, S., Bristol.
Sykes, Col.

Temminck, M.
Terver, M., Lyons.
Teylerian Library, Harlem, The Li-
brarian of.
Thompson, W., Belfast.
Tiedemann, Dr., Heidelberg.
Totten, Mr.
Trevisan, Conte.
Troschel, Dr., Bonn.
Turner, J. A., Manchester.

Upsala, Kongl. Vetensk. Society.

Valenciennes, M.
Van der Hoeven, M., Leyden.
Visiani, Prof.
Voorst, J. Van.
Vrolik, Prof.

Wahlenberg, Prof. G., Upsala.
Wallace, J. R., Distington.
Warwickshire, Nat. Hist. Soc.
Waterhouse, G. R.
West Riding, the Geological and
Polytechnic Society of the.
Wiegmann's Archiv, Editor of.
Westwood, J. O.
White, A.
Wood, Searles.
Worcestershire, Nat. Hist. Soc.

Yarrell, W.

Zetterstädt, Prof., Lund.
Zoological Society of London.

