

Current text	Proposed new text	Comments	References
Valid Publication of the Name of a Species	Valid Publication of the Name of a Species		
<p>Rule 30 For the name of a species to be validly published, it must conform with the following conditions.</p> <p>(1) It must be published in conformity with Rules 27 and 28b.</p> <p>(2) It must be published as a binary combination consisting of a genus name followed by a single species epithet (see Rule 12a).</p> <p>(3) (a) Up to 31 December 2000, before publication of the name of a new species, a culture of the type strain (or, if the species is non-cultivable, type material, a photograph or an illustration, see Rule 18a) should be deposited in at least one of the permanently established culture collections from which it would be readily available. The designation allotted to the strain by the culture collections should be quoted in the published description.</p> <p>(b) As of 1 January 2001, the description of a new species, or new combinations previously represented by viable cultures must include the designation of a type strain (see Rule 18a), and a viable culture</p>	<p>Rule 30 For the name of a species to be validly published, it must conform with the following conditions.</p> <p>(1) It must be published in conformity with Rules 27 and 28b.</p> <p>(2) It must be published as a binary combination consisting of a genus name followed by a single species epithet (see Rule 12a).</p> <p>(3) (a) Until 31 December 2000, before valid publication of the name of a new species, a culture of the type strain or, if the species is not yet cultivated, type material (see Rule 18a) should be deposited in at least one of the permanently established culture collections from which it would be readily available. The designation allotted to the strain by the culture collections should be quoted in the published description.</p> <p>(b) As of 1 January 2001, the valid publication of the name of a new species, or new combinations previously represented by viable cultures must include the designation of a type strain</p>	<p>Text clarifications proposed by the Editorial Board</p> <p>The term ‘non-cultivable’ should probably not be used in the ICNP. In reality, ‘non-cultivable’ probably means, not-yet-cultivated or not-yet-cultivable.</p> <p>Note that the term ‘permanently established’ was not repeated in (b) in the</p>	<p>Tindall BJ. Clarifying the limitations on Rule 18a and Rule 30 of the International Code of Nomenclature of Prokaryotes <i>Int J Syst Evol Microbiol</i> 2017;67:505-506.</p> <p>Tindall BJ. Clarifying the limitations on Rule 18a and Rule 30 of the International Code of Nomenclature of Prokaryotes <i>Int J Syst Evol Microbiol</i> 2017;67:505-506.</p>

<p>of that strain must be deposited in at least two publicly accessible culture collections in different countries from which subcultures must be available. The designations allotted to the strain by the culture collections should be quoted in the published description. Evidence must be presented that the cultures are present, viable, and available at the time of publication.</p> <p><i>Note.</i> In exceptional cases, such as organisms requiring specialized facilities (e.g. Risk Group/Biological Safety Level 3, high pressure requirements, etc.), exceptions may be made to this Rule. Exceptions will be considered on an individual basis by a committee consisting of the Chairman of the ICSP, the Chairman of the Judicial Commission and the Editor of the IJSEM. Exceptions will be made known at the time of publication.</p>	<p>(see Rule 18a), and a viable culture of that strain must be deposited in at least two publicly accessible culture collections in different countries from which subcultures must be available. The designations allotted to the type strain by the culture collections are to be quoted at the time of valid publication. They should also be cited in effective publications not published in the IJSEM. Evidence must be presented that the cultures are present, viable, and available at the time of valid publication. This does not affect nomenclatural types designated before 31 December 2000 under Rule 18a (1) and Rule 3 3(a).</p> <p><i>Note.</i> In exceptional cases, such as organisms requiring specialized facilities (e.g., Risk Group/Biological Safety Level 3, high pressure requirements, etc.), exceptions may be made to this Rule. Exceptions will be considered on individual basis by a committee consisting of the Chair of the ICSP, the Chair of the Judicial Commission and the Editor-in-Chief of the IJSEM. Exceptions will be made known at the time of publication.</p>	<p>previous version. The question of what is a ‘permanently established’ culture collected, what is a ‘publicly accessible culture collection’ and what culture collections qualify and why, was never addressed (see also also discussion of ‘recognized’ in Rule 27); discussion of this is invited as these definitions should preferentially be added in this revision. The important issues are that type material must be a ‘permanent reference’ – so the acceptable culture collections must be ‘permanent’, and they must be ‘accessible, without restriction’ – so the acceptable culture collections must be in countries without restrictions on natural resources – or something similar. The term, ‘publicly accessible’ culture collection, seems to be a good possibility. The term, ‘publicly accessible’ is important, since private research collections or industrial collections would not qualify. The term, ‘internationally recognised’ suggests a profile that is necessary for a qualified culture collection and suggests the permanence that is necessary for maintaining type material, but the question is, who is responsible for this ‘recognition’?</p> <p>Other important issues to be addressed in the discussion: what kinds of ‘restrictions’ are allowed for the distribution of type</p>	
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<p>(4) Organisms deposited in such a fashion that access is restricted, such as safe deposits or strains deposited solely for current patent purposes, may not serve as type strains.</p>	<p>(4) Organisms deposited in a manner restricts access such as safe deposits, strains with attached MTAs, strains deposited for current patent purposes, or those governed by contractual agreements may not serve as type strains.</p> <p>(5) Names of taxa of <i>Cyanobacteria</i> validly (published in conformity with the Rules of the International Code of Nomenclature for algae, fungi, and plants are also validly published in conformity with the Rules of the International Code of Nomenclature of Prokaryotes (see General Consideration 5).</p>	<p>material? All culture collections have certain restrictions in the MTAs that customers must sign.</p> <p>Another important issue to be discussed came up during the preparation of the Validation Lists: In many cases the List Editors encountered requests for validation based on effective publications that give one culture collection deposit only, and the second one was obtained later. Here validation was routinely approved. There are even cases in which the effective publication has only the strain designation given by the author, and the two culture collection documents were obtained after the paper was published. In such cases, the List Editors have requested the publication of a Corrigendum. Both authors and the List Editors need clear guidelines from the ICSP here, and these guidelines must be explained in the ICNP.</p>	<p>Oren A, Arahal DR, Rosselló-Móra R, Sutcliffe, IC, Moore EJB. Emendation of General Consideration 5, Rules 18a, 24a, and Rule 30 of the International Code of Nomenclature of Prokaryotes to resolve the status of the <i>Cyanobacteria</i> in the prokaryotic nomenclature. <i>Int J Syst Evol Microbiol</i>, in press.</p>
<p>Recommendation 30 Before publication of the name and description of a new species, the examination and description should conform at least to the minimal standards (if available) required for the relevant taxon of prokaryote.</p> <p><i>Note 1.</i> Lists of minimal standards are being prepared for each group of</p>	<p>Recommendation 30 Before publication of the name and description of a new species, the examination and description should conform to the current minimal standards (if available) required for the relevant taxon of prokaryote</p> <p><i>Note 1.</i> Lists of proposed minimal standards are prepared for prokaryotic</p>		

<p>prokaryotes by experts at the request of the Judicial Commission for consideration by the Judicial Commission and the ICSP for publication in the IJSEM (see Appendix 6). Such standards include tests for the establishment of generic identity and for the diagnosis of the species, i.e. an indication of characters which would distinguish the species from others.</p> <p>Note 2. It is the aim of minimal standards to provide guidance on the description of taxa for taxonomists seeking such advice. However, these standards are not to be applied in such a way as to contradict Principle 1(4).</p>	<p>taxa by experts for publication in the IJSEM (see Appendix 6). Such standards include current tests for the establishment of generic identity and for the diagnosis of the species, i.e., an indication of characters which distinguish the species from others.</p> <p>Note 2. The aim of proposed minimal standards is to provide guidance on the description of taxa for taxonomists seeking such advice. However, these standards are not to be applied in such a way that contradicts Principle 1(4).</p>	<p>Based on the ICSP statutes, this is not one of the tasks of the Judicial Commission.</p>	
<p>Rule 31a The name of a species or a subspecies is not validly published if the description is demonstrably ambiguous and cannot be critically identified for purposes of the precise application of the name of a taxon. Examples: (a) '<i>Methanobacillus omelianskii</i>' Bryant et al. 1967, whose description included all component species, was treated as a single species and was thus illegitimate; (b) <i>Syntrophobacter wolinii</i> Boone and Bryant 1984 is legitimate, because the species description applies to one</p>	<p>Rule 31a The name of a species or a subspecies is not validly published if the description is demonstrably ambiguous and cannot be critically identified for purposes of the precise application of the name of a taxon. Examples: (a) '<i>Methanobacillus omelianskii</i>' Bryant et al. 1967, whose description included all component species, was treated as a single species, and thus was illegitimate; (b) <i>Syntrophobacter wolinii</i> Boone and Bryant 1984 is legitimate, because the species description applies to one</p>		

member of the syntrophic association with a hydrogen-producing organism.	member of the syntrophic association with a hydrogen-producing organism.		
<p>Rule 31b The name of a consortium is not regulated by this Code, and such a name has no standing in nomenclature. Example: <i>Cylindrogloea bacterifera</i> Perfiliev 1914. <i>Note.</i> A consortium is an aggregate or association of two or more organisms.</p>	<p>Rule 31b The name of a consortium is not regulated by this Code, and such a name is not validly published. Example: <i>Cylindrogloea bacterifera</i> Perfiliev 1914. <i>Note.</i> A consortium is an aggregate or association of two or more organisms.</p>		<p>Tindall BJ. An analysis of the term 'standing in nomenclature', as used in the International Code of Nomenclature of Prokaryotes. <i>Int J Syst Evol Microbiol</i> 2019;69:2166-2168.</p>
Valid Publication of the Name of a Subspecies	Valid Publication of the Name of a Subspecies		
<p>Rule 32a For the name of a subspecies to be validly published, it must conform with the following conditions. (1) It must be published in conformity with Rules 27 and 28b. (2) It must be published as a ternary combination consisting of the generic name followed by a single specific epithet and this in turn by a single subspecific epithet, with the abbreviation "subsp." between the two epithets to indicate the rank (see Rule 13a). Example: <i>Bacillus subtilis</i> subsp. <i>subtilis</i>. (3) The author must clearly indicate that a subspecies is being named</p>	<p>Rule 32a For the name of a subspecies to be validly published, it must conform with the following conditions. (1) It must be published in conformity with Rules 27 and 28b. (2) It must be published as a ternary combination consisting of the generic name followed by a single specific epithet and this in turn by a single subspecific epithet, with the abbreviation "subsp." between the two epithets to indicate the rank (see Rule 13a). Example: <i>Bacillus subtilis</i> subsp. <i>subtilis</i>. (3) The author(s) must clearly indicate that a subspecies is being named</p>		
Recommendation 32a	Recommendation 32a		

Recommendation 30 applies to the name of a subspecies with replacement of the word “species” by the word “subspecies”.	Recommendation 30 applies to the name of a subspecies with replacement of the word “species” by the word “subspecies”.		
<i>Publication of a Specific or Subspecific Epithet</i>	<i>Publication of a Specific or Subspecific Epithet</i>		
Rule 32b A specific (or subspecific) epithet is not rendered illegitimate by publication in a species (or subspecies) name in which the generic name is illegitimate (see also Chapter 3, Section 8, and example for Rule 20f).	Rule 32b A specific (or subspecific) epithet is not rendered illegitimate by publication of a species (or subspecies) name in which the generic name is illegitimate (see also Chapter 3, Section 8, and example for Rule 20d).	Numbers to be changed if the old Rules 20c and 20d are to be deleted as proposed by Tindall, 2016.	Tindall BJ. Are Rules 20d and 20e of the International Code of Nomenclature of Prokaryotes superfluous? <i>Int J Syst Evol Microbiol</i> 2016;66:4907-4909.
Section 6. Citation of Authors and Names	Section 6. Citation of Authors and Names		
<i>Proposal and Subsequent Citation of the Name of a New Taxon</i>	<i>Proposal and Subsequent Citation of the Name of a New Taxon</i>		
Rule 33a An author should indicate that a name is being proposed for a new taxon by the addition of the appropriate abbreviation for the category to which the taxon belongs. <i>Note 1.</i> Appropriate abbreviations are: “ ord. nov. ” for <i>ordo novus</i> , “ gen. nov. ” for <i>genus novum</i> , “ sp. nov. ” for <i>species nova</i> , “ comb. nov. ” for <i>combinatio nova</i> . Similar abbreviations may be formed as required.	Rule 33a The authors should indicate that a name is being proposed for a new taxon by the addition of the appropriate abbreviation for the category to which the taxon belongs. <i>Note 1.</i> Appropriate abbreviations are: “ phyl. nov. ” for <i>phylum novum</i> , “ ord. nov. ” for <i>ordo novus</i> , “ gen. nov. ” for <i>genus novum</i> , “ sp. nov. ” for <i>species nova</i> , “ comb. nov. ” for <i>combinatio nova</i> . Similar abbreviations may be formed as required.		Oren A, Arahal DR, Rosselló-Móra R, Sutcliffe, IC, Moore EJB. Emendation of Rules 5b, 8, 15, and 22 of the International Code of Nomenclature of Prokaryotes to include the

<p><i>Note 2.</i> Although words or abbreviations in Latin are usually printed in italics, such abbreviations as the above are frequently printed in Roman or boldface type when they follow a Latin scientific name in order to differentiate them from the name and draw attention to the abbreviation.</p> <p>Examples: Order, <i>Actinomycetales</i> ord. nov.; family, <i>Actinomycetaceae</i> fam. nov.; genus, <i>Actinomyces</i> gen. nov.; species, <i>Actinomyces bovis</i> sp. nov.</p>	<p><i>Note 2.</i> Although words or abbreviations in Latin are usually printed in italics, such abbreviations as the above are frequently printed in Roman or boldface type when they follow a Latin scientific name in order to differentiate them from the name and draw attention to the abbreviation.</p> <p>Examples: Order, <i>Actinomycetales</i> ord. nov.; family, <i>Actinomycetaceae</i> fam. nov.; genus, <i>Actinomyces</i> gen. nov.; species, <i>Actinomyces bovis</i> sp. nov.</p>		<p>rank of phylum. <i>Int J Syst Evol Microbiol</i> 2021;71:004851.</p>
<p>Rule 33b The citation of the name of a taxon that has been previously proposed should include both the name of the author(s) who first published the name and the year of publication. If there are more than two authors of the name, the citation includes only the first author followed by “<i>et al.</i>” and the year.</p>	<p>Rule 33b The citation of the name of a taxon that has been proposed previously should include both the name of the author(s) who first published the name and the year of publication. If there are more than two authors of the name, the citation includes only the first author followed by “<i>et al.</i>” and the year.</p>		
<p>Examples: <i>Actinomyces bovis</i> Harz 1877 (Approved Lists 1980); <i>Acetobacterium woodii</i> Balch <i>et al.</i> 1977 (Approved Lists 1980).</p>	<p>Examples: <i>Actinomyces bovis</i> Harz 1877 (Approved Lists 1980); <i>Acetobacterium woodii</i> Balch <i>et al.</i> 1977 (Approved Lists 1980).</p>		
<p><i>Note 1.</i> Correct citation of a name enables the date of publication to be verified, the original description to be found, and the use of the name by</p>	<p><i>Note 1.</i> Correct citation of a name enables the date of publication to be verified, the original description to be found, and the use of the name by</p>		

<p>different authors for different organisms to be distinguished. Example: <i>Mycobacterium terrae</i> Wayne 1966 (Approved Lists 1980), not <i>Mycobacterium terrae</i> Tsukamura 1966.</p>	<p>different authors for different organisms to be distinguished. Example: <i>Mycobacterium terrae</i> Wayne 1966 (Approved Lists 1980), not <i>Mycobacterium terrae</i> Tsukamura 1966.</p>		
<p><i>Note 2.</i> Full citation of the publication should include reference to the page number(s) in the main text of the scientific work in which the name was proposed, not to the summary or abstract of that text even if proposal of the name is mentioned in that summary or abstract. Example: <i>Bacillus subtilis</i> (Ehrenberg 1835) Cohn 1872, 174. The page number “174” is the page in Cohn’s publication [17] on which the proposal of the new combination occurs.</p>	<p><i>Note 2.</i> Full citation of the publication should include reference to the page number(s) in the main text of the scientific work in which the name was proposed, not to the summary or abstract of that text even if the proposal of the name is mentioned in that summary or abstract. Example: <i>Bacillus subtilis</i> (Ehrenberg 1835) Cohn 1872, 174. The page number “174” is the page in Cohn’s publication [17] on which the proposal of the new combination occurs. Example for a name published in the IJSEM after 1 January 2021: <i>Escherichia ruysiae</i> van der Putten <i>et al.</i> 2021, 004609, 6. The page number ‘6’ is the page in article number 004609 on which the proposal of the new name occurs.</p>	<p>A new example was added to show a case after 2021 with continuous publication of articles in the IJSEM</p>	
<p><i>Note 3.</i> (1) The citation of a name which is included in an Approved List can include the name of the original author and date of publication followed by the words “Approved Lists” in parentheses. Example: <i>Bacillus cereus</i> Frankland and Frankland 1887 (Approved Lists 1980);</p>	<p><i>Note 3.</i> (1) The citation of a name which is included in an Approved List can include the name of the original author(s) and date of publication, followed by the words “Approved Lists” in parentheses. Example: <i>Bacillus cereus</i> Frankland and Frankland 1887 (Approved Lists 1980);</p>		

<p><i>Bacillus subtilis</i> (Ehrenberg 1835) Cohn 1872 (Approved Lists 1980). (2) Alternatively, a name which is included in an Approved List may be cited simply by the addition of the words “Approved Lists” in parentheses. Examples: <i>Bacillus cereus</i> (Approved Lists 1980); <i>Bacillus subtilis</i> (Approved Lists 1980). (3) If indication is given that a name is included in an Approved List without specification of that list, the abbreviation “nom. approb.” (<i>nomen approbatum</i>) may be appended to the name of the taxon. Example: <i>Bacillus subtilis</i> nom. approb.</p>	<p><i>Bacillus subtilis</i> (Ehrenberg 1835) Cohn 1872 (Approved Lists 1980). (2) Alternatively, a name which is included in an Approved List may be cited simply by the addition of the words “Approved Lists 1980”, in parentheses. Examples: <i>Bacillus cereus</i> (Approved Lists 1980); <i>Bacillus subtilis</i> (Approved Lists 1980). (3) If indication is given that a name is included in an Approved List without specification of that list, the abbreviation “nom. approb.” (<i>nomen approbatum</i>) may be appended to the name of the taxon. Example: <i>Bacillus subtilis</i> nom. approb.</p>		
<p>Rule 33c If a name or epithet which was published prior to 1 January 1980 but not included in an Approved List is proposed by an author for a different or for the same taxon, the name or epithet must be attributed to the author of the proposal (Rule 28a), and the citation should be made according to Rules 33a, 33b, 34a and 34b.</p> <p><i>Note 1.</i> If a name or epithet is revived for the same taxon (in the author’s opinion), the author may indicate the fact by addition of the abbreviation “nom. rev.” (<i>nomen revictum</i>) after the correct</p>	<p>Rule 33c If a name or epithet which was published prior to 1 January 1980 but not included in an Approved List is proposed for a different or for the same taxon, the name or epithet must be attributed to the author(s) of the proposal (Rule 28a), and the citation should be made according to Rules 33a, 33b, 34a and 34b.</p> <p><i>Note 1.</i> If a name or epithet is revived for the same taxon, the author(s) may indicate the fact by addition of the abbreviation “nom. rev.” (<i>nomen</i></p>		

<p>abbreviation (Rule 33a) for the category concerned.</p> <p>Example: <i>Actinobacillus seminis</i> sp. nov., nom. rev., or <i>Leptothrix discophora</i> sp. nov., nom. rev.</p>	<p><i>revictum</i>) after the correct abbreviation (Rule 33a) for the category concerned.</p> <p>Example: <i>Actinobacillus seminis</i> sp. nov., nom. rev., or <i>Leptothrix discophora</i> sp. nov., nom. rev.</p>		
<p><i>Note 2.</i> If an author wishes to indicate the names of the original authors of a revived name, he may do so by citation of the name of the taxon, followed by the word “ex” and the name of the original author and the year of publication, in parentheses, followed by the abbreviation “nom. rev.”</p> <p>Example: <i>Leptothrix discophora</i> (ex Schwerts 1912) nom. rev. A subsequent author citing this revived name would use the citation <i>Leptothrix discophora</i> Spring <i>et al.</i> 1997, or <i>Leptothrix discophora</i> (ex Schwerts 1912) Spring <i>et al.</i> 1997.</p>	<p><i>Note 2.</i> If an author wishes to indicate the names of the original authors of a revived name, the author may do so by citation of the name of the taxon, followed by the word “ex” and the name of the original author(s) and the year of publication, in parentheses, followed by the abbreviation “nom. rev.”</p> <p>Example: <i>Pseudomonas cepacia</i> (Burkholder 1950) sp. nov., nom. rev., proposed by Palleroni & and Holmes 1981. An author who subsequently referred to this revived name should use the citation <i>Pseudomonas cepacia</i> (ex Burkholder 1950) Palleroni & and Holmes 1981. If the name is subsequently revised, its origins should be perpetuated by the inclusion of the original citation in the form <i>Burkholderia cepacia</i> (Palleroni & and Holmes 1981 <i>ex</i> Burkholder 1950) Yabuuchi <i>et al.</i> 1993.</p>	<p>As proposed by Young and Euzéby 2008 with minor changes.</p>	<p>Young JM, Euzéby JP. Proposed revision of Rule 33c to perpetuate the citation of revived names <i>Int J Syst Evol Microbiol</i> 2008;58:2468-2469.</p>
<p><i>Note 3.</i> If an author wishes to indicate that a reused name has been used for a different taxon, indication is made by citation of the name and the author and</p>	<p><i>Note 3.</i> If an author wishes to indicate that a reused name has been used for a different taxon, indication is made by citation of the name and the author and</p>		

<p>year of publication followed by the word “non” (or “not”) and the name and year of the publication of the author who first used the name. Example: <i>Achromobacter</i> Yabuuchi and Yano 1981 non <i>Achromobacter</i> Bergey et al. 1923.</p>	<p>year of publication followed by the word “non” (or “not”) and the name and year of the publication of the author(s) who first used the name. Example: <i>Achromobacter</i> Yabuuchi and Yano 1981 non <i>Achromobacter</i> Bergey et al. 1923.</p>		
<p>Rule 33d If a name is revived under Rule 33c it may be revived in a new combination; that is, the revived species may be transferred to another genus, or the revived subspecies may be transferred to another species, at the time the name is revived. It is not necessary first to revive the name in the original combination. Example: ‘<i>Actinobacterium meyeri</i>’ has been revived by Cato <i>et al.</i> [18] as a species of the genus <i>Actinomyces</i> as <i>Actinomyces meyeri</i> (ex Prévot 1938) Cato <i>et al.</i> 1984 nom. rev., comb. nov. A subsequent author can cite it as <i>Actinomyces meyeri</i> (ex Prévot 1938) Cato <i>et al.</i> 1984.</p>	<p>Rule 33d If a name is revived under Rule 33c it may be revived in a new combination; that is, the revived species may be transferred to another genus, or the revived subspecies may be transferred to another species, at the time the name is revived. It is not necessary first to revive the name in the original combination. Example: ‘<i>Actinobacterium meyeri</i>’ has been revived by Cato <i>et al.</i> [18] as a species of the genus <i>Actinomyces</i> as <i>Actinomyces meyeri</i> (ex Prévot 1938) Cato <i>et al.</i> 1984 nom. rev., comb. nov. Subsequent authors can cite it as <i>Actinomyces meyeri</i> (ex Prévot 1938) Cato <i>et al.</i> 1984.</p>		
<p><i>Proposal and Subsequent Citation of a New Combination</i></p>	<p><i>Proposal and Subsequent Citation of a New Combination</i></p>		
<p>Rule 34a When an author transfers a species to another genus (Rule 41), or a subspecies to another species, then the author who makes the transfer should indicate the</p>	<p>Rule 34a When authors transfer a species to another genus (Rule 41), or a subspecies to another species, the author(s) who makes the transfer should indicate the</p>		

<p>formation of the new combination by the addition to the citation of the abbreviation “comb. nov.” (combinatio nova).</p> <p>This form of citation should be used when the author retains the original specific epithet in the new combination; however, if an author is obliged to substitute a new specific epithet as a result of homonymy, the abbreviation “nom. nov.” (nomen novum) should be used [see Rule 41a(1)]. The original name is referred to as the basonym.</p> <p>Example: <i>Anaerovibrio glycerini</i> Schauder and Schink 1996; <i>Anaerosinus glycerini</i> (Schauder and Schink 1996) Strömpl <i>et al.</i> 1999.</p>	<p>formation of the new combination by the addition to the citation of the abbreviation “comb. nov.” (combinatio nova).</p> <p>This form of citation should be used when authors retain the original specific epithet in a new combination; however, if an author is obliged to substitute a new specific epithet as a result of homonymy, the abbreviation “nom. nov.” (nomen novum) should be used [see Rule 41a(1)]. The original name is referred to as the basonym.</p> <p>Example: <i>Anaerovibrio glycerini</i> Schauder and Schink 1996; <i>Anaerosinus glycerini</i> (Schauder and Schink 1996) Strömpl <i>et al.</i> 1999.</p>		
<p><i>Note 1.</i> If an author transfers a species which has been included in the Approved Lists to another genus, the proposal of the new combination should be made by the addition of the abbreviation “comb. nov.” (<i>combinatio nova</i>) followed in parentheses by the name under which it appeared in the Approved Lists.</p> <p>Example: The species <i>Pseudomonas saccharophila</i> Doudoroff 1940 appeared on the Approved Lists and was transferred by Xie and Yokota [19] to the genus <i>Pelomonas</i>, then the proposal by Xie and Yokota would be as follows: <i>Pelomonas saccharophila</i> (Doudoroff</p>	<p><i>Note 1.</i> If an author transfers a species which has been included in the Approved Lists to another genus, the proposal of the new combination should be made by the addition of the abbreviation “comb. nov.” (<i>combinatio nova</i>), followed by the name in parentheses under which it appeared in the Approved Lists.</p> <p>Example: The species <i>Pseudomonas saccharophila</i> Doudoroff 1940 appeared on the Approved Lists and was transferred by Xie and Yokota [19] to the genus <i>Pelomonas</i>, then the proposal by Xie and Yokota would be as follows: <i>Pelomonas saccharophila</i> (Doudoroff</p>		

<p>1940) comb. nov. <i>Pseudomonas saccharophila</i> (Approved Lists 1980). Another author citing this proposal would then use the citation <i>Pelomonas saccharophila</i> (Doudoroff 1940) Xie and Yokota 2005 comb. nov. (<i>Pseudomonas saccharophila</i> Approved Lists 1980).</p>	<p>1940) comb. nov. Basonym: <i>Pseudomonas saccharophila</i> (Approved Lists 1980). Another author citing this proposal would then use the citation <i>Pelomonas saccharophila</i> (Doudoroff 1940) Xie and Yokota 2005 comb. nov. (<i>Pseudomonas saccharophila</i> Approved Lists 1980).</p>		
<p>Rule 34b The citation of a new combination which has been previously proposed should include the name of the original author in parentheses followed by the name of the author(s) who proposed the new combination and the year of publication of the new combination. Example: <i>Microbacterium oxydans</i> (Chatelain and Second) Schumann <i>et al.</i> 1999 or <i>Microbacterium oxydans</i> (Chatelain and Second 1966) Schumann <i>et al.</i> 1999.</p>	<p>Rule 34b The citation of a new combination which has been previously proposed should include the name of the original author, in parentheses, followed by the name of the author(s) who proposed the new combination and the year of publication of the new combination. Example: <i>Microbacterium oxydans</i> (Chatelain and Second) Schumann <i>et al.</i> 1999 or <i>Microbacterium oxydans</i> (Chatelain and Second 1966) Schumann <i>et al.</i> 1999.</p>		
<p><i>Note 1.</i> The inclusion of the date of the publication of the original author of the name is to be preferred, although it is sometimes omitted since the date can be expected to be found in the publication of the author(s) who proposed the new combination. Example: <i>Microbacterium oxydans</i> (Chatelain and Second 1966) Schumann <i>et al.</i> 1999 is to be preferred to</p>	<p><i>Note 1.</i> The inclusion of the date of the publication of the original author(s) of the name is to be preferred, although it is sometimes omitted since the date can be expected to be found in the publication of the author(s) who proposed the new combination. Example: <i>Microbacterium oxydans</i> (Chatelain and Second 1966) Schumann <i>et al.</i> 1999 is to be preferred to</p>		

<i>Microbacterium oxydans</i> (Chatelain and Second) Schumann <i>et al.</i> 1999.	<i>Microbacterium oxydans</i> (Chatelain and Second) Schumann <i>et al.</i> 1999.		
Note 2. When, however, the author who formed the new combination was obliged to substitute a new specific epithet to avoid homonymy [see Rule 41a(1)], the name of the author of the original specific epithet is omitted. Example: <i>Flavobacterium hydatis</i> Bernardet <i>et al.</i> 1996 is correct, not <i>Flavobacterium hydatis</i> (Strohl and Tait 1978) Bernardet <i>et al.</i> 1996 [see Example to Rule 41a(1) for an explanation].	Note 2. When, however, the authors who form a new combination are obliged to substitute a new specific epithet to avoid homonymy [see Rule 41a(1)], the name of the author of the original specific epithet is omitted. Example: <i>Flavobacterium hydatis</i> Bernardet <i>et al.</i> 1996 is correct, not <i>Flavobacterium hydatis</i> (Strohl and Tait 1978) Bernardet <i>et al.</i> 1996 [see Example to Rule 41a(1) for an explanation].		
Rule 34c When a taxon from subspecies to genus is altered in rank but retains its name or epithet, the original author(s) must be cited in parentheses followed by the name of the author(s) who effected the alteration and the year of publication. Example: <i>Bifidobacterium globosum</i> (ex Scardovi <i>et al.</i> 1969) Biavati <i>et al.</i> 1982 to <i>Bifidobacterium pseudolongum</i> subsp. <i>globosum</i> (Biavati <i>et al.</i> 1982) Yaeshima <i>et al.</i> 1992.	Rule 34c When a taxon from subspecies to genus is altered in rank but retains its name or epithet, the original author(s) must be cited, in parentheses, followed by the name of the author(s) who effected the alteration and the year of publication. Example: <i>Bifidobacterium globosum</i> (ex Scardovi <i>et al.</i> 1969) Biavati <i>et al.</i> 1982 to <i>Bifidobacterium pseudolongum</i> subsp. <i>globosum</i> (Biavati <i>et al.</i> 1982) Yaeshima <i>et al.</i> 1992.		
Citation of the Name of a Taxon whose Circumscription Has Been Emended	Citation of the Name of a Taxon in which Circumscription Has Been Emended		
Rule 35 If an alteration of the diagnostic characters or of the circumscription of a taxon modifies the nature of the taxon,	Rule 35 If an alteration of the diagnostic characters or of the circumscription of a taxon modifies the nature of the taxon,		

<p>the author responsible may be indicated by the addition to the author citation of the abbreviation “emend.” (<i>emendavit</i>) followed by the name of the author responsible for the change. Example: <i>Rhodopseudomonas</i> Czurda and Maresch 1937 emend. van Niel 1944 (see Opinion 49; Judicial Commission [20]).</p>	<p>the author(s) responsible may be indicated by the addition to the author citation of the abbreviation “emend.” (<i>emendavit</i>) followed by the name of the author(s) responsible for the change. Example: <i>Rhodopseudomonas</i> Czurda and Maresch 1937 emend. van Niel 1944 (see Opinion 49; Judicial Commission [20]).</p>		
<p>Citation of a Name Conserved so as to Exclude the Type</p>	<p>Citation of a Name Conserved so as to Exclude the Type</p>		
<p>Rule 36 A name conserved so as to exclude the type is not to be ascribed to the original author, but the author whose concept of the name is conserved must be cited as authority. Example: The original type species of the genus <i>Aeromonas</i> was rejected as a nomen dubium. (Opinion 48; Judicial Commission [21]). The generic name <i>Aeromonas</i> is now attributed to Stanier 1943, not to Kluver and van Niel 1936, and with a new type species, <i>A. hydrophila</i>.</p>	<p>Rule 36 A name conserved so as to exclude the type is not to be ascribed to the original author(s), but the author(s) whose concept of the name is conserved must be cited as authority. Example: The original type species of the genus <i>Aeromonas</i> was rejected as a nomen dubium. (Opinion 48; Judicial Commission [21]). The generic name <i>Aeromonas</i> is now attributed to Stanier 1943, not to Kluver and van Niel 1936, and with a new type species, <i>A. hydrophila</i>.</p>		
<p>Section 7. Changes in Names of Taxa as a Result of Transference, Union, or Change in Rank</p>	<p>Section 7. Changes in Names of Taxa as a Result of Transference, Union, or Change in Rank</p>		
<p>Rule 37a (1) The name of a taxon must be changed if the nomenclatural type of the taxon is excluded.</p>	<p>Rule 37a (1) The name of a taxon must be changed if the nomenclatural type of the taxon is excluded.</p>		

<p>Example: On transferring the type species of the genus <i>Micropolyspora</i> Lechevalier et al. 1961, <i>Micropolyspora brevicatena</i> Lechevalier et al. 1961 to the genus <i>Nocardia</i>, Goodfellow and Pirouz [22] did not provide a solution for the taxonomic position of <i>Micropolyspora angiospora</i> Zhukova et al. 1968, <i>Micropolyspora faeni</i> Cross et al. 1968, <i>Micropolyspora internatus</i> Agre et al. 1974 and <i>Micropolyspora rectivirgula</i> (Krasil'nikov and Agre 1964) Prauser and Momirova 1970, which they should have removed from the genus <i>Micropolyspora</i>.</p> <p>(2) Retention of a name in a sense which excludes the type can only be effected by conservation and only by the Judicial Commission (see also Rule 23a). At the time of conservation, the new type is established by the Judicial Commission.</p>	<p>Example: On transferring the type species of the genus <i>Micropolyspora</i> Lechevalier et al. 1961, <i>Micropolyspora brevicatena</i> Lechevalier et al. 1961 to the genus <i>Nocardia</i>, Goodfellow and Pirouz [22] did not provide a solution for the taxonomic position of <i>Micropolyspora angiospora</i> Zhukova et al. 1968, <i>Micropolyspora faeni</i> Cross et al. 1968, <i>Micropolyspora internatus</i> Agre et al. 1974 and <i>Micropolyspora rectivirgula</i> (Krasil'nikov and Agre 1964) Prauser and Momirova 1970, which they should have removed from the genus <i>Micropolyspora</i>.</p> <p>(2) Retention of a name in a sense which excludes the type can only be effected by conservation and only by the Judicial Commission (see also Rule 23a). At the time of conservation, the new type is established by the Judicial Commission.</p>	<p>The use of numbered references must be reconsidered – see earlier comments on this topic.</p>	
<p>Rule 37b A change in the name of a taxon is not warranted by an alteration of the diagnostic characters or of the circumscription. A change in its name may be required by one of the following. (1) An Opinion of the Judicial Commission [see Rule 37a(2) above]. (2) Transfer of the taxon (see Rule 41). (3) Union with another taxon (Rules 42–44, 47a, and 47b).</p>	<p>Rule 37b A change in the name of a taxon is not warranted by an alteration of the diagnostic characters or of the circumscription. A change in a name may be required by one of the following. (1) An Opinion of the Judicial Commission [see Rule 37a(2) above]. (2) Transfer of the taxon (see Rule 41). (3) Union with another taxon (Rules 42–44, 47a, and 47b).</p>		

(4) Change of its rank (Rules 48, 49, 50a, 50b).	(4) Change of rank (Rules 48, 49, 50a, 50b).		
<p>Rule 38</p> <p>When two or more taxa of the same rank are united, then the name of the taxon under which they are united (and therefore the type of the taxon) is chosen by the rule of priority of publication. Example: White [23] united <i>Eberthella</i> Bergey et al. 1923 [20] with <i>Salmonella</i> Lignières 1900 and retained the earlier name, <i>Salmonella</i>.</p>	<p>Rule 38</p> <p>When two or more taxa of the same rank are united, the name of the taxon under which they are united (and, therefore, the type of the taxon) is chosen by the rule of priority of publication. Example: White [23] united <i>Eberthella</i> Bergey et al. 1923 [20] with <i>Salmonella</i> Lignières 1900 and retained the earlier name, <i>Salmonella</i>.</p>	The use of numbered references must be reconsidered – see earlier comments on this topic.	
<p><i>Note.</i> <i>Eberthella</i> was raised by Bergey et al. [24] to a genus from the subgeneric name, <i>Eberthella</i> Buchanan 1918. If, however, this choice would lead to confusion in bacteriology, the author should refer this matter to the Judicial Commission. (For taxa above the rank of species, see also Rule 47a). Example: Not yet found.</p>	<p><i>Note.</i> <i>Eberthella</i> was raised by Bergey et al. [24] to a genus from the subgeneric name, <i>Eberthella</i> Buchanan 1918. If, however, this choice would lead to confusion in prokaryotic nomenclature, the author(s) should refer this matter to the Judicial Commission. (For taxa above the rank of species, see also Rule 47a). Example: Not yet found.</p>	“prokaryotic nomenclature” or “nomenclature for prokaryotes”?	
<p>Division of a Genus into Genera or Subgenera, and of a Subgenus into Subgenera</p>	<p>Division of a Genus into Multiple Genera or Subgenera, and of a Subgenus into Subgenera</p>	About the issue of subgenera see earlier comments; some members of the Editorial Board proposed abolishing the rank of subgenus; however, there are validly published names of subgenera.	
<p>Rule 39a</p> <p>If a genus is divided into two or more genera or subgenera, the generic name must be retained for one of these. If the</p>	<p>Rule 39a</p> <p>If a genus is divided into two or more genera or subgenera, the generic name must be retained for one of these. If the</p>		

<p>name has not been retained (in a previous publication), it must be re-established under Rule 39b. (See Rule 49 when a subgenus is raised to genus). Example: Ash <i>et al.</i> [5] proposed that the genus <i>Bacillus</i> be divided into the genera <i>Bacillus</i> and <i>Paenibacillus</i>, and the genus which contained the type species <i>Bacillus subtilis</i> must be named <i>Bacillus</i>.</p>	<p>name has not been retained (in a previous publication), it must be re-established under Rule 39b. (See Rule 49 when a subgenus is raised to genus). Example: Ash <i>et al.</i> [5] proposed that the genus <i>Bacillus</i> be divided into the genera <i>Bacillus</i> and <i>Paenibacillus</i>, and the genus which contained the type species <i>Bacillus subtilis</i> must be named <i>Bacillus</i>.</p>	<p>Instead of [5]: (Validation List no. 51; <i>Int J Syst Bacteriol</i> 1994; 44:852)?</p>	
<p>Rule 39b When a particular species has been designated as the type, the generic name must be retained for the genus which includes that species. When no type was designated a type must be chosen (<i>Editorial Note</i>: should not be needed in the future; see Rule 27).</p>	<p>Rule 39b When a particular species has been designated as the type, the generic name must be retained for the genus which includes that species. When no type was designated a type must be chosen (<i>Editorial Note</i>: should not be needed in the future; see Rule 27).</p>		<p>Oren A, Garrity GM. The status of the Notes in the International Code of Nomenclature of Prokaryotes: proposal to emend General Consideration 6. <i>Int J Syst Evol Microbiol</i> 2016;66:305-306.</p>
<p>Rule 39c The principles of Rules 39a and 39b apply when a subgenus is divided into two or more subgenera, the original subgeneric name being retained for that subgenus which contains the type species.</p>	<p>Rule 39c The provisions of Rules 39a and 39b apply when a subgenus is divided into two or more subgenera, the original subgeneric name being retained for that subgenus which contains the type species.</p>	<p>‘principles’ is confusing as the Code has Principles? Therefore ‘provisions’ (or ‘precepts’) is suggested. About the issue of subgenera see earlier comments; some members of the Editorial Board proposed abolishing the rank of subgenus; however, there are validly published names of subgenera. If abolished, Rule 39c can be deleted.</p>	