

Current text	Proposed new text	Comments	References (to be added at the end of the Code document)
<p><b>Section 5. Priority, Effective and Valid Publication of Names</b></p>	<p><b>Section 5. Effective Publication, Priority of Names, and Valid Publication of Names</b></p> <p><b>OR KEEP:</b></p> <p><b>Section 5. Priority, Effective and Valid Publication of Names</b></p>	<p>Change of the text of the heading was proposed by Tindall, 2019. The members of the Editorial Board found the proposed new title awkward and the change unnecessary.</p>	<p><b>Tindall BJ.</b> Clarifying the definition and role of effective publication in the International Code of Nomenclature of Prokaryotes with proposals to make changes. <i>Int J Syst Evol Microbiol</i> 2019;69:2602–2605.</p>
<p><b>Rule 23a</b></p> <p>Each taxon above species, up to and including order, with a given circumscription, position, and rank can bear only one correct name, that is, the earliest that is in accordance with the Rules of this Code.</p> <p>The name of a species is a binary combination of a generic name and specific epithet (see Rule 12a). In a given <b>position</b>, a species can bear only one correct epithet, that is, the earliest that is in accordance with the Rules of this Code.</p>	<p><b>Rule 23a</b></p> <p>Each taxon above species, up to and including order, with a given circumscription, position, and rank can bear only one correct name, that is, the earliest that is in accordance with the Rules of this Code.</p> <p>The name of a species is a binary combination of a generic name and specific epithet (see Rule 12a). In a given <b>position</b>, a species can bear only one correct epithet, that is, the earliest that is in accordance with the Rules of this Code.</p>		

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<p>Example: The species <i>Haemophilus pleuropneumoniae</i> bears this name in the genus <i>Haemophilus</i>. When placed in the genus <i>Actinobacillus</i>, it bears the name <i>Actinobacillus pleuropneumoniae</i>.</p> <p><i>Note 1.</i> In the case of a species, Rule 23a must be applied independently to the generic name and the specific epithet. The specific epithet remains the same on transfer of a species from one genus to another unless the specific epithet has been previously used in the name of another species or subspecies in the genus to which the species is <b>to be</b> transferred (see Rule 41a).</p> <p><i>Note 2.</i> The name of a subspecies is a ternary combination of a generic name, a specific epithet, and a subspecific epithet (see Rule 13c). In a given position a subspecies can bear only one correct subspecific epithet, that is, the earliest that is in accordance with the Rules of this Code. In the case of a subspecies, Rule 23a must be applied independently to the specific and subspecific epithets. The subspecific epithet remains the same on transfer of a subspecies from one</p>	<p>Example: The species <i>Haemophilus pleuropneumoniae</i> bears this name in the genus <i>Haemophilus</i>. When placed in the genus <i>Actinobacillus</i>, it bears the name <i>Actinobacillus pleuropneumoniae</i>.</p> <p><i>Note 1.</i> In the case of a species, Rule 23a must be applied independently to the generic name and the specific epithet. The specific epithet remains the same on transfer of a species from one genus to another <b>except for necessary changes of the gender of adjectives used as specific epithets, i.e., to comply with Rule 12c(1)</b>, unless the specific epithet has been previously used in the name of another species or subspecies in the genus to which the species is transferred (see Rule 41a).</p> <p><i>Note 2.</i> The name of a subspecies is a ternary combination of a generic name, a specific epithet, and a subspecific epithet (see Rule 13c). In a given position, a subspecies can bear only one correct subspecific epithet, that is, the earliest that is in accordance with the Rules of this Code. In the case of a subspecies, Rule 23a must be applied independently to the specific and subspecific epithets. The subspecific epithet remains the same on transfer of a subspecies from one</p>	<p>The newly added text <b>is</b> proposed by the Editorial Board.</p>	
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<p>species to another, unless the subspecific epithet has been previously used in the name of another species or subspecies in the genus to which the subspecies is to be transferred (see Rule 41a).</p> <p><i>Note 3.</i> The date from which all priorities were determined under the previous revisions of the Code was 1 May 1753. After 1 January 1980, under Rule 24a all priorities date from 1 January 1980 (see also Rule 24b).</p> <p><i>Note 4.</i> The Judicial Commission may make exceptions to Rule 23a by the addition of names to the list of <b>conserved names</b> (<i>nomina conservanda</i>) or to the list of <b>rejected names</b> (<i>nomina rejicienda</i>) (see Appendix 4). The Judicial Commission may correct the Approved Lists (see Rule 24a).</p> <p>(1) By <b>conserved name</b> (<i>nomen conservandum</i>) is meant a name which must be used instead of all earlier <b>synonyms</b> and <b>homonyms</b>. By rejected name (<i>nomen rejiciendum</i>) is meant a name which must not be used to designate any taxon. Only the Judicial</p>	<p>species to another, <b>except for necessary changes of the gender of adjectives used as specific epithets, i.e., to comply with Rule 12c(1)</b>, unless the subspecific epithet has been previously used in the name of another species or subspecies in the genus to which the subspecies is to be transferred (see Rule 41a).</p> <p><i>Note 3.</i> The date from which all priorities were determined under the previous revisions of the Code was 1 May 1753. After 1 January 1980, under Rule 24a, all priorities date from 1 January 1980 (see also Rule 24b).</p> <p><i>Note 4.</i> The Judicial Commission may make exceptions to Rule 23a by the addition of names to the list of <b>conserved names</b> (<i>nomina conservanda</i>) or to the list of <b>rejected names</b> (<i>nomina rejicienda</i>) (see Appendix 4). The Judicial Commission may correct the Approved Lists (see Rule 24a).</p> <p>(1) By <b>conserved name</b> (<i>nomen conservandum</i>) is meant a name which must be used instead of all earlier <b>synonyms</b> and <b>homonyms</b>. By rejected name (<i>nomen rejiciendum</i>) is meant a name which must not be used to designate any taxon. Only the Judicial</p>	<p>The newly added text <u>is</u> proposed by the Editorial Board.</p>	
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<p>Commission can conserve or reject names (see also Rules 56a and 56b).</p> <p>(2) <b>Opinions</b> on the conservation or rejection of names, issued by the Judicial Commission, are published with other Opinions in the IJSEM. Opinions are <b>now</b> numbered serially.</p> <p><i>Note 5.</i> Names and epithets may be: <b>legitimate</b>—in accordance with the Rules; <b>illegitimate</b>—contrary to the Rules; <b>effectively published</b>—in printed and/or electronic matter made generally available to the scientific community (see Rule 25); <b>validly published</b>—<b>effectively published</b> and accompanied by a description of the taxon or a reference to a description and certain other requirements (see Rules 27–32);</p> <p><b>correct</b>—the name which must be adopted for a taxon under the Rules.</p>	<p>Commission can conserve or reject names (see also Rules 56a and 56b).</p> <p>(2) <b>Opinions</b> on the conservation or rejection of names, issued by the Judicial Commission, are published with other Opinions in the IJSEM. Opinions are numbered serially.</p> <p><i>Note 5.</i> Names and epithets may be: <b>legitimate</b>—in accordance with the Rules; <b>illegitimate</b>—contrary to the Rules; <b>effectively published</b>—in printed and/or electronic matter made generally available to the scientific community (see Rule 25); <b>validly published</b>—<b>the name is included in an effective publication</b> and is accompanied by a description of the taxon or a reference to a description and certain other requirements (see Rules 27–32);</p> <p><b>correct</b>—the name which must be adopted for a taxon under the Rules.</p>	<p><b>Tindall (2019) proposed deleting the text “effectively published</b>—in printed and/or electronic matter made generally available to the scientific community (see Rule 25)”, The members of the Editorial Board <del>did</del> <u>do</u> not support this proposal.</p> <p>One of the members of the Editorial Board suggested that the definitions ‘legitimate’ and ‘illegitimate’ should go after ‘effectively published’ and ‘validly published’, since they are dependent upon whether names and epithets are validly published or not.</p>	<p><b>Tindall BJ.</b> Clarifying the definition and role of effective publication in the International Code of Nomenclature of Prokaryotes with proposals to make changes. <i>Int J Syst Evol Microbiol</i> 2019;69:2602–2605.</p>
<p><b>Rule 23b</b> The date of a name or epithet is that of its valid publication. For purposes of priority, <b>however</b>, only legitimate names and epithets are taken into consideration (see Rules 32b and 54).</p>	<p><b>Rule 23b</b> The date of a name or epithet is that of its valid publication. For purposes of priority, only legitimate names and epithets are taken into consideration (see Rules 32b and 54).</p>		

<p><b>Rule 24a</b> Valid publication of names (or epithets) which are <b>in accordance with</b> the Rules of this Code dates from <b>the date of publication of the</b> Code.</p> <p>Priority of publication dates from 1 January 1980. On that date all names published prior to 1 January 1980 and included in the Approved Lists of Bacterial Names are treated for <b>all</b> nomenclatural purposes as though they had been validly published for the first time on that date, the existing types being retained (but see Rule 24b).</p> <p><b>Note 1.</b> Names of prokaryotes in the various taxonomic <b>categories</b> published</p>	<p><b>Rule 24a</b> Valid publication of names (or epithets) which are <b>governed by</b> the Rules of this Code dates from <b>the dates of publication of the</b> Code.</p> <p>Priority of publication dates from 1 January 1980. On that date, all names published prior to 1 January 1980 and included in the Approved Lists of Bacterial Names are treated, for nomenclatural purposes, as though they had been validly published for the first time on that date, the existing types being retained (but see Rule 24b).</p> <p>Priority of publication for names of <i>Cyanobacteria</i> validly published under the provisions of the International Code of Nomenclature for algae, fungi, and plants is determined by Article 13.1 of that Code.</p> <p><b>Note 1.</b> Names of prokaryotes in the various taxonomic <b>ranks</b> published <b>until</b></p>	<p>Change proposed by Tindall, 2016</p> <p>As approved by the ICSP in <b>March</b>-April 2021.</p>	<p><b>Tindall BJ.</b> The relationship of validly published names to legitimate and illegitimate names in the International Code of Nomenclature of Prokaryotes. <i>Int J Syst Evol Microbiol</i> 2016;66:4905-4906.</p> <p><b>Oren A, Arahal DR, Rosselló-Móra R, Sutcliffe IC, Moore EJB.</b> 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 Cyanobacteria in the prokaryotic nomenclature. <i>Int J Syst Evol Microbiol</i>, <b>submitted May 2021</b> <a href="#">in press</a>.</p>
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<p>up to 31 December 1977 were assessed by the Judicial Commission with the assistance of taxonomic experts. Lists of names were prepared together with the names of the authors who originally proposed the names. These Approved Lists of Bacterial Names were approved by the ICSB and published in the IJSB on 1 January 1980. Names validly published between 1 January 1978 and 1 January 1980 were included in the Approved Lists of Bacterial Names (see Appendix 2).</p> <p>No further names will be added to the Approved Lists. Those names validly published prior to 1 January 1980 but not included in the Approved Lists have no further standing in nomenclature. They were not added to the lists of <i>nomina rejicienda</i> and are thus available for reuse in the naming of new taxa. The reuse of a particular name cannot be recommended if such reuse is likely to result in confusion due to previous or continuing use of the name as a synonym, a strain designation, or for other reasons.</p> <p>The Approved Lists of Bacterial Names contain for each name a reference to an <del>effectively published</del> description and the type whenever possible. In the case of species or subspecies, if a type strain is</p>	<p>31 December 1977 were assessed by the Judicial Commission, with the assistance of taxonomic experts. Lists of names were prepared together with the names of the authors who originally proposed the names. These Approved Lists of Bacterial Names were approved by the ICSB and published in the IJSB on 1 January 1980. Names validly published between 1 January 1978 and 1 January 1980 were included in the Approved Lists of Bacterial Names (see Appendix 2).</p> <p>No further names will be added to the Approved Lists. Those names validly published prior to 1 January 1980 but not included in the Approved Lists have no further standing in nomenclature. They were not added to the lists of <i>nomina rejicienda</i> and are thus available for reuse in the naming of new taxa. The reuse of a particular name cannot be recommended if such reuse is likely to result in confusion due to previous or continuing use of the name as a synonym, a strain designation, or for other reasons.</p> <p>The Approved Lists of Bacterial Names contains for each name a reference to an <del>effectively published</del> description and the type, whenever possible. In the case of species or subspecies, if a type strain is</p>	<p>Changes proposed by Tindall, 2019.</p>	<p><b>Tindall BJ.</b> Clarifying the definition and role of effective publication in the International Code of Nomenclature of Prokaryotes with proposals to make changes. <i>Int J Syst Evol Microbiol</i> 2019;69:2602–2605.</p>
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available it is listed by its designation and the culture collection(s) from which it may be obtained is indicated. If such a strain is not available, a reference strain or reference material is **listed** if possible. Neotypes may be proposed in conformity with Rule 18c on such lists. (For citation of names on the Approved Lists, see Rules 33b and 34a.)

*Note 2.* These Approved Lists may contain more than one name attached to the same type (**homotypic synonyms<sup>1</sup>**) since the names on the list represent **these** names which are considered **reasonable** in the present state of bacteriological nomenclature and taxonomy and represent the views of **many** bacteriologists who **may** hold different taxonomic opinions.

*Note 3.* Synonyms may be **homotypic synonyms** (i.e., more than one name has been associated with the same type) or **heterotypic synonyms<sup>2</sup>** (i.e., different names have been associated with different types that in the opinion of the bacteriologist concerned belong to the same taxon). The synonym first published is known as the **earlier synonym<sup>3</sup>**, and **later** synonyms are known as **later synonyms**.

available, it is listed by its designation and the culture collection(s) from which it may be obtained is indicated. If such a strain is not available, a reference strain or reference material is **indicated**, if possible. Neotypes may be proposed, in conformity with Rule 18c on such lists. (For citation of names on the Approved Lists, see Rules 33b and 34a.)

*Note 2.* These Approved Lists may contain more than one name attached to the same type (**homotypic synonyms<sup>1</sup>**) since the names on the list represent names which are considered **legitimate** in the present state of bacteriological nomenclature and taxonomy and represent the views of bacteriologists who hold different taxonomic opinions.

*Note 3.* Synonyms may be **homotypic synonyms** (i.e., more than one name has been associated with the same type) or **heterotypic synonyms<sup>2</sup>** (i.e., different names have been associated with different types that, in the opinion of the bacteriologist concerned, belong to the same taxon). The synonym first published is known as the **earlier synonym<sup>3</sup>**, and **subsequently published** synonyms are known as **later synonyms**.

<p>Publication of <b>homotypic synonyms</b> in the Approved Lists does not affect prokaryotic nomenclature any more than does the valid publication of homotypic synonyms <b>in different works in the bacteriological literature at present.</b></p> <p>Examples: <b>Homotypic synonyms</b> – <i>Pseudomonas mallei</i> (Zopf 1885) Redfearn et al. 1966 (Approved Lists 1980) and <i>Burkholderia mallei</i> (Zopf 1885) Yabuuchi et al. 1993 are based on the same type. <b>Heterotypic synonyms</b> – Kelly and Wood [11] regard <i>Thiobacillus concretivorus</i> Parker 1945 as a heterotypic synonym of <i>Thiobacillus thiooxidans</i> Waksman and Joffe 1922. These two species have different types.</p>	<p>Publication of <b>homotypic synonyms</b> in the Approved Lists does not affect prokaryotic nomenclature any more than does the valid publication of homotypic synonyms <b>in currently published prokaryotic taxonomic literature.</b></p> <p>Examples: <b>Homotypic synonyms</b> – <i>Pseudomonas mallei</i> (Zopf 1885) Redfearn et al. 1966 (Approved Lists 1980) and <i>Burkholderia mallei</i> (Zopf 1885) Yabuuchi et al. 1993 are based on the same type. <b>Heterotypic synonyms</b> – Kelly and Wood [11] regard <i>Thiobacillus concretivorus</i> Parker 1945 as a heterotypic synonym of <i>Thiobacillus thiooxidans</i> Waksman and Joffe 1922. These two species have different types.</p>	<p><del>Based-Depending</del> on the <b>reference</b> style <b>to be</b> adopted, the numbered reference can be changed to (<i>Int J Syst Evol Microbiol</i> 2000;50:511-516)</p> <p>Tindall 2019 proposed introducing the concept of isonyms:  <b>Note 4. Isonyms</b> are defined as names based on the same nomenclatural type that has been validly published independently at different times, possibly by different authors. Only the earliest validly published isonym is to be taken into consideration when considering priority of publication</p>	<p><b>Tindall BJ.</b> Introducing the concept of the isonym into the International Code of Nomenclature of Prokaryotes. <i>Int J Syst Evol Microbiol</i> 2019;69:1515–1518.</p>
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		<p>and selection of the authorship and date of valid publication.</p> <p>Example: <i>Halobacterium mediterranei</i> Rodriguez-Valera <i>et al.</i> 1983 and <i>Halobacterium mediterranei</i> Rodriguez-Valera <i>et al.</i> 1984 are validly published names that share the same nomenclatural type and are isonyms. Only <i>Halobacterium mediterranei</i> Rodriguez-Valera <i>et al.</i> 1983 is taken into consideration for the purpose of determining priority. When placed in the genus <i>Halobacterium</i> the correct name and citation is <i>Halobacterium mediterranei</i> Rodriguez-Valera <i>et al.</i> 1983. On transfer to the genus <i>Haloferax</i> this becomes <i>Haloferax mediterranei</i> (Rodriguez-Valera <i>et al.</i> 1983) Torreblanca <i>et al.</i> 1987.</p> <p>There <del>is</del> was no support for this proposal among the members of the Editorial Board as no need for such a concept was identified. This can be further addressed in the public discussion and, if necessary, in the ICSP ballot to approve the final text.</p>	
<p>Footnotes to Rule 24a:</p> <ol style="list-style-type: none"> <li>1. Homotypic synonyms were previously referred to as objective synonyms.</li> <li>2. Heterotypic synonyms were previously referred to as subjective synonyms.</li> <li>3. Earlier synonyms were previously referred to as senior synonyms.</li> </ol>	<p>Footnotes to Rule 24a:</p> <ol style="list-style-type: none"> <li>1. Homotypic synonyms were previously referred to as objective synonyms.</li> <li>2. Heterotypic synonyms were previously referred to as subjective synonyms.</li> <li>3. Earlier synonyms were previously referred to as senior synonyms.</li> </ol>		

4. Later synonyms were previously referred to as junior synonyms.	4. Later synonyms were previously referred to as junior synonyms.		
<p><b>Rule 24b</b> (1) If two names compete for priority and if both names date from 1 January 1980 on an Approved List, the priority shall be determined by the date of the effective publication of the name before 1 January 1980.</p> <p>Should the two names bear the same date, then priority shall be determined by page number. If this fails to determine priority then it shall be determined by the order of publication in the effective publication.</p> <p>Example: <i>Caulobacter halobacteroides</i> Poindexter 1964 and <i>Caulobacter maris</i> Poindexter 1964 were described on the same page.</p> <p>(2) If two names published after 1 January 1980 (and therefore not included on the Approved Lists, 1980, or the Corrigenda, 1984) compete for priority, priority is determined by the date of the valid publication or announcement of the name in the IJSEM. Where the two names appear in the same issue of IJSEM, priority is determined by page number; a name appearing on a lower page number</p>	<p><b>Rule 24b</b> When the nomenclatural types of two or more taxa that are considered to be heterotypic synonyms priority of the names or epithets and consequently which are the correct names or correct epithets are determined as follows (see also Rule 23a and 23b):</p> <p>(1) If two or more names or epithets based on different nomenclatural types compete for priority (i.e., the names or combinations are considered to be heterotypic synonyms) and if all names or epithets were included on an Approved List, priority shall be determined by the date of the name or epithet given on the Approved List (i.e., before 1 January 1980) unless an earlier name or epithet is illegitimate (see Rule 23b). If two or more names or epithets are of the same date, the author who first unites the taxa has the right to choose one of them, and this choice must be followed.</p> <p>(2) If two or more names or epithets are of the same date, the author(s) who first unites the taxa has the right to choose one of them, and this choice must be followed. If two or more names or</p>	<p>The alternative version, much longer than the original one, was proposed by Tindall (2019). This rule must be checked carefully, and comments are invited in favor or against the new, 'long' version. Section numbers were added.</p>	<p><b>Tindall BJ.</b> Rule 24b of the International Code of Nomenclature of Prokaryotes and regulating the priority of names and epithets considered to be associated with heterotypic synonyms. <i>Int J Syst Evol Microbiol</i> 2019;69:3980–3983.</p> <p><b>Tindall BJ.</b> Clarifying the definition and role of effective publication in the International Code of Nomenclature of Prokaryotes with proposals to make changes. <i>Int J Syst Evol Microbiol</i> 2019;69:2602–2605.</p>

<p>of the same issue is deemed to be the earlier. Should the page number not determine priority, this shall be determined by the order of valid publication of the names in original articles in IJSEM. Where two names effectively published in other journals, are validly published by announcement on the same Validation List in IJSEM, priority is established by the sequence number on the list.</p> <p><i>Note 1.</i> In order to implement Rule 24b(2) in the fairest manner, names submitted for inclusion in the Validation List will include a sequence number that reflects the date of receipt of the validation request in the form that is accepted for publication.</p> <p>Example: Koch et al. [12] consider <i>Rhodococcus erythropolis</i> (Gray and Thornton 1928) Goodfellow and Alderson 1979 (Approved Lists 1980) to be an earlier heterotypic synonym of <i>Arthrobacter picolinophilus</i> Tate and Ensign 1974 (Approved Lists 1980).</p> <p>Example: Sly et al. [13] regard <i>Streptococcus caprinus</i> Brooker et al. 1996 as a heterotypic synonym of <i>Streptococcus gallolyticus</i> Osawa et al.</p>	<p>epithets based on different nomenclatural types compete for priority (i.e., the names or combinations are considered to be heterotypic synonyms) and one or more names or epithets appear on an Approved List while the others were otherwise validly published after 1 January 1980 then priority is determined by the date of the name(s) or epithet(s) as given on the Approved List (i.e., before 1 January 1980) and the date of valid publication of the other name(s) or epithet(s) in the IJSB/IJSEM after 1 January 1980 unless an earlier name or epithet is illegitimate (see Rule 23b). If two or more names or epithets are of the same date, the author(s) who first unites the taxa has the right to choose one of them, and this choice must be followed.</p> <p>(3) If two or more names or epithets based on different nomenclatural types that are validly published between 1 January 1980 and 31 December 2020 (and therefore not included on the Approved Lists, 1980, or the Corrigenda, 1984) and before compete for priority (i.e., the names or combinations are considered to be heterotypic synonyms), priority is determined by the date of the valid publication (or announcement) of the name or epithet in the IJSB/ IJSEM</p>	<p>Addition needed following change of the IJSEM to continuous publication.</p>	<p><b>Oren A, Garrity GM, Moore ERB, Sutcliffe IC, Trujillo MA.</b> The International Journal of Systematic and Evolutionary Microbiology moves to ‘true continuous publication’ in the beginning of 2021; Proposals to amend Rule 24b (2) and Note 2 to Rule 33b of the International</p>
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<p>1996. <i>Streptococcus gallolyticus</i> (Validation List no. 56, priority number 2) having priority over <i>Streptococcus caprinus</i> (Validation List no. 56, priority number 7)</p>	<p>unless an earlier name or epithet is illegitimate (see Rule 23b).</p> <p>(4) Where two names or epithets appear in the same volume of the IJSB/IJSEM but in different articles, priority is determined by page number; a name or epithet appearing on a lower page number of the same issue is deemed to be the earlier. If two or more names or epithets that appear in the same article compete for priority (ie. the names or combinations are considered to be heterotypic synonyms) the author who first unites the taxa has the right to choose one of them, and this choice must be followed. In order to implement Rule 24b (2) and 24b (3) in the fairest manner, as of 1st January 1988 (Validation List no 24 onwards) names submitted for inclusion in the Validation List will be allocated a number that reflects the date of receipt of the validation request in the form that is accepted for publication. Where names that were included in other printed or electronic publications as effective publications, are validly published by announcement on the same Validation List in IJSEM, priority is established by the number allocated on the list. If two or more names or epithets on the same Validation List compete for</p>		<p>Code of Nomenclature of Prokaryotes. <i>Int J Syst Evol Microbiol</i> 71, 004732.</p>
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priority (i.e., the names or combinations are considered to be heterotypic synonyms) and are attributed the same number (or no number was assigned) the author(s) who first unites the taxa has the right to choose one of them, and this choice must be followed.

(5) If two names published after 1 January 2021 in different articles have the same publication date in the IJSEM, priority shall be determined by the date of acceptance for publication.

(6) Where two names effectively published in other journals are validly published by announcement in the same Validation List in IJSEM, priority is established by the sequence number on the list.

*Note 1.* In order to implement Rule 24b(2) in the fairest manner, names submitted for inclusion in the Validation List will include a sequence number that reflects the date of receipt of the validation request in the form that is accepted for publication.

Example: Sly et al. [13] regard *Streptococcus caprinus* Brooker et al. 1996 as a heterotypic synonym of

Addition needed following change of the IJSEM to continuous publication.

	<i>Streptococcus gallolyticus</i> Osawa et al. 1996. <i>Streptococcus gallolyticus</i> (Validation List no. 56, priority number 2) having priority over <i>Streptococcus caprinus</i> (Validation List no. 56, priority number 7).	Alternative instead of [13]: [ <i>Int J Syst Bacteriol</i> 1997;47:893-894]	
<b>Rule 24c</b> The Judicial Commission may place on the list of <b>rejected names</b> ( <i>nomina rejicienda</i> ) a name previously published in an Approved List.	<b>Rule 24c</b> The Judicial Commission may place on the list of <b>rejected names</b> ( <i>nomina rejicienda</i> ) a name previously published in an Approved List.		
<b>Rule 25a Effective publication</b> Effective publication is effected under this Code by making generally available, by sale or distribution, to the scientific community, printed <b>and/or</b> electronic material for the purpose of providing a permanent record.  When a name of a new taxon is published in a work written in a language unfamiliar to the majority of workers in <b>bacteriology</b> , it is recommended that the author(s) include in the publication a description in English.	<b>Rule 25a Effective publication</b> Effective publication is effected under this Code by making generally available, by sale or distribution, to the scientific community, printed <b>or</b> electronic material for the purpose of providing a permanent record.  When a name of a new taxon is published in a work written in a language unfamiliar to the majority of workers in <b>prokaryotic microbiology</b> , it is recommended that the author(s) include in the publication a description in English.	microbiology of prokaryotes?  The question whether this is <b>must-should</b> be a recommendation or made obligatory was discussed by the Editorial Board. <del>The</del> <b>was-</b> the majority of members agreed that it <b>must-should</b> remain a recommendation.	

<p> </p> <p><i>Note.</i> Electronic publication should follow the tradition of publication of printed matter acceptable to this Code.</p>	<p><i>Note.</i> Electronic publication should follow the tradition of publication of printed matter acceptable to this Code.</p>	<p>AN IMPORTANT ISSUE TO BE ADDRESSED: Can protologues given in <a href="#">online</a> supplementary material be accepted for validation of names? Comments are welcome.</p>	
<p><b>Rule 25b</b> No other kind of publication than that cited in Rule 25a is accepted as effective, nor are the following.</p> <p>(1) Communication of new names at a meeting, in minutes of a meeting, or, after 1950, in abstracts of papers presented at meetings.</p> <p>(2) Placing of names on specimens in collections or in listings or catalogues of collections.</p> <p>(3) Distribution of microfilm, microcards, or matter reproduced by similar methods.</p> <p>(4) Reports in ephemeral publications, newsletters, newspapers after 1900, or non-scientific periodicals.</p> <p>(5) Inclusion of a name of a new taxon of prokaryote in a published patent application or issued patent.</p> <p>(6) Making available electronic material in advance of publication (e. g. papers in press, or otherwise making unpublished manuscripts available in electronic format).</p>	<p><b>Rule 25b</b> No other kind of publication than that cited in Rule 25a is accepted as effective, nor are the following:</p> <p>(1) Communication of new names at a meeting, in minutes of a meeting, or, after 1950, in abstracts of papers presented at meetings.</p> <p>(2) Placing of names on specimens in collections or in listings or catalogues of collections.</p> <p>(3) Distribution of microfilm, microcards, or matter reproduced by similar methods.</p> <p>(4) Reports in ephemeral publications, newsletters, newspapers after 1900, or non-scientific periodicals.</p> <p>(5) Inclusion of a name of a new taxon of prokaryote in a published patent application or issued patent.</p> <p>(6) Making available electronic material in advance of publication (e.g., papers in press, or otherwise making unpublished manuscripts available in electronic format).</p>		

<p><b>Rule 26a Date of publication</b> The <b>date of publication</b> of a scientific work is the date of publication of the printed <b>and/or</b> electronic matter. The date given to the work containing the name or epithet must be regarded as correct in the absence of proof to the contrary.</p>	<p><b>Rule 26a Date of publication</b> The <b>publication date</b> of a scientific work is the date of publication of the printed <b>or</b> electronic matter. The date given to the work containing the name or epithet must be regarded as correct in the absence of proof to the contrary.</p>		
<p><b>Rule 26b</b> The date of acceptance of an article for publication if given in a publication does not indicate the effective date of publication and has no significance in the determination of the priority of publication of names.</p>	<p><b>Rule 26b</b> The date of acceptance of an article for publication if given in a publication <b>does not indicate the effective date of publication and</b> has no significance in the determination of the priority of publication of names.</p>		
<b>Valid and Invalid Publication</b>			
<p><b>Rule 27</b> A name of a new taxon, or a new combination for an existing taxon, is not validly published unless the following criteria are met:</p> <p>(1) The name is published in the IJSB/IJSEM.</p>	<p><b>Rule 27</b> A name of a new taxon, or a new combination for an existing taxon, is not validly published unless the following criteria are met:</p> <p><b>Version 1:</b> (1) The name must have appeared in an effective publication. (2) The name is published in the IJSB/IJSEM.</p> <p><b>Version 2:</b> (1) The name <b>or new combination</b> must have appeared in an effective</p>	<p>Tindall (2019) proposed two alternative versions. The Editorial Board prefers the second version. If the first version <del>will be is</del> accepted, the later parts of Rule 27 needs to be renumbered.</p>	<p><b>Tindall BJ.</b> Clarifying the definition and role of effective publication in the International Code of Nomenclature of Prokaryotes with proposals to make changes. <i>Int J Syst Evol Microbiol</i> 2019;69:2602–2605.</p> <p><b>Oren A, Garrity GM.</b> Proposal to modify Rules 27 and 30(3)(b) of the International Code of</p>

<p>(2) The publication of the name in the IJSB/IJSEM is accompanied by a description of the taxon or by a reference to a previous effectively published description of the taxon (see Rules 16, 25a and 25b and, for genus and species, Rules 29–32).</p> <p>As of 1 January 2001 the following criteria also apply</p> <p>a. The new name or new combination should be clearly stated and indicated as such (i.e. fam. nov., gen. nov., sp. nov., comb. nov., etc.).</p> <p>b. The derivation (etymology) of a new name (and if necessary of a new combination) must be given.</p>	<p>publication and the name must be published in the IJSB/IJSEM. Publication of original articles appearing in the IJSB/IJSEM this journal serves as the effective publication.</p> <p>(2) The publication of the name or new combination in the IJSB/IJSEM is accompanied by a description of the taxon or by a reference to a description of the taxon that has appeared in an effective publication (see Rules 16, 25a and 25b and, for genus and species, Rules 29–32).</p> <p>A formal description (“protologue”) must be included in the publication in the IJSEM or in the effectively description of the taxon published elsewhere. This description must contain the following elements:</p> <p>a. The new name or new combination should be clearly stated and indicated as such (i.e. fam. nov., gen. nov., sp. nov., comb. nov., etc.).</p> <p>b. The derivation (etymology) of a new name (and if necessary of a new combination) must be given. All new combinations are considered to be homotypic or heterotypic synonyms; with their author(s) and dates are to be listed and the basonym indicated.</p>		<p>Nomenclature of Prokaryotes. <i>Int J Syst Evol Microbiol</i> 2018;68:3951–3951.</p> <p><b>Tindall BJ.</b> Rule 27 of the International Code of Nomenclature of prokaryotes: the basonym is not enough. <i>Int J Syst Evol Microbiol</i> 2016;66:4897–4899.</p> <p><b>Oren A, Garrity GM.</b> Proposal to modify Rules 27 and 30(3)(b) of the International Code of Nomenclature of Prokaryotes.. <i>Int J Syst Evol Microbiol</i> 2018;68:3951–3953.</p>
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<p>c. The properties of the taxon being described must be given directly after (a) and (b). This may include reference to tables or figures in the same publication, or reference to <b>previously effectively published work</b>.</p> <p>d. All information contained in (c) should be accessible.</p> <p><del>(3) The type of the taxon must be designated (see Rules 15, 16, 18a, b, f, 20a-c, 21a and 22). In the case of species or subspecies including new combinations, the type strains must be deposited according to Rule 30.</del></p> <p><i>Note 1.</i> Valid publication of the name of a taxon requires publication in the IJSB/IJSEM of the name of the taxon and reference <b>to an effectively published description</b> whether in the IJSB/IJSEM or in another publication. The date of valid</p>	<p>c. The properties of the taxon being described must be <del>given directly after (a) and (b)</del>. This may include reference to tables or figures in the same publication, or reference to <b>a previous effective publication</b>.</p> <p>d. The type of the taxon must be designated (see Rules 15, 16, 18a, b, f, 20a-c, 21a and 22). In the case of species and subspecies including new combinations, the type strains must be deposited according to Rule 30 and the accession identifiers stated.</p> <p>e. All information contained in (c) should be accessible.</p> <p><i>Note 1.</i> Valid publication of the name of a taxon requires publication in the IJSB/IJSEM of the name of the taxon and reference <b>to a description in an effective publication</b>, whether in the IJSB/IJSEM or in another publication. The date of valid publication is that of publication in the</p>	<p>Based on Oren and Garrity 2018, <del>we the Editorial Board</del> deleted the statement that the properties of the taxon being described must be given directly after (a) and (b). This allows the option to give information about the nomenclatural type <del>also</del> before the description of the properties of the taxon, as often done in the 'digital protologue' format adopted by some journals.</p>	
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<p>publication is that of publication in the IJSB/IJSEM. The name may be mentioned in a previously published description, but the name is not validly published until its publication in the IJSB/IJSEM.</p> <p>If the initial proposal of the new name or new combination is not <b>effectively published</b> in the IJSB/IJSEM, valid publication (<b>announcement</b> in a <b>Validation List</b>) of the name in the IJSB/IJSEM is primarily the responsibility of the author of the name or combination together with the requirements of Rule 27(2) and (3) above. However, other individuals may also submit a new name or new combination for valid publication provided it conforms to the Rules of this Code.</p> <p>At the request of the Judicial Commission, the IJSB/IJSEM provides a Notification List which lists all nomenclatural changes as well as listing changes in taxonomic opinion that have occurred in an issue of the journal. This list has no formal status in prokaryote</p>	<p>IJSB/IJSEM. The name may be mentioned in a previously published description, but the name is not validly published until its publication in the IJSB/IJSEM.</p> <p>If the initial proposal of the new name or new combination is not <b>published</b> in the IJSB/IJSEM, valid publication (<b>announcement</b> in a <b>Validation List</b>) of the name in the IJSB/IJSEM is primarily the responsibility of the author(s) of the name or combination, together with the requirements of Rule 27(2) and (3) above. However, other individuals may also submit a new name or new combination <b>for valid publication, different from that already associated with a description of a taxon that has appeared in an effective publication</b>, provided it conforms to the Rules of this Code (see Rules 16, 25a and 25b and, for genus and species, Rules 29–32).</p> <p>At the request of the Judicial Commission, the IJSB/IJSEM provides a Notification List which lists all nomenclatural changes as well as listing changes in taxonomic opinion that have occurred in an issue of the journal. <b>After 1 January 2021, the Notification List will include a sequence number that provides the temporal order of publication of</b></p>	<p>“The name may be mentioned in a previously published description” – can be deleted. Of course a name may be mentioned. Just because a name is not validly published does not mean that the name is without value, even if it is not ‘legitimate’.</p>	
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nomenclature except to allow for orthographic corrections to be made.

In the case of a name of a new taxon (rather than a new combination for a taxon already described), a type must be designated in the effective or valid publication. It is recommended that the type of a species or subspecies be deposited in a recognized culture collection [see Rule 30 (3a) and Rule 30 (3b)] and that the description of the taxon conform to minimal standards (see Recommendation 30).

*Note 2.* When a new species or a new combination results in the proposal of a new genus, both the genus name and the new species name or new combination must be validly published. Valid publication of the new species or new combination alone does not constitute valid publication of the new genus.

articles in an issue of the journal, in lieu of page number. This list has no formal status in prokaryotic nomenclature except to allow for orthographic and grammatical corrections to be made and to sequence number and to fairly establish priority of competing names within an issue in lieu of a page number.

In the case of a name of a new taxon, a type must be designated at the time of valid publication. In the case of a new combination for an existing taxon, the type must be stated. The type of a species or subspecies must be deposited in at least two recognized culture collections in different countries from which subcultures must be available [see Rule 30 (3b)] and that the description of the taxon conform to minimal standards (see Recommendation 30).

*Note 2.* When a new species or a new combination results in the proposal of a new genus, both the genus name and the new species name or new combination must be validly published. Valid publication of the name of the new species or of the new combination alone does not constitute valid publication of the name of the new genus.

An important issue for discussion: What is a 'recognized' culture collection? Who 'recognizes' it? How should this be defined? See also comments on Rule 30(3).

Another question: should we add should "without restrictions" be added? The Editorial Board suggests pProbably not, as there are always restrictions of some sort.

**Rule 28a**

An author validly publishing a new name after 1 January 1980 may revive a name published prior to 1 January 1980 (see Rule 24a) but not listed in one of the Approved Lists of Bacterial Names unless the name is a *nomen rejiciendum*. The name may be used whether or not the new taxon is related in any way to the taxon to which the name was originally applied.

Authority for the name must be claimed by the new author. However, if the author wishes to indicate that the name is a revived name and is used to describe a taxon with the same circumscription, position, and rank as that given by the original author, this may be done by appending the abbreviation “nom. rev.” (**revived name**) to the name (see Rule 33c). The proposal must contain a brief diagnosis, i.e. a statement or list of those features that led the author to conclude that the proposed taxon is sufficiently different from other recognized taxa to justify its revival. The data included in the statement may be taken from the earlier description and may include newer data, when appropriate. The description of the taxon and derivation of the name must conform to the requirements of Rule

**Rule 28a**

**Authors** validly publishing a new name after 1 January 1980 may revive a name published prior to 1 January 1980 (see Rule 24a) but not listed in one of the Approved Lists of Bacterial Names unless the name is a *nomen rejiciendum*. The name may be used whether or not the new taxon is related in any way to the taxon to which the name was originally applied.

Authority for the name must be claimed by the new author(s). If the author(s) wishes to indicate that the name is a revived name and is used to describe a taxon with the same circumscription, position, and rank as that given by the original author(s), this may be done by appending the abbreviation “nom. rev.” (**revived name**) to the name (see Rule 33c). The proposal must contain a brief diagnosis, i.e., a statement or list of features that led the author(s) to conclude that the proposed taxon is sufficiently different from other recognized taxa to justify its revival. The data included in the statement may be taken from the earlier description and may include newer data. The description of the taxon and derivation of the name must conform to the requirements of

<p>27(2). The type must <b>also</b> be designated [see Rule 27(3)].</p> <p><i>Note 1.</i> A new name which was previously published before 1 January 1980 is <b>only</b> considered to be already validly published if the name was included in the Approved Lists of Bacterial Names.</p> <p><i>Note 2.</i> Since revived names are treated as new names, they require valid publication, and the date of priority <b>of publication</b> of a revived name is that of the publication in the IJSEM (see Rule 27).</p> <p><i>Note 3.</i> <b>Search</b> for publication of names and <b>effectively published</b> descriptions prior to 1 January 1980 is no longer required. The Approved Lists of Bacterial Names form the foundation of a new prokaryotic nomenclature and taxonomy.</p>	<p>Rule 27(2). The type must be designated [see Rule 27(3)].</p> <p><i>Note 1.</i> A new name which was previously published before 1 January 1980 is considered to be already validly published <b>only</b> if the name was included in the Approved Lists of Bacterial Names.</p> <p><i>Note 2.</i> Since revived names are treated as new names, they require valid publication, and the date of priority of a revived name is that of the publication in the IJSEM (see Rule 27).</p> <p><i>Note 3.</i> <b>Searching</b> for publication of names and descriptions <b>included in effective publications</b> prior to 1 January 1980 is no longer required. The Approved Lists of Bacterial Names form the foundation of a new prokaryotic nomenclature and taxonomy.</p>		
<p><b>Rule 28b</b> A name or epithet is not validly published in the following circumstances.</p> <p>(1) It was not accepted at the time of publication by the author who published it.</p>	<p><b>Rule 28b</b> A name or epithet is not validly published in the following circumstances:</p> <p>(1) It was not accepted at the time of publication by the author <b>(s)</b> who published it.</p>		

<p>Example: <i>Muellerina</i> de Petschenko 1910 (Opinion 10; Judicial Commission [14]). Names or epithets published with a question mark or other indication of taxonomic doubt yet accepted by the author are not validly published.</p> <p>(2) It was merely proposed in anticipation of the future acceptance of the taxon concerned or the acceptance of a particular circumscription, position, or rank for the taxon which is being named or in anticipation of the future discovery of some hypothetical taxon.</p> <p>Examples: (a) <i>Clostridium</i> Fischer 1895 (Opinion 20; Judicial Commission [15]); (b) <i>Corynebacterium hemophilum</i> Svendsen et al. 1947. "Its haemophilic properties might be used in coining a name, and the name <i>Corynebacterium hemophilum</i> is suggested in case further investigation should justify its rank as a species".</p> <p>(3) It was mentioned incidentally. <b>Incidental mention</b> of a new name means mention by an author who does not clearly state or indicate that he is proposing a new name or combination.</p>	<p>Example: <i>Muellerina</i> de Petschenko 1910 (Opinion 10; Judicial Commission [14]). Names or epithets published with a question mark or other indication of taxonomic doubt yet accepted by the author(s) are not validly published.</p> <p>(2) It was merely proposed in anticipation of the future acceptance of the taxon concerned or the acceptance of a particular circumscription, position, or rank for the taxon which is being named or in anticipation of the future discovery of some hypothetical taxon.</p> <p>Examples: (a) <i>Clostridium</i> Fischer 1895 (Opinion 20; Judicial Commission [15]); (b) <i>Corynebacterium hemophilum</i> Svendsen et al. 1947. "Its haemophilic properties might be used in coining a name, and the name <i>Corynebacterium hemophilum</i> is suggested in case further investigation should justify its rank as a species".</p> <p>(3) It was mentioned incidentally. <b>Incidental mention</b> of a new name means mention by an author who does not clearly state or indicate that he is proposing a new name or combination.</p>		
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<p>Examples: (a) <i>Pseudobacterium</i> Trevisan 1888. (b) Raj [16] stated: “Also, recently another organism tentatively named as <i>Microcyclus marinus</i> was isolated from the ocean.”</p>	<p>Examples: (a) <i>Pseudobacterium</i> Trevisan 1888. (b) Raj [16] stated: “Also, recently another organism tentatively named as <i>Microcyclus marinus</i> was isolated from the ocean.”</p>		
<p><b>Valid Publication of the Name of a Genus or Subgenus, including a Monotypic Genus</b></p>	<p><b>Valid Publication of the Name of a Genus or Subgenus, including a Monotypic Genus</b></p>	<p>About subgenera, see comments elsewhere: some members of the Editorial Board proposed to delete the rank of subgenus, but there are validly published names of subgenera.</p>	
<p><b>Rule 29</b> For a generic or subgeneric name to be validly published it must comply with the following conditions.</p> <p>(1) It must be published in conformity with Rules 27 and 28b. (2) The genus or subgenus named must include one or more <del>described or previously described</del> species.</p> <p>Instead of a new description of the genus or subgenus, a citation to a <del>previously and effectively published</del> description of</p>	<p><b>Rule 29</b> For a generic or subgeneric name to be validly published, it must comply with the following conditions:</p> <p>(1) It must be published in conformity with Rules 27 and 28b. (2) The valid publication of a genus or subgenus name must include one or more species or combinations validly published, according to Rule 30. (3) A nomenclatural type must be selected at the time of valid publication from one of the species included in the genus. In the case of a genus containing a single species, that species serves as the type (see Rule 20c).</p> <p>Instead of a new description of the genus or subgenus, a citation to a <del>description or the properties of the genus, subgenus, genus as a subgenus, or subgenus as a</del></p>	<p>About subgenera, see comments elsewhere: some members of the Editorial Board proposed to delete the rank of subgenus, but there are validly published names of subgenera.</p> <p>The newly proposed text is difficult to understand. <del>Therefore</del>Therefore, the Editorial Board we propose deleting</p>	<p><b>Tindall BJ.</b> 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.</p> <p><b>Tindall BJ.</b> Clarifying the definition and role of effective publication in the International Code of Nomenclature of Prokaryotes with proposals to make changes. <i>Int J Syst Evol Microbiol</i> 2019;69:2602–2605.</p> <p><b>Tindall BJ.</b> Rule 29 and combined generic and specific descriptions. <i>Int J</i></p>

<p>the genus as a subgenus (or subgenus as a genus) may be given.</p> <p><del>Example: Not yet found.</del></p> <p>In the case of a genus containing a single species, a combined generic and specific description may be given.</p>	<p>genus in a previous effective publication may be given.</p> <p>In the case of a genus containing a single species, a combined generic and specific description may be given. In the case of a combined generic and specific description for a genus that contains a single species (see Rule 20c) the name of the new taxon is to be given (i.e., the genus name and the species epithet) indicating that it is both a novel genus and a novel species, gen. nov. sp. nov., followed by the etymology of the genus name and species epithet, in conformity with Rules 27 (2a) and (2b). The requirements of Rule 27 (2c), combining the information for the genus and species, are to be given. At the time of valid publication, the nomenclatural type of the name at the rank of genus and the name at the rank of species must be given, in conformity with Rule 16 and 27 (3).</p> <p>Example: <i>Propioniferax innocua</i> (Pitcher and Collins 1992) Yokota <i>et al.</i> 1994 or</p>	<p>“subgenus, genus as a subgenus, or subgenus as a genus’.</p> <p>About subgenera, see comments elsewhere: some members of the Editorial Board proposed to delete the rank of subgenus, but there are validly published names of subgenera.</p>	<p><i>Syst Evol Microbiol</i> 2019;69:2600-2601.</p>
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<p>Example: <i>Propioniferax innocua</i> (Pitcher and Collins 1992) Yokota et al. 1994 or <i>Lamprocystis roseopersicina</i> (Kützing 1849) Schroeter 1886 (Approved Lists 1980).</p>	<p><i>Lamprocystis roseopersicina</i> (Kützing 1849) Schroeter 1886 (Approved Lists 1980).</p>		
<p><b>Recommendation 29</b> A description of a genus or subgenus should mention the points in which the genus or subgenus differs from related genera or subgenera. Where possible, the family to which it belongs should be mentioned.</p>	<p><b>Recommendation 29</b> A description of a genus or subgenus should mention the points in which the genus or subgenus differs from related genera or subgenera. Where possible, the family to which it belongs should be mentioned.</p>		