THE ENTOMOLOGICAL CODE

A CODE OF NOMENCLATURE FOR USE IN ENTOMOLOGY

WASHINGTON, D. C.
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ARRANGEMENT OF CONTENTS.

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PREFACE.

The following rules have been prepared for the purpose of aiding entomologists in deciding questions of nomenclature arising in their work. In preparing them the various codes of nomenclature have been freely consulted and used, articles on nomenclature in various journals read, and pamphlets on the subject have furnished some points. After a mass of matter was prepared, copies were sent to many of the principal systematic entomologists of America, in fact all whom we knew to be interested in such matters. Nearly all have expressed opinions on the more important rules, and many on almost every one. Various other workers have been consulted personally and the published utterances and catalogs of several entomologists have furnished opinions. After being worked over and over again the rules have gradually taken shape, often far from their original form. They have been subjected to some use in catalog making, type fixation, &c., and so far as possible they are brought into accord with the general practice of entomologists. The result, while hardly satisfactory to any one entomologist, expresses the opinion of systematic workers far more accurately than the vote of any committee.

These rules do not represent the personal desires of their preparators, since there are several important rules which have been accepted reluctantly by one or both of the compilers in order to join the majority of American systematic entomologists. As they stand there will probably be at least one objector to every rule, but we hope no one will object to all of them. The point of the use of a misidentification as a genotype, and that on a name in synonymy preoccupying the use of such name in the genus, provoked the most discussion, but the weight of opinion and of practice seems to sanction the rules as herein set forth. A few object to a valid specific name being required as the basis of a genus, but by far the greater number express themselves as in favor of the rule.

Rarely will two people express the same thought in the same language, and likewise two persons reading the same statement may disagree as to its meaning. An effort had been made to express the following rules in language as plain and definite as possible, and wherever it was thought helpful, examples are inserted. If the rules are carefully considered, in conjunction with the examples, where

given, little trouble ought result in their use. While an earnest effort has been made to cover all the questions that commonly arise, completeness in this matter is practically an impossibility.

It seems scarcely necessary to discuss the necessity of an entomological code. Most existing codes fail to cover in a definite manner many points that continually arise in entomological work, or the language used is of such a broad or indefinite scope as to require official interpretation to make the meaning evident. Scarcely an entomologist has been connected with the preparation of the larger codes and the codes prepared by entomologists have been of restricted scope, or made with certain questions in view.

Each entomologist of much experience has acquired certain methods of dealing with points arising in his work, usually dependent upon personal judgment. One cannot expect that many active workers will sacrifice their personal judgment in favor of a consensus of opinion. But the new worker, without established ideas, is apt to use such tools as will do his work, and if he finds at hand a code that will answer the greater number of the questions that arise he will very likely use it, especially if it is clear and comprehensive and not subject to official interpretation and decision. That the present code of rules will be found helpful to many workers in the field of Entomology is the earnest hope of the compilers,

Nathan Banks,
A. N. Caudell.

INTRODUCTION.

1. No person nor committee has authority to interpret, limit, or extend the precepts here laid down; every user interpreting the rules for himself.

2. The word "VALID" as used in this code of rules means "WITH STANDING IN NOMENCLATURE," and the word "INVALID" means "WITHOUT STANDING IN NOMENCLATURE."

Note.—Names in synonymy, or ones preoccupied, as well as names in use may be valid, having standing as defined above. Invalid names are *nomina nuda.*

BINOMIAL NOMENCLATURE.

3. All species of insects are to be named according to the binomial system of nomenclature as applied by Linnaeus in the 10th edition of his Systema Naturæ of 1758. This consists of the generic, or general, name of one word, and the specific, or trivial, name, of one word, or a hyphenated word.

Example.—*Alpha alba* L.

Note.—If a "binary" (two categories whether named or not) system were adopted as the basis of entomological nomenclature we would be compelled to go back to the first edition of Linnaeus' Systema Naturæ of 1735, as the use of the generic name (independent of the specific name) dates from that work.

4. The nomenclature of any author who has not followed the binomial system is to be ignored. Accidental binomials occurring in the works of such authors are to be rejected as invalid, and accidental trinomials in works otherwise binomial are not to be excluded.

5. The use of a French binomial (or other language not in Latin form) does not validate the name. Thus "Acridien algèrien" is not available under the code.

6. The following cases shall be considered as complying with the requirements of binomial nomenclature:

(*a.*) Where the Latin name of the foodplant has been used as a part of the name of an insect such name shall be considered a bi-

nomial, and the two words are to be hyphenated or the name of the foodplant abbreviated to the initial, the former preferred.

Example.—*Cynips quercus palustris.* This may be written *Cynips quercus-palustris,* preferably, or *Cynips q-palustris.* The name of the foodplant should not be dropped entirely.

(*b.*) If an author in an index to plates gives a specific name with plate and figure reference between it and the generic name such treatment shall be considered as binomial, even where the generic name is more than one word.

Examples.—*Amadis,* pl. 39, fig. c.—*Sphinx.* (From Cramer.)
Amalia, pl. 383, fig. b.—*Phal. Bomb.* (From Cramer.)

Note.—This is the method of Stoll, Cramer, Drury, &c., whose names have always been accepted.

(*c.*) Where an author writes the first Latin word after a generic name in a different type from that of the other Latin words, or puts it in parenthesis, such word is the specific name, and the author is considered as having fulfilled the requirements of binomial nomenclature.

7. Names based on hypothetical insects, or knowingly based on a composite specimen are invalid.

8. Names printed as provisional, or as suggested substitutes, are on the same basis as though definitely proposed.

PUBLICATION.

9. Matter printed and offered for sale, or existant in the libraries of public institutions, constitutes publication.

10. Printing shall include only such methods of reproduction by which an edition is printed by use of type from one original. In the case of plates, a name engraved on the plate will hold.

11. To be valid for the purpose of entomological nomenclature matter must be printed in one of the European languages.

12. Names distributed in connection with specimens are not thereby validated.

13. Publication of new names in newspapers, either daily or weekly, popular magazines, non-technical agricultural journals, school programs, programs of meetings, or in price lists are not valid, no matter how or where printed.

14. Additions or corrections given in one part of an article or work to matter on a previous page of that same article or work are admissible only when published on the same date.

Example.—On page 41 an author makes a new genus, *Alpha* for a single species, *alba* n. sp. On page 105 he adds a second species, *X. nigra* Jones, to the genus. *Alpha* is then not monobasic unless it is shown that page 41 was published before page 105.

15. The date of a publication is the date of its first distribution. The date of a work published in parts is the date of first distribution of each part. In cases where the date of distribution is not given in or on the publication an approximate date may be accepted until a more definite date is known. There are a number of ways in which such approximate dates may be obtained, such as the date of first reception of the publication at some learned society or public institution, the review of the publication in other works, etc. Dates shown to be false shall be corrected.

16. If reprints are distributed in advance of the distribution of the general article or volume, they become separate publications, and date from such distribution, if otherwise conformable to the rules.

PRIORITY.

17. The law of priority applies to all generic names, and ones of lower grade, published since January 1, 1758, the assumed date of publication of the 10th edition of Linnaeus' Systema Naturæ. No name, binomial or otherwise, published before this date has any standing whatever in entomological nomenclature.

18. In case two conflicting names occur in the same work, the one on the earlier page shall have precedence over that on the later page; if both appear on the same page, the one coming first on that page shall have precedence.

19. In case two conflicting names are published in separate works in the same year or the same month, and no evidence is obtainable of a more definite date, page precedence shall obtain until more accurate dates are determined.

20. In case two conflicting names are published in separate publications on the same day, no account of longitude nor hour shall be taken, but absolute page and line precedence shall obtain.

21. If a publication has the pages unnumbered, they shall be counted as though they were numbered. If two styles of page numbering (as Roman and Arabic numerals) occur in the same work the various pagings shall be considered as continuous.

Example.—The new generic name *Alpha* appears on page xi of a work comprising preface pages i-xxi and text pages 1-100. On page 3 of the same work the generic name *Alpha* is used in a different sense than that of page xi. Then the name on page xi preoccupies that on page 3.

22. The law of priority shall apply where different stages (except egg) broods, conditions, sexes or forms of insects have been described under different names.

NAMES.

23. Generic and specific names should be taken from the Latin or Greek languages, but any combination of letters in Latin form is permissible. The letters K and W may be used in scientific names.

24. Subgeneric names, and all of higher rank, should be written with a capital initial; the specific name, and all of lower rank, with a lower-case initial.

25. A name once published cannot be retracted, even by the author. Nor does the author of a name, after the name is published, have any more privilege than any other person with that name.

26. A name invalid at its first appearance can never be made valid for that date by any subsequent action.

27. The author of a name is the one who validates it; however, when one author publishes the manuscript description furnished by another and anywhere in that work by direct statement, use of different type, quotation marks, &c., so indicates it, the name validated by the publication of such manuscript (but not names of higher rank dependent thereon) belongs to the author of that manuscript. But the mere crediting a name to another without other indication, the use of "MSS.," "in litt.," or collection label does not convey authorship.

Example.—*Alpha* Smith, 1900; an invalid generic name. In 1910 Jones uses *Alpha,* giving Smith 1900 as authority and date, and prints a description of *Alpha alba* n. sp. furnished by Smith, as clearly indicated by quotation marks and different type. *Alba,* the species, is credited to Smith, but Jones is responsible for *Alpha,*

the genus. However, had Jones also published a description of the genus admittedly furnished by Smith, then the genus would also be credited to Smith.

28. New names given with reference to figures, or previous descriptions, belong to the author publishing such names, whether credited to another or not.

29. Articles without signature, or with ones insufficient for identification, are to be credited to "anonymous," unless there is internal or later evidence proving the real authorship.

30. Where an author has two names, or has changed his or her name, that name shall be used which is used in the article quoted.

31. In the division or restriction of species, genera, families, &c., the typical part must retain the original name.

32. When species, genera, families, &c., are united the oldest name shall be retained in use.

33. Names used by Linnaeus in the 10th edition of his Systema Naturæ for species can never be changed, as they cannot be homonyms, synonyms (except of each other), nor misidentifications of previous names, since nomenclatorially there are no names before this work. Names appearing in synonymy in this work may be used for purposes of identification of species, but cannot be resurrected, being permanent synonyms.

34. Names used before 1758 are not validated by reprinting after 1758.

35. Names may be divided into the following grades, or categories:

I. Specific names, and ones of lower rank.
II. Generic, and subgeneric names.
III. Superfamily, family, and subfamily names.
IV. Superordinal, ordinal, and subordinal names.

36. The use of a name in one category does not invalidate its use in another category, but in no case shall the same name be used twice in Zoology in the same category above category no. 1.

37. In species, subspecies, varieties, or races, the same name shall not be used twice in the same genus, but names of lower rank, as hybrids, seasonal or colorational forms, hermaphrodites, gynandromorphs, sports, &c., may be used twice in the same genus but not in the same rank immediately above.

Example.—*Alpha alba,* var. *minor,* form *longipennis* Jones.
Alpha alba, var. *major,* form *longipennis* Smith.

CATEGORY I.

(*Specific Names and Ones of Lower Rank.*)

38. A specific name becomes valid when published in connection with a description or figure of that species, or with reference to a previously published named or unnamed description or figure, or to replace a valid name of specific or lower rank.

39. A specific name published without reference to or in connection with a generic name is invalid.

40. The citation of a manuscript name as a synonym of a valid name does not of itself validate the manuscript name, its status being subject to the rules governing new names.

Example.—*Alpha minor* Linn.
(= *Alpha nor* Latr. MSS.)
Alpha nor Latr. is still but a manuscript species, even though a description of *A. minor* Linn. is therein included.

41. A new specific name mentioned in the description of a new genus is not thereby validated unless it is clearly stated that the description is that of both a new genus and a new species.

42. The date of a valid specific name is that of first publication of the page whereon that specific name becomes valid.

43. The name (or abbreviation) of the author of a specific name is placed, without intervening comma, after the specific name.

44. If a species is removed from the genus in which it was originally described the author's name may be placed in parenthesis and, if desirable, the name of the person responsible for the first use of the new combination may be placed after the original author's name; but in no case is it allowable to substitute another name for that of the original author of the species.

Example.—*Alpha alba* Linnaeus, when transferred to the genus *Beta* by Gray, may be written:
Beta alba Linn.
Beta alba (Linn.)
or *Beta alba* (Linn.) Gray.
but not *Beta alba* Gray.

45. A specific name, if a Latin adjective, should agree in gender with the generic name, even when published in connection with a subgeneric name of different gender.

46. Arbitrary specific names are not to be changed to agree in gender with the generic name.

Example.—*Cossus orc* Str. is not to be changed to *Cossus orca, orcus,* or *orcidis.*

47. A specific name given to any part or stage (except egg) of an insect, or to the cast or imprint of a fossil insect, is valid if otherwise available.

48. A specific name based wholly on a cocoon, case, gall, leaf-mine, or other work of an insect is valid, if otherwise available, only until the insect itself is described, when that name and authority replaces the one based on the work.

49. A specific name of an insect based wholly on characters of internal anatomy, on habits, or on anything other than external characters, or invaginated parts of the exoskeleton, is invalid.

50. Rules applicable to specific names apply also to names of lower rank except as provided in section 37 and certain of the following ones.

51. A subspecific, or varietal, name is a trinomial.

52. One of the subspecific or varietal names shall be a repetition of the specific name and have the same type. The name of the typical variety is usually omitted.

Example.—*Papilio glaucus glaucus* Linn (usually written *Papilio glaucus* L.).
Papilio glaucus turnus Linn.

53. The name of a race is a quadrinomial, and is usually given to a local form.

Example.—*Papilio glaucus turnus mexicanus* Linn.

54. A misidentification shall not be perpetuated as a valid species.

Example.—Fitch, under the genus *Ecanthus*, treats and describes a species (*fasciatus*) which he considers as being the *Gryllus fasciatus* of De Geer. It is now known that the insect before Fitch was not De Geer's species. Thus the name *Ecanthus fasciatus* cannot hold for the species treated by Fitch, as it was a misidentification, not the proposal of a new species.

55. A subspecies, a variety, or a race described in connection with a valid generic name but under an invalid specific name (or a misidentified species) is validly established as a species, but the status of the invalid specific name is unchanged.

Example.—Jones describes a new variety *nigripes* of *Alpha alba* Smith MSS. *Nigripes* stands as a valid species of *Alpha* and *alba* is still a manuscript name.

56. In writing the subspecific or varietal name the author of the species is omitted and that of the subspecies or variety given.

Example.—Jones' variety *alba* of Smith's *Papilio nigra* is written *Papilio nigra alba* Jones.

57. The names of hybrids may be written with the male parent first, as *Papilio philenor* × *Papilio asterias,* or as a fraction with the male parent above as $\frac{\textit{Papilio philenor.}}{\textit{Papilio asterias.}}$

Specific Homonyms.

58. Homonyms (that is the same name for two different things) are of two classes, primary and secondary; primary when two species are described originally in the same genus under the same generic name (emended or misspelled), and secondary when they are described under separate genera but later are referred to the same genus.

59. Specific names differing only in gender termination are considered as homonyms, and a name is a homonym when it is the same as the corrected form of an earlier name emendable under these rules.

60. Specific names shall be considered as homonyms which are equivalent in established Latin usage, as in the following examples:

i or *ii* at the end, as *fitchi* and *fitchii.*

æ or *iæ* at the end, as *slossonæ* and *slossoniæ.*

ev or *eu* at the beginning, as *euonomi and evonomi.*

i or *j* at beginning, as *ianthinum* and *janthinum.*

œ, æ, or *e,* as *cœruleus, cæruleus,* and *ceruleus.*

i or *y,* as *silvaticus* and *sylvaticus.*

c, ch, or *k,* as *microdon, mikrodon; cochi, kochi; antochi,* and *antoki.*

Ending of prefixes in *i, o,* or *a,* as *albipunctata, albopunctata,* and *albapunctata.*

r or *rr* before *h,* as *hæmorhoidalis* and *hæmorrhoidalis.*

61. In case of primary homonyms the later name shall be changed, no matter to what genus they are now referred.

62. In case of secondary homonyms the earlier one shall retain the name, the later species to be renamed. This shall follow no matter which is first referred to the genus.

Example.—*Alpha alba* Smith 1834.

Beta alba Jones 1847.

In 1848 *Beta alba* is referred to the genus *Delta,* and in 1852 *Alpha alba* is also referred to *Delta. Beta alba* Jones must be renamed.

63. In case a secondary homonym which has had its name changed on that ground, is referred out of that genus, its former name is to be restored; but if it is again referred to that genus, or another in which it is a homonym, the previous change of name again becomes effective.

Example.—*Alpha alba* Smith 1824 is referred to the genus *Beta* and is not preoccupied by the *Beta alba* Jones 1812, which has been referred to the genus *Delta.* But if now the *Beta alba* of Jones be re-transferred to *Beta,* then the *alba* of Smith will have to be renamed, or if it had been renamed before, while both species were in *Beta,* the name by which it was previously replaced comes again into use.

64. If a species is described in, or referred to, a genus to which a species of the same name has at a previous time been referred, but does not now belong thereto, the later name shall not be changed.[1]

Example.—*Alpha alba* Smith 1892. In 1860 the *Beta alba* of Jones was referred to *Alpha,* but later referred to *Delta;* the *Alpha alba* Smith is not to be changed.

65. A specific name, even in synonomy, preoccupies the use of that name in the genus, provided the synonym is a valid name.

66. Misspelled specific names cannot preoccupy other names, but an emended name and names suggested as substitutes will preoccupy in both the emended and original spelling.

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[1] Entomologists should refrain from duplicating combinations which have entered largely into recent literature, such as *Phyllodromia germanica, Doryphora decimlineata, Mytilaspis pomorum,* etc.

67. A species described in a subgenus is also described in the genus to which the subgenus belongs, and any future combination of that name with either the genus or subgenus constitutes primary homonymy.

Example.—If a new species be described as *Alpha* (*Nala*) *alba,* then a later *Alpha alba* or *Nala alba* is a homonym.

68. Two or more specific names in the same genus based on the same root but spelled differently, except gender termination, do not conflict.

Example.—*Alpha hispana* and *Alpha hispanica* do not conflict.

Emendations and Misprints of Specific Names.

69. A specific name once published shall not be changed except for a few reasons. The following rules apply:

a. Where a name is clearly based on a food-plant, host, locality, or a person's name and is misprinted, a change is permissible.

Example.—The specific name of a parasite said to have been bred from *Orgyia* was originally spelled *orvziæ.* This should be emended to *orgyiæ;* or if a species said to be named in honor of Mr. Brown is spelled *brawni* it should be changed to *browni.*

b. An evident misprint shall be corrected.

c. Corrections made in a work to matter on a previous page of that work shall be accepted if published at the same date.

d. An evident typographical error shall be corrected.

e. An evident error in spelling a valid name cannot be treated as a new name.

f. A properly emended name takes the date and authority of the unemended form.

The Type of a Species.

70. The type of a species is a single specimen. Specimens other than the type used in making the original description are termed cotypes, or paratypes; cotypes when no type is designated, paratype when a type is indicated. Many other names are in use for certain identified specimens. A number of these are as follows:

Topotype.[1]—A specimen from the original locality.

[1] A topotype of an insect in order to have any particular value should be taken at the same general time of year, and under the same œcological conditions.

Metatype.—A specimen compared by the author of the species with the type and determined by him as conspecific with it.

Homotype.—A specimen compared by another than the author of a species with the type and determined by him as conspecific with it.

Holotype.—A single specimen selected by the author of a species as its type, or the only specimen known at the time of description.

Syntype.—One of two or more specimens upon which a species is based when no holotype has been selected (= cotype).

Lectotype.—A syntype selected as a holotype.

Allotype.—A paratype of the opposite sex to the holotype.

Monotype.—The holotype of a species based on a single specimen.

Chirotype.—The type of a manuscript name.

Plesiotype.—A specimen upon which subsequent or additional description or figure is based.

Apotype.— = Plesiotype.

Hypotype.— = Plesiotype.

Neotype.—A plesiotype selected to represent the holotype when the holotype is lost or destroyed.

Heautotype.—A specimen named by the author of a species, or one used by him for figuring. Practically a metatype.

Plastotype.—A cast of a type.

Morphotype.—The type of the dimorphic form of a species.

Autotype.— = Heautotype.

Homeotype.— = Homotype.

Ideotype.—A metatype, but a specimen not from the type locality.

Androtype.—Male type, Gynetype—female type.

Various combinations of the above have been used and many other names could be given for particular conditions in entomology, as for specimens from the same nest, as the type of social species, the descendants of the type of a species described from living specimens, from the same batch of eggs, from the same host, &c.

71. In the case of Coccids or other insects where a description is based on specimens in the natural condition, and on ones mounted on slides, the specimens in the natural condition may be considered as type material, and the slide (or one of the slides if there are more than one) as the type slide, but in case of doubt, or a mixture of species, the type slide shall retain the name.

72. In case of minute insects or acari where more than one specimen is mounted on a slide one should label but one slide as the type slide, and if there is doubt or a mixture of species it shall be treated as a case where the author has labeled more than one specimen as type.

73. The following rules apply for the fixation of types of species in the order given:

A. Author's Fixation in the Original Description.

a. If a specific name is based on but one specimen, that specimen is the type.

b. If an author labels or, in the original description, designates a certain specimen as type, that specimen is the type.

c. If an author in the original description designates a series or collection of specimens as type, then the type is among such designated material.

Note.—Obvious errors or transposals of labels are sufficient grounds for disregarding rules *b* and *c*.

B. Fixation by Others than the Author, or by the Author Subsequent to the Original Description.

d. A specimen to be chosen as type must be found among material presumably examined by the author at the time of its description.

e. The type shall not be selected from among material indicated in the original description as variational or aberrational, nor from material doubtfully included in the species.

f. If it is anywhere stated in a work that a new species described therein is based on material wholly from a source other than the author's own collection, the type is to be selected from among such material.

g. If there are distributed to two or more collections specimens of a species all labeled by the author as types, or none labeled as types, the type should be selected from the specimens retained, if any, in the collection of the author. In case of a joint work the first author has precedence.

h. If two or more species are included in the original series of specimens upon which a new species has been based and the author

has not labeled, nor has he nor any one else designated one as type, nor restricted the type material, and it results that one of the included species is a synonym of an older valid species or has been afterwards (knowingly or unknowingly) described as a new species, then the type is restricted to the remaining material.

Example.—*Alpha alba* Latr. 1831, described without type fixation from two specimens, *a* and *b*, which prove to represent two species, *a* proving to be the *Alpha brunnea* of Linn. 1768. Thus the type of *Alpha alba* Latr. is the specimen *b* by restriction according to the above rule. The same would have resulted had the species *a* been described as new prior to the type designation of *alba*.

i. The first intentional definite type designation in accord with the above rules is final. The mere reference to a specimen as type is not to be considered as type fixation.

74. Where the type of a species is lost, or destroyed, the first interpretation shall obtain unless later acquired information clearly proves it should be otherwise, when a change is allowable.

75. In cases where specimens have been labeled as types by others than the author of the species such type labels shall be interpreted independently by each investigator since there is much variation in the credibility of such labels.

76. A species based wholly on a figure has the original of that figure as the type.

77. The type of a specific name proposed to replace a preoccupied specific name is the same as the type of the name replaced, irrespective of any attached description.

78. The type of a new name proposed to replace a misidentification is among the material in the collection of the author of the new name, if there is inherent evidence that he had material, and he gives a description or figure; otherwise, if based on the misidentification of a specified author the type is among the material utilized by such specified author if there is inherent evidence that he had material. If the name is given for the misidentification of several or no specified authors, then the type may be selected by any subsequent worker from among the material of the authors concerned. If it results that there is no described material back of a name based on a misidentification or misinterpretation then such name is invalid.

CATEGORY II.

(*Generic and Subgeneric Names.*)

79. A generic name becomes valid when published in connection with, or with reference to, a valid (= described or figured) specific name, or to replace a valid generic name.

80. A description without mention of a specific name, or the mention of an invalid specific name, cannot validate a generic name.

81. A generic name first appearing as a synonym of another generic name is valid (and may preoccupy or replace) if there be a valid specific name printed in connection with the names; if no valid specific name is there cited, the synonym is invalid.

82. A generic or subgeneric name is a homonym and subject to replacement when it is spelled exactly like a previous valid generic or subgeneric name, letter for letter. However, I or J, and Eu or Ev at the beginning of a name are considered the same, and other words that are equivalent in established Latin usage.

Example.—*Julus* and *Iulus; Euashmeadia* and *Evashmeadia; Elmis* and *Helmis.*

83. If a new generic name is proposed as new it shall be considered as new; if not stated to be new, it shall nevertheless be considered as new, unless it is a misspelling of a previous name.

84. A name which, as plainly shown by the text, is proposed as an emendation, or a substitute for a certain indicated generic name, is a new name and a synonym of the original name, and can preoccupy and replace.

85. All other variants are misspellings, and misspellings are to be corrected.

86. Emendations can be permitted only for unpronounceable names, or for misspelled generic names given in honor of a person.

87. When a new species is also considered as representing a new genus it is not necessary, although advisable, to separate the two descriptions in order that both shall be validated. But when an author proposes new genera in synoptic tables and mentions in connection therewith only new or invalid specific names, such specific name or names is not thereby validated, the generic name, therefore, also being invalid at that place.

88. A genus is not a synonym because it has among its originally included species one or more that is already the type of another genus.

89. Names, when used and treated by their author as generic names, are such, even when called by some other names, as "cohors," &c.

90. To rank as a subgenus a name, or its initial, must be so stated or used, or placed in parentheses between the generic and specific names. Any name given to any division of a genus and neither designated nor used as a subgenus has no standing in nomenclature.

Note.—There are thousands of such names, called series, cohors, divisions, groups, sections, legions, &c., or even families and races. Such have not been cataloged as genera nor subgenera.

91. Subgeneric names are subject to the same rules as generic names. One subgeneric name shall be the same as that of the genus to which it is subordinate, and its type the same as that of the genus.

92. A genus does not lose its genotype by becoming a subgenus, and a subgenus on becoming a genus retains its former type, if it had one; otherwise a type must be selected from among those species originally included under it as a subgenus.

Type of a Genus.

93. In every genus there shall be one species known as the type, or genotype. Two essential qualifications of a genotype are: 1st. It shall have a valid name. 2d. That name shall have been originally included, without question in the genus.

94. No specific name originally quoted in synonymy in a certain genus can be accepted as the type of that genus, nor one doubtfully determined, provided there are others available for type citation under these rules.

95. Genera with but one originally included specific name (exclusive of synonyms and subspecies or varieties) are monobasic and genera with more than one such name, not including synonyms, are polybasic.

96. The genotype of a monobasic genus is the only specific name cited, irrespective of misidentification or restriction.

Example.—*Alpha* Smith, new genus with a single specific name included, the *Beta alba* of Jones. Then *Beta alba* Jones is the geno-

type of *Alpha* Smith, even if it later results that Smith did not know that species, what he thought to be that, being in reality a very different species.

97. In regard to the genotypes of polybasic genera the following rules apply:

a. When an author, in describing a new genus, mentions or refers to any valid specific name, except one doubtfully included or quoted in synonymy, as type, typus, genotype, &c., or states that the genus is "based on" or "erected for" (or such similar phrase) some one species, then the species properly represented by that specific name is the genotype, irrespective of misidentification.

b. If a specific name not originally included in the genus, but with an originally included species quoted in synonymy, is designated as the genotype of an established genus such designation is deemed valid for the species in synonymy.

Example.—*Alpha* Smith 1870, based on two new species, *alba* and *nigra*. In 1880 the genotype is designated as "*brunnea* Jones 1860 (= *nigra* Smith 1870)." Then, by the above rule, *nigra* Smith 1870 is the properly designated type of *Alpha*.

c. If a genus, established in the text, is also given on a previous page in a synoptic table with the mention of a valid specific name or names, the type is not thereby selected or restricted.

98. If the author of a polybasic genus has not established the genotype by any of the above methods, it may be selected by any one as follows:

a. The first author to select as type one of the originally unquestionably included, specific names fixes the genotype, provided such specific name has not already been properly chosen as the type of another genus, and such selected specific name represents the type, irrespective of misidentification.

b. If all the originally unquestionably included species of a genus are already properly selected as types of other genera, any one of them may be chosen as the type of this genus.

99. A specific name cited as the genotype with a query, or indicated as the probable type, is not thereby the type.

100. If two or more species are cited at one place as types of one genus, neither is thereby the type, nor is type selection restricted.

101. If all but one of the species of a polybasic genus are types of other genera, then that one remaining, if otherwise eligible, is the genotype.

102. If all but one of the species of a polybasic genus are removed to other genera, but not as types, this one remaining does not thereby become the genotype—that is, an author does not restrict a genus except by type selection.

Example.—*Alpha* is established with four included species, none cited as type. Later species 1, 2, and 4 are removed to the genus *Beta,* but none of them as its genotype. Species 3, the only one not removed from *Alpha,* is not thereby the type of *Alpha,* and no more eligible for type selection than species 1, 2, or 4.

103. The citation of a generic name in synonymy under another generic name does not thereby restrict either name.

Example.—*Alpha* is described with four originally included species. Later *Beta* is described with *Alpha* quoted in synonymy, and with the species 1 and 2 included. This does not restrict *Alpha* to the species 1 and 2.

104. When an author changes a generic name, or unites two or more genera, the genotypes remain unchanged.

105. The type of a new generic name which by sign or language is clearly shown to be proposed to replace another valid generic name is the same as that of the genus replaced.

106. If a polybasic genus without designated genotype contains among its originally unquestionably included species one not in synonymy and of the same name as the generic name, then that species is the genotype (type by absolute tautonomy).

107. Genotypes fixed according to the above rules are stable, and cannot be changed. No other form of genotype designation than distinctly indicated above shall be valid; therefore the use of "n. gen. n. sp.," "sensu strictorum," the repetition of generic characters in the specific description, the first species, the most common species, a medicinal species, a figured species, nor one with the life history given shall, of itself, be considered as genotype fixation.

CATEGORY III.

(Superfamily, Family, and Subfamily Names.)

108. The name of a family shall be formed by changing the last syllable of the genitive case of an included generic name (preferably the oldest) into *idæ*.

109. The name of a subfamily shall be formed by using *"inæ"* in place of the *idæ*. One of the subfamily names shall be based on the same generic name as that of the family of which the subfamily is a part.

110. The name of a superfamily shall be formed by replacing the *"idæ"* of one of the included family names with *"oidea."*

111. The name of a tribe (a prime division under the subfamily) shall be based on that of an included genus, and shall end in *"ini."* One of the tribes under a subfamily shall be based on the same generic name as that on which the subfamily is based.

112. The name of a subtribe (a prime division under the tribe) shall be based on an included genus and end in *"ina."* One of the subtribes shall be based on the same genus as that of the tribe of which it is a part.

Note.—The term "group," formed by adding *"æ"* to the stem of a genus, is used by many under the tribe, subtribe or subfamily, but the term is used also for other grades and is inadvisable owing to this confusion.

113. The name of a family or subfamily is to be changed when the basic generic name is a homonym, or is removed from the family or subfamily, or becomes a synonym.

114. If there are two or more names proposed for the same family or subfamily ending in *idæ* or *inæ*, the earlier name shall be adopted.

115. If there are two family or subfamily names of the same spelling, the more recent shall be replaced, or so modified as not to conflict.

CATEGORY IV.

(Superordinal, Ordinal, and Subordinal Names.)

116. The names of superorders, orders, and suborders have no relation in formation to names of lower rank.

117. No change in the commonly accepted names in this category should be made for any cause, but when two or more names are in

use for one group of insects, as Physapoda and Thysanoptera for thrips, or Siphonaptera and Aphaniptera for fleas, the earlier should be used.

Status of Invalid Names.

118. If an author publishes a manuscript name, or any other name that is invalid, such name may be adopted later by any author for any purpose, and it will date from the first valid usage, and be credited to the validating author, no matter in what sense used.

Example.—*Alpha alba* Smith 1834, MSS. does not preoccupy *Alpha alba* Jones 1867. Likewise the generic name *Beta* Smith 1834 without included species does not preoccupy *Beta* Jones 1867 validly established.

RECOMMENDATIONS.

119. Reprints should always bear the name and volume of the publication and the original pagination.

Titles should indicate the Order or Family, preferably both, to which the insects discussed belong, and if the article treats of the fauna of one general region that fact should also appear in the title.

Follow some plan in making descriptions, segregate the matter relative to one part or pertaining to the color, &c. Comparative notes relative to an allied species in the same genus, where such occurs, is recommended.

A new genus or species should be clearly indicated as such and should be noticeably set off in position or type, not obscurely proposed in the midst of a paragraph or other inconspicuous position.

A description should be given separately for each new genus and species and their types indicated.

When descriptions of new genera or species are given in languages other than Latin, German, French or English it is well to include a diagnosis in Latin.

New species should not be based on the early stages, nor on the work of insects.

Do not make overlong descriptions nor titles.

In describing new species a figure, especially of distinguishing characters, should be given.

The Metric system of measurements should be used in all scientific works.

A name should be euphonious, and of moderate length. Hybrid names should be avoided.

In some groups it is customary to have uniform terminations or a common root, thus facilitating reference. Examples are tortricid specific names ending in *ana*, and tineid names ending in *ella*, &c.

Names taken from native languages, such as Indian, Malay, Philippine, &c., are often found useful when latinized for names of genera and species.

Personal names should be used sparingly, especially for genera. The British Association in 1865 well said: "The handing down the name of a naturalist by a genus has always been considered as the highest honor that could be given, and should never be bestowed lightly."

To form generic names from personal names, if the name ends in *e, i, o, u* or *y* add *a, us* or *um* to the name. If it ends in *a*, then *ia* is added to the name. If it ends in a consonant add *ia, ium* or *ius* to the name.

In latinizing personal names for use as specific names the usual rule is to add *i*, if masculine, or *æ*, if feminine; but in many cases where the name ends in a vowel it is better to change that vowel to *i* and add *i* or *æ*. Often names ending in *o* should have *i* or *æ* added to the genitive of the name.

Example.—An insect named in honor of Mrs. Slosson is *slossonæ*, one named for Mr. Smith is *smithi*, one for Latreille is *latreillii*, and one for Antonio is *antonini*.

A specific name based on that of a country should take its root from the Latin name of that country, if there is one. Thus an insect from Spain should be called *hispanus* or *hispanicus*, not *spainus* nor *spainicus*.

Two names in the same genus should not be based on the same Latin root. Thus *hispanus* and *hispanicus* in the same genus are objectionable.

Prefixes or suffixes of a generic name are useful in forming names for segregates of a genus, as *Ilybius, Ilybiosoma, Galeruca, Galerucella, Dachne, Megalodachne, Hypodachne*, &c.

In making names based on words having diacritic marks, such marks need not be retained, as *Stalia*, in honor of Stål.

Names expressing diminution or resemblance are often helpful, as *Tettix, Tettigella, Climacia, Climacina*.

In general it is not advisable to fix genotypes for genera with which the writer is unfamiliar.

In subdividing a genus it is well to have the new genera agree in

gender with the old one in order that no changes will be required in the termination of specific names.

When a new generic name is based on an old species, the former generic name of the old species should always be cited.

Before changing the name of a supposed secondary homonym care should be taken to ascertain quite surely the generic position of both species.

The name of the author should be given in conjunction with a specific name.

In abbreviating words the following rule is usually good: Stop before the second vowel unless the resulting abbreviation contains but one consonant, in which case stop before the third vowel.

Examples.—Washington, Wash.; History, Hist.; Academy, Acad., &c.

In the abbreviation of author's names it is recommended to follow the custom of the author himself.

Do not make generic names similar to ones already in use, or of the same pronunciation.

Various signs have been used to indicate certain facts about names in synonymy, not always with the same meaning. The following six signs are recommended for constant use with the meaning here given:

|| = primary homonym.
= secondary homonym.
† = misidentification.
♂ = male.
♀ = female.
☿ = neuter, worker.

Many other signs have been used, some in different senses. A number are here given, and if they are made use of it is recommended that they be used in the sense quoted below:

§ = figure of typical specimen.
! = specimen examined.
— = shorter than.
+ = longer than.
< = falling short of.
> = extending beyond.
⊙ = adult.
⊖ = egg.
⊕ = larva.
☽ = pupa.
⚥ = hermaphrodite.
* = many different things, and should be used only to indicate a footnote, when but one occurs on a page, or where the use is explained in the work in which it appears.

Footnotes are best indicated by arabic numerals.

For the sake of uniformity, it is recommended that the following scheme of grouping be followed in the order indicated below whenever applicable:

Order.	Genus.
Suborder.	Subgenus.
Superfamily.	Species.
Family.	Subspecies or variety.
Subfamily.	Race.
Tribe.	Aberration, sport, &c.
Subtribe.	

In cataloging, the employment of a small serial number after each reference, to be repeated in connection with the citation of information therein given, will indicate the authority for each item.

Example.—*Beta alba* (Smith).

Alpha alba Smith, Proc. Ent. Soc. Paris, vol. xii, p. 76 (1900)[1]; Jones, Rev. Ent. Inf., vol. ii, p. 7 (1904)[2]; *Beta alba* Brown, Ent. Journ., vol. lv, p. 80 (1911)[3].

Hab.—United States[1, 3]; Mexico[2].

Feeds on *Salix*[3]; ♂ dimorphic[2].

Thus Brown is responsible for the statement that it feeds on Salix, and Jones for the male being dimorphic, and occurrence in Mexico.

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