The International Code of Nomenclature of Prokaryotes Described from Sequence Data

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CHAPTER 1. GENERAL CONSIDERATIONS

General Consideration 1

The progress of prokaryotic microbiology requires a precise system of nomenclature accepted by the majority of microbiologists. For practical purposes the term prokaryotes is a synonym for Archaea and Bacteria.

General Consideration 2

To achieve order in nomenclature, it is essential that scientific names be regulated by internationally accepted rules.

General Consideration 3

The rules that govern the scientific nomenclature used in the biological sciences are embodied in international codes of nomenclature.

General Consideration 4

Rules of nomenclature do not govern the delimitation of taxa or determine their relations. The rules are primarily for assessing the correctness of the names applied to defined taxa; they also prescribe procedures for creating and proposing new names.

General Consideration 5

This International Code of Nomenclature of Prokaryotes Described from Sequence Data applies to the naming of all prokaryotes where the lower taxa (species and subspecies) are typified by a DNA sequence and all higher taxa of prokaryotes. This code is colloquially referred to as the SeqCode to distinguish it from the International Code of Nomenclature of Prokaryotes (ICNP), which applies to the naming of all prokaryotes where the lower taxa (species and subspecies) are typified by either a strain or illustration/description. The nomenclature of eukaryotic microbial groups is provided for by other Codes; fungi and algae by the International Code of Nomenclature for algae, fungi and plants; protozoa by the International Code of Zoological Nomenclature. The nomenclature of viruses is provided for by the International Code of Virus Classification and Nomenclature.

General Consideration 6

53 The International Committee on the Systematics of Prokaryotes Described from Sequence Data, colloquially the 54 SeqCode Committee, has been established to provide mechanisms to emend, interpret, and consider exemptions to the

rules of the SeqCode.

General Consideration 7

The SeqCode is divided into Principles, Rules and Recommendations. The Principles (Chapter 2) form the basis of the Code, and the Rules and Recommendations are derived from them. The Rules (Chapter 3) are designed to implement the Principles. The Recommendations (Chapter 3) supplement some of the Rules and do not have the force of Rules. They are intended as guides to desirable practice. Names contrary to Recommendations cannot be rejected for this reason. Appendices are included to assist in the application of this Code and do not form the legislative part of this Code.

General Consideration 8

Nomenclature deals with the application of names to the following taxonomic ranks, i.e., "subspecies", "species", "genus", "family", "order", "class", and "phylum".

General Consideration 9

The SeqCode is an instrument of scientific communication.

CHAPTER 2. PRINCIPLES

Principle 1

 The SeqCode has one fundamental aim, which is to provide a standardized, robust, and stable system of nomenclature for prokaryotes that is compatible with the freedom of scientists to classify prokaryotes according to taxonomic opinion. Nothing in the SeqCode may be construed to restrict the freedom of taxonomic opinion or action.

Principle 2

The nomenclature of prokaryotes is **not independent** of botanical, zoological and viral nomenclature. When naming new taxa at the rank of genus or higher, names that are already regulated by the International Code of Zoological Nomenclature, the International Code of Nomenclature for algae, fungi and plants and the International Code of Virus Classification and Nomenclature must not be used.

The SeqCode is **not independent** of the names regulated by the International Code of Nomenclature of Prokaryotes (ICNP) and formed before January 1, 2022. Before that date, legitimate names formed under the ICNP have priority. After that date, names formed under the ICNP compete with names formed under the SeqCode for priority.

Principle 3

 The scientific names of all taxa are Latin or Latinized words treated as Latin.

Principle 4

 The primary purpose of giving a name to a taxon is to supply a means of referring to it. A secondary consideration, given the nature of cognition and memory, is that names should aid memorability.

Principle 5

Names of taxa are tied to their nomenclatural types, referred to as types in the SeqCode. Types should unambiguously identify taxa.

Principle 6

 The correct name of a taxon is based upon valid publication, legitimacy, taxonomic position, and priority of publication.

Principle 7

108 Principle 8

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Each taxon with a given circumscription, position, and rank can bear only one correct name, i.e., the earliest that is in

A name only has standing in nomenclature if it is validly published under the rules of the SeqCode.

accordance with the rules of the SeqCode. The circumscription of a taxon is an indication of its limits or the set of biological entities it contains. The position of a taxon or rank is an indication of its relationship to a parent taxon within a taxonomy.

Principle 9

To promote stability, the name of a taxon should not be changed or replaced without sufficient reason based on either further taxonomic studies or the need to rectify a name that is contrary to the rules of SeqCode.

Principle 10

Names created should be clear enough to avoid errors, confusion, or misunderstandings.

CHAPTER 3. RULES OF NOMENCLATURE WITH RECOMMENDATIONS

Section 1. General

Rule 1

The International Code on the Nomenclature of Prokaryotes Described from Sequence Data, or SeqCode, will take effect on January 1, 2022.

Rule 2

The SeqCode Legislative Commission has been established as the legislative branch of the SeqCode Committee in accordance with its statutes. The SeqCode Legislative Commission is the only body authorized to amend the SeqCode.

Rule 3

The SeqCode Reconciliation Commission has been established as the judicial branch of the SeqCode Committee to make decisions pertaining to the application of the SeqCode in accordance with its statutes. Examples of cases for the Reconciliation Commission may include: (a) cases in which the consequences or interpretation of a rule are uncertain, (b) cases in which the application of a name is likely to endanger health or have serious economic consequences, or (c) cases where the application of a rule is likely to lead to confusion. When the opinion of the SeqCode Reconciliation Commission is sought, a summary of pertinent facts should be submitted to the Reconciliation Commission. The SeqCode Reconciliation Commission is the only body authorized to render decisions on the application of the SeqCode.

Rule 4

The SeqCode Registry has been established to record and maintain names that are formed or recognized under the SeqCode in accordance with its statutes. Registration of names constitutes valid publication and is required for naming under the SeqCode.

Rule 5

The rules of the SeqCode are retroactive except where specified.

Rule 6

Names contrary to a rule may not be maintained in the SeqCode Registry.

Section 2. Ranks of Taxa

Rule 7a

The taxonomic categories covered by these rules are given below in descending taxonomic rank.

163 Phylum

164 Class

- 165 Order
- 166 Family
- 167 Genus
- 168 Species
- 169 Subspecies

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Rule 7b

The relative order of these categories may not be altered in any classification even though definitions of taxonomic categories may vary with individual opinion.

Rule 7c

The use of the taxonomic rank of subspecies is optional.

Rule 7d

Intermediate or informal ranks or categories not mentioned in Rule 7a are not covered by the SeqCode.

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Recommendation 7: An author who describes and names a new taxon should indicate the rank of the taxon and where possible the rank and name of the parent taxon. If the parent taxon is not currently named, the author should name it.

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Section 3. Naming of Taxa

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General

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Rule 8

The scientific names of all taxa must be treated as Latin and spelled only with the Latin alphabet. A species name is a binary combination of a genus name and a specific epithet; names of taxa above the rank of species are single words. Typographical signs, numbers, and additional characters cannot be used.

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Rule 9a

A name at any taxonomic rank can only refer to a single type.

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Rule 9b

A later homonym of a name of a taxon of prokaryotes, fungi, algae, protozoa, or viruses cannot be used.

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Recommendation 9

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To form new prokaryotic names, authors are advised as follows:

1. Names that are very long or difficult to pronounce should be avoided.

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- 2. Names should differ by at least three characters from existing names of genera or species within the same
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 - 3. Languages other than Latin should be avoided when Latin equivalents exist or can be constructed by combining Latin word elements. Exceptions include names derived from local items such as foods, drinks, geographic localities, and other names for which no Latin words exist.
 - 4. Authors should not name organisms after themselves. If names are formed from personal names, they should contain only the name of one person. They may contain the untruncated family and/or first names.
 - 5. All personal genus names should be feminine regardless of the gender identity of the person they commemorate.
 - 6. Names should not be deliberately contentious or abusive of any person, race, religion, political belief, or ideology.
 - 7. Names that include mnemonic cues are preferred because they promote learning and memory.

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Rule 10

The name of a genus is a noun or adjective used as a noun, in the singular number and written with an initial capital letter. The name must be treated as a Latin substantive or noun.

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Recommendation 10

Authors should attend to the following Recommendations and those of Recommendation 9 when forming genus

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1. Names that have the same suffixes as those used for the higher taxonomic ranks should be avoided: -aceae, -ales, -ia, and -ota (see Table 1).

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Names of Species

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Rule 11

233 234 The name of a species is a binary combination consisting of the name of the genus followed by a single word known as a species epithet. The genus part of the name must begin with an initial capital letter, and the species epithet must begin with a lowercase letter.

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Rule 12

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A species epithet must be related to the genus name in one of three ways.

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1. As an adjective. Example: aureus in Staphylococcus aureus.

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2. As a substantive (noun) in apposition in the nominative case. Example: Desulfovibrio gigas or other names cited in Trüper and De'Clari (1997).

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3. As a substantive (noun) in the genitive case. Example: coli in Escherichia coli.

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Recommendation 12

246 247 Authors should attend to the following recommendations and those of Recommendation 9 when forming species names.

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1. When a species epithet is chosen to indicate a property or source of the species, epithets should not express a character common to all, or nearly all, the species of a genus.

2. When the species epithet is an adjective, it should agree in gender with the genus name. 3. The genitive and adjectival forms of the same Latin word should not be used to name two different species of the same genus.

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Names of Subspecies

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Rule 13a

259 260 The name of a subspecies is a ternary combination consisting of three names: the genus name, the species epithet, the abbreviation "subsp." (subspecies), and the subspecies epithet that begins with a lower-case letter.

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Rule 13b

Rule 13c

263 264 A subspecies epithet is formed in the same way as a species epithet.

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Names of Taxa above the Rank of Genus (Family, Order, Class, Phylum)

A subspecies that includes the type of the species must bear the same epithet as the species.

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Rule 14

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The name of a taxon above the rank of genus is a Latinized word. Names of families and orders are in the feminine gender, the plural number, and written with an initial capital letter. Names of classes and phyla are in the neuter gender,

the plural number, and written with an initial capital letter.

Rule 15

The name of a family, order, class, or phylum is formed by the addition of the appropriate suffix to the stem of the type genus name (see Section 4). These suffixes are presented in Table 1.

Table 1. Suffixes for Taxonomic Ranks

Rank	Suffix	Example for the genus <i>Hadarchaeum</i> ^a
Phylum	-ota	Hadarchaeota
Class	-ia	Hadarchaeia 🛕
Order	-ales	Hadarchaeales
Family	-aceae	Hadarchaeaceae

^aFrom Chuvochina et al., 2019

Section 4. Nomenclatural Types and Their Designation

General

Rule 16

Each named taxon must have a designated nomenclatural type. The nomenclatural type, referred to in the SeqCode as "type", for a species or subspecies is the evidence for that taxon (DNA sequence, see Rule 18a) with which the name is permanently associated. For taxa above the rank of species, the type is one of the subordinate taxa, with which the name is permanently associated. Formation of names of the taxa above the level of genus is based on the names of the types, allowing tracing which biological entity is included in the taxon. The nomenclatural type is not necessarily the most typical or representative element of the taxon.

Types of the various taxonomic categories are presented in Table 2.

Table 2. Nomenclatural types of taxonomic ranks

Taxonomic category	Nomenclatural type
Subspecies	Designated DNA sequence
Species	Designated DNA sequence
Genus	Designated species
Family	Designated genus
Order	Designated genus
Class	Designated genus
Phylum	Designated genus

Rule 17

The type of a taxon must be designated for the name to be validly published (see Section 5).

Type of a Species or Subspecies

Rule 18a

The type of a species or subspecies is a designated DNA sequence that is compliant with the minimum standards designated by the SeqCode Committee for genome, metagenome-assembled genome, or single-amplified genome sequences. The sequence must be available in the International Nucleotide Sequence Database Collaboration (INSDC). Upon recommendations of the SeqCode Committee or subcommittees on the taxonomy of specific groups, the SeqCode Committee may approve other minimal standards as suitable types for specific groups.

Rule 18b

The type of a species or subspecies must unambiguously identify the taxon. Names based on types that later prove to be ambiguous are not legitimate unless a neotype is proposed.

Rule 18c

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If the type of a name is lost or demonstrated to be ambiguous, a neotype sequence may be proposed to the SeqCode Reconciliation Commission. If approved, the SeqCode Registry will be amended to reflect the new type.

Rule 19

Unless designated under the rules of this code, a reference DNA sequence is not a type but a sequence used in comparative studies. A reference sequence has no standing in nomenclature.

Types of higher taxa

Rule 20

Only taxa with legitimate names may serve as types for taxa higher than the rank of species.

Rule 21a

The nomenclatural type of a genus is the type species that was designated when the genus name was originally validly published.

Rule 21b

The valid publication of a new genus name as a deliberate substitute for an earlier name found to be illegitimate does not change the type species of the genus.

Rule 22

When more than one subordinate taxa are available to serve as type, the earliest legitimately named taxon available at the time must be chosen, except where the type is neither a strain nor sequence data (i.e., taxa described from illustrations under the ICNP).

Section 5. Priority and Valid Publication of Names

Rule 23a

Any taxon with a given circumscription, position, and rank can bear only one correct name, the earliest name that is in accordance with the rules of SeqCode.

Note 1. In the case of a species epithet, Rule 23a must be applied independently of the genus name. Under most circumstances, the species epithet remains the same on transfer of a species from one genus to another. However, if the species epithet is currently in use in the name of another species or subspecies in the genus to which the species is to be transferred, a new name must be proposed for the transferred species.

Note 2. In the case of a subspecies, Rule 23a must be applied independently of the genus name and species epithet. The subspecies epithet remains the same on transfer of a subspecies from one species to another unless the subspecies epithet has been previously used as the name of another species or subspecies in the genus to which the subspecies is to be transferred.

Rule 23b

The priority of a genus, species, or subspecies name is determined by the time and date of its valid publication, i.e., when the registration of the name is completed. For purposes of priority, only legitimate names are taken into consideration.

Rule 23c

The priority of species and subspecies names will compete for priority with names in any other code after January 1, 2022. If two names validly published after 1 January 2022 compete for priority, priority is determined by the time and

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date of valid publication, either under the rules of the SeqCode or other nomenclatural codes. If both names are published at the same time and date, priority will be decided by the SeqCode Reconciliation Committee.

Rule 23d

The priority date of names of taxa of rank higher than genus proposed after 1 January 2022 is the same as the priority date of the corresponding type genus name. The priority date for names published before 1 January 2022 is the same as their priority under the ICNP.

Rule 23e

Legitimate names validly published under the ICNP remain legitimate in the SeqCode even if there are differences in type designations.

Effective publication

Rule 24a

Effective publication under the SeqCode means making the name generally available to the scientific community via printed and/or electronic material for the purpose of providing a permanent record.

Rule 24b

When a name of a new taxon is published in a work written in a language other than English, the author(s) should include a description in English in the publication.

Rule 24c

The following are not accepted as forms of effective publication.

- 1. Communication of new names at a meeting, minutes of a meeting, or abstracts of papers presented at meetings.
- 2. Placing of names in listings or catalogues of collections.
- 3. Reports in ephemeral publications, newsletters, white papers, self-published papers, or non-scientific periodicals.
- 4. A published patent application or issued patent including the name.
- 5. A database containing names associated with a sequence or metadata.
- 6. Electronic material available in advance of publication (e.g., papers in press or preprints).

Valid and Invalid Publication and Registration of Names

Rule 25

The time and date of validation is the time and date of completion of the registration in the SeqCode Registry.

Rule 26

A name of a new taxon, or a new combination for an existing taxon, is not validly published unless the following criteria are met:

- 1. The name is effectively published under the rules of the SeqCode.
- 2. The name is registered in the SeqCode Registry, along with mandatory data fields listed below.
- 3. The type of the taxon is clearly designated. In the case of species or subspecies, the type sequence is deposited according to Rule 18a and the accession number cited.
- 4. The taxonomic rank is designated.
- 5. The derivation (etymology) of a new name (and if necessary of a new combination) is given, wherein one or more distinguishable roots are identified. Roots can originate from any language in use or extinct (see also Recommendation 9).

Note 1. When a new species or a new combination results in the proposal of a new genus, both the new genus name and the new species name or the new combination must be validly published. Publication of the new species epithet

or new combination alone does not constitute valid publication of the new genus name.

Note 2. When possible, authors are recommended to include the SeqCode Registry identifier in the effective publication.

Note 3. If the information provided in the registration and the effective publication differ, the registration is considered definitive.

Recommendation 26

It is recommended that the name, etymology, type information, and diagnosis of the novel taxon should be clearly identifiable in a designated section of the effective publication (i.e., the section termed the 'protologue' by some microbial taxonomists). Authors are encouraged to provide information describing the taxon such as predicted or known physiological characteristics, ecological data, location, and additional metadata. Authors are also encouraged to submit metadata with the type sequence in one of the INSDC databases.

Rule 27

Placement of a species or subspecies epithet into a genus or species that is illegitimate does not preclude the legitimacy of the species or subspecies epithet.

Section 6. Citation of Authors and Names

Proposal and Subsequent Citation of the Name of a New Taxon

Recommendation 28

The effective publication should be cited with the name of a previously proposed taxon. Correct citation of a name enables the date of publication, the description, and the circumscription of the taxon to be found. For names published under the SeqCode, the validly published name and date of valid publication should be determined from the SeqCode Registry.

Proposal of a New Combination

Rule 29

When an author proposes transfer of a species to another genus, or a subspecies to another species, then the author who makes the proposal should indicate the formation of the new combination by the addition of the abbreviation 'comb. nov.'' (combinatio nova). This convention should be used when the author retains the original species epithet in the new combination. However, if an author is obliged to substitute a new species epithet as a result of homonymy, the abbreviation 'nom. nov." (nomen novum) should be used. The original name is referred to as the basonym and should be given, along with the citation of the effective publication, in the description of the novel combination.

Citation of the Name of a Taxon whose Circumscription Has Been Emended

Recommendation 30

If an alteration of a taxon modifies its circumscription, the author responsible may be indicated by the addition to the author citation of the abbreviation "emend." (emendavit) followed by the name of the author responsible for the change. Only alterations that cause significant changes in the circumscription warrant description as an emendation.

Section 7. Changes in Names of Taxa as a Result of Transference, Union, or Change in Rank

Rule 31

If the type of a taxon is excluded, a type must be designated for the remaining members of the original taxon (see Rule

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17), which must be given a new name.

Rule 32

A change in the name of a taxon is not warranted by an alteration of the diagnostic characters or the circumscription.

Rule 33

If a genus is divided into two or more genera, the genus name must be retained for the genus that retains the type species.

Division of Species and Subspecies

Rule 34a

When a species is divided into two or more species, the species epithet of the original species must be retained for the taxon that includes the type.

Rule 34b

When a species is divided into two or more subspecies, the species epithet of the original species must be retained for the subspecies that includes the type.

Note. Although the species and subspecies epithets in the name of a type subspecies are the same, they do not contravene Rule 9 because they are based on the same type.

Rule 34c

When a subspecies is divided into two or more subspecies, the subspecies epithet of the original subspecies must be retained for the subspecies that includes the type.

Transfer of a Species to Another Genus

Rule 35a

When a species is transferred to another genus without any change of rank, the species epithet must be retained unless it is already in use in the new genus. In that case, a new species epithet must be chosen for the transferred species. This rule avoids creation of a later homonym.

Rule 35b

Regardless of its priority, the transfer of species that is not the type of another genus does not affect the type species or priority of the receiving genus even if it involves union of the incoming species with the type species of the receiving genus.

Rule 35c

When the name of a genus is changed, the epithets of the species within it must be retained unless already in use (see Rule 29).

Note 1: Modification of the gender of the species epithet to accommodate the gender of the new genus name is a minor orthographic variant and encouraged.

Union of Taxa of Equal Rank

Rule 36

When two or more taxa of the same rank are united, then the name and type of the taxon is determined by following the rules of priority (see Section 5). In cases of species and subspecies, if the names or epithets are of the same time and date, the author who first unites the taxa has the right to choose one of them, and their choice must be followed.

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When several species are united under one species as subspecies, the subspecies that includes the type strain of the species under whose name they are united must be designated by the same epithet as the species name (see Rule 13c).

Rule 38

If two or more species of different genera are united to form a single genus, and if those species include the type species of one or more genera, the genus name must be the earliest validly published, legitimate name. If no type species is placed in the genus, a new genus name must be proposed, and a type species must be specified.

Rule 39

When two or more taxa of the same rank from family to class are brought together under a taxon of higher rank, the higher-ranking taxon should derive its name from the name of the earliest legitimate type genus among the lower-ranking taxa.

Rule 40

If no type genera were placed in the taxon, a new name based on the selected type must be proposed. (see Rule 22)

Change in Rank

Rule 41a

When the rank of a taxon of genus or above is changed, the stem of the name must be retained and only the suffix altered (see Rule 15).

Rule 41b

When a subspecies is elevated in rank to a species, the subspecies epithet must be used as the species epithet unless the resulting combination is illegitimate.

Rule 41c

When a species is lowered in rank to a subspecies, the species epithet must be used as the subspecies epithet unless the resulting combination is illegitimate.

Section 8. Illegitimate Names and Epithets: Replacement, Rejection, and Conservation of Names and Epithets

Illegitimate Names

Rule 42

A name contrary to a Rule is illegitimate and must not be used. However, a name of a taxon that is illegitimate when the taxon is in one taxonomic position is not necessarily illegitimate when the taxon is in another taxonomic position.

Note: Some common reasons for which a name may be illegitimate are the following.

- 1. If the taxon to which the name was applied, as circumscribed by the author, included the nomenclatural type of a name which the author ought to have adopted under one or more of the rules.
- 2. If the author did not adopt for a binary or ternary combination the earliest legitimate genus name, species epithet, or subspecies epithet available for the taxon with its particular circumscription, position, and rank.
- 3. A species or subspecies epithet is illegitimate if it duplicates a species or subspecies epithet previously validly published for the same genus but whose name is based upon another type.

Replacement of Names

Rule 43

An illegitimate name or epithet should be replaced by the earliest legitimate name or epithet in a binary or ternary combination which in the new position will be in accordance with the rules. If no legitimate name or epithet exists,

one must be chosen. Since a species epithet is not rendered illegitimate by publication in a species name in which the generic name is illegitimate, authors may use such an epithet if they wish provided that there is no obstacle to its employment in the new position or sense; the resultant combination is treated as a new name (nom. nov.) and is ascribed to the author. The epithet is, however, ascribed to the original author.

Rule 44

A legitimate name or epithet may not be replaced.

Rule 45

Names contrary to the General Considerations or Principles of the code may be rejected by the SeqCode Reconciliation Commission.

Section 9. Orthography

Rule 46

All names comprise only the 26 letters of the ISO basic Latin alphabet. Diacritic signs are not to be used.

Rule 47

Any name or epithet should be written in conformity with the spelling of the word from which it is derived and in accordance with the rules of Latinization. Exceptions are provided for typographic and orthographic errors and orthographic variants.

Notes:

- 1. Consult Appendix 9 of the ICNP for recommendations on forming properly Latinized names.
- 2.. In the SeqCode an orthographic variant is a name (or epithet) applied to the same type that differs from another name only in transliteration into Latin of the same word from a language other than Latin or in its grammatical correctness. Changes in suffixes for consistency with the names of higher taxa are orthographic variants. Names transliterated from the same word and based on different types are not orthographic variants.

Typographic and Orthographic Errors

Rule 48

The original spelling of a name or epithet must be retained, except for typographic or orthographic errors.

An unintentional typographical or orthographic error later corrected by the author is to be accepted in its corrected form without affecting the status and date of valid publication. It can also be corrected by a subsequent author who may or may not mention that the spelling is corrected. However, the abbreviation "corrig." (*corrigendum*) may be appended to the name if an author wishes to draw attention to the correction. Succeeding authors may be unaware that the original usage was incorrect and use the spelling of the original author(s). Other succeeding authors may follow the correction of a previous author or may independently correct the spelling themselves, but in no case is the use of corrig. regarded as obligatory. None of these corrections affects the status and date of validation.

Note. The liberty of correcting a name or epithet must be used with reserve, especially if the change affects the first syllable and above all the first letter of the name or epithet.

Personal Names

Rule 49

The genitive and adjectival forms of a personal name are treated as different epithets and not as orthographic variants

unless they are so similar as to cause confusion.

646647 Gender of Names

Rule 50

The gender of genus names is governed by the following.

- 1. A Latin or Latinized genus name retains the gender of its language of origin. Authors must give the gender of any proposed genus name. In cases where the classical gender varies, the author has the right of choice between the alternatives.
- 2. Genus names that are compounds from two or more Latin words take the gender of the last component of the compound word.
- 3. Arbitrarily formed genus names or vernacular names used as genus names take the gender assigned to them by their authors.

CHAPTER FOUR. RECOMMENDATIONS FOR AUTHORS AND PUBLISHERS

When it is desirable to distinguish the nature of the type of a name, the following convention is recommended. When the type for a species or subspecies is determined by the ICNP, the superscript "T" will be used immediately following the name or strain identifier. If the type is determined by the SeqCode, the superscript "Ts" or "TS" will be used. When the type is a taxon at the rank of genus or higher, the superscript is determined by the nature of the type of the species. If superscripts are not possible, they may be replaced by the symbols in parentheses, i.e., (T), (Ts) or (TS).

For the purpose of identification in the text, names of taxa at all ranks should be italicized.

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