Taxonomic Note

Correspondence

B. J. Tindall

email address can be found at
www.dsmz.de

Proposal of *Parvimonas* gen. nov. and *Quatrionicoccus* gen. nov. as replacements for the illegitimate, prokaryotic, generic names *Micromonas* Murdoch and Shah 2000 and *Quadricoccus* Maszenan *et al.* 2002, respectively

B. J. Tindall¹ and J. P. Euzéby²

¹DSMZ – Deutsche Sammlung von Mikroorganismen und Zellkulturen GmbH, Inhoffenstrasse 7b, D-38124 Braunschweig, Germany

²Société de Bactériologie Systématique et Vétérinaire (SBSV) and École Nationale Vétérinaire de Toulouse (ENVT), 23 Chemin des Capelles, BP 87614, 31076 Toulouse Cedex 3, France

The prokaryotic, generic names *Micromonas* Murdoch and Shah 2000 and *Quadricoccus* Maszenan *et al.* 2002 are **illegitimate*** because they are **later homonyms** of the names *Micromonas* Manton and Parke 1960 (alga) and *Quadricoccus* Fott 1948 (alga). [Principle 2, Rule 51b(4) of the Bacteriological Code (1990 Revision)]. Such names have no claim to be **correct names** (Principle 6) and, therefore, replacement generic names must be proposed (Rule 54).

On 14 August 1999, the Judicial Commission (De Vos & Trüper, 2000) recommended that the change in wording of Principle 2 proposed by Tindall (1999) be accepted, with modifications:

‘The nomenclature of Prokaryotes is not independent of botanical and zoological nomenclature. When naming new taxa in the rank of genus or higher, due consideration is to be given to avoiding names which are regulated by the Zoological Code and the International Code of Botanical Nomenclature.’

Further, the addition of the following Note to Principle 2 was proposed:

‘Note. This principle takes effect with publication of acceptance of this change by the ICSB and is not retroactive.’

Later, the ICSB (International Committee on Systematic Bacteriology, now the International Committee on Systematics of Prokaryotes) voted unanimously in favour of this proposal (Labeda, 2000).

The minutes of the meetings of the Judicial Commission and the minutes of the meetings of the ICSB were published in the November 2000 issue of the IJSEM and, for all practical purposes, the new Principle 2 applies from 01 January 2001.

The ‘old’ Principle 2 and Rule 51b(4) of the Bacteriological Code (1990 Revision) (Lapage *et al.*, 1992) state that a bacterial (prokaryotic) name is **illegitimate** if it is a **later**

homonym of a name of a taxon of fungi, algae, protozoa or viruses.

According to the new Principle 2 or/and to Rule 51b(4) the prokaryotic generic names *Micromonas* Murdoch and Shah 2000 (Murdoch & Shah, 2000) and *Quadricoccus* Maszenan *et al.* 2002 (Maszenan *et al.*, 2002) are **illegitimate**. The primary resources for searching the botanical and the zoological names were: Index Nominum Genericorum (ING) Plantarum (<http://ravenel.si.edu/botany/ing/ingForm.cfm>), Names in Current Use for Extant Plant Genera (NCU) (<http://www.bgbm.fu-berlin.de/iapt/ncu/genera/Default.htm>), algaeBASE (<http://www.algaebase.org/>) and Index of Organism Names (Thomson) (<http://www.organismnames.com>).

The prokaryotic genus name *Micromonas* Murdoch and Shah 2000 is **illegitimate** because of **precedence** of the algal genus name, *Micromonas* Manton and Parke 1960 [Rule 51b(4)]. Although the ‘new’ Principle 2 does not apply to the genus name *Micromonas*, this name was also **illegitimate** according to the ‘old’ Principle 2. A search of the ING, NCU and algaeBASE websites indicates that the botanical name *Micromonas* Manton and Parke 1960 is currently being used. The ING website also lists the name *Micromonas* Borrel, 1902 (Flagellata?), although this name does not appear in the other databases.

The prokaryotic genus name *Quadricoccus* Maszenan *et al.* 2002 is **illegitimate** because of **precedence** of the algal genus name *Quadricoccus* Fott 1948 [Principle 2 and Rule 51b(4)].

*Technical terms used in the Bacteriological Code are marked in bold text.

In this case the name would also have been **illegitimate** had the 'old' Principle 2 been retained. A search of the ING, NCU and algaeBASE websites indicates that the botanical name *Quadricoccus* Fott 1948 is currently being used.

Therefore, the prokaryotic generic names *Micromonas* Murdoch and Shah 2000 and *Quadricoccus* Maszenan *et al.* 2002 are **illegitimate**. According to Principle 6:

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

An **illegitimate name** cannot be a **correct name**, and must be replaced.

The corresponding authors of papers proposing these illegitimate names were contacted in order that they be given the opportunity to find replacements. However, no reply was received.

Consequently, we propose to replace (i) the prokaryotic names *Micromonas* and *Micromonas micros* (*sic*) by *Parvimonas* and *Parvimonas micra*, respectively; and (ii) the prokaryotic names *Quadricoccus* and *Quadricoccus australiensis* by *Quatrionicoccus* and *Quatrionicoccus australiensis*, respectively. In each of these cases the fact that the generic names are **illegitimate** does not affect the legitimacy of the species epithets (Rule 32b and Rule 51a). As a result reference to the authors of the species epithets has been retained in the authorship of the resulting combinations (Rule 54).

The new generic names have been chosen in a fashion which seeks to conserve the meaning of the **illegitimate** names as originally published.

Description of *Parvimonas* Tindall and Euzéby gen. nov.

Parvimonas (Par.vi'mo.nas. L. adj. *parvus* little, small; L. fem. n. *monas* a unit, monad; N.L. fem. n. *Parvimonas* a small monad).

Previous illegitimate name *Micromonas* Murdoch and Shah 2000.

The description of the genus is as given for *Micromonas* in Murdoch & Shah (1999).

The type species is *Parvimonas micra* (Prévot 1933) Tindall and Euzéby.

Description of *Parvimonas micra* (Prévot 1933) Tindall and Euzéby comb. nov.

Parvimonas micra (mi'cra. Gr. adj. *mikros* -ê-on small, little; N.L. fem. adj. *micra* small, little).

Basonym: *Peptostreptococcus micros* (*sic*) (Prévot 1933) Smith 1957 (Approved Lists 1980); **illegitimate homotypic synonym:** *Micromonas micros* (*sic*) (Prévot 1933) Murdoch and Shah 2000.

The description of the species is as given for *Micromonas micros* (*sic*) in Murdoch & Shah (1999).

The type strain is ATCC 33270^T (=NCTC 11808^T=DSM 20468^T=GIFU 7824^T).

Description of *Quatrionicoccus* Tindall and Euzéby gen. nov.

Quatrionicoccus (Qua.tri.o.ni.coc'cus. L. masc. n. *quatrio* -onis the number four; N.L. masc. n. *coccus* a grain, berry; N.L. masc. n. *Quatrionicoccus* four spherical cells).

Previous illegitimate homotypic synonym *Quadricoccus* Maszenan *et al.* 2002.

The description of the genus is as given for *Quadricoccus* in Maszenan *et al.* (2002).

The type species is *Quatrionicoccus australiensis* (Maszenan *et al.* 2002) Tindall and Euzéby.

Description of *Quatrionicoccus australiensis* (Maszenan *et al.* 2002) Tindall and Euzéby comb. nov.

Quatrionicoccus australiensis (aus.tra.li.en'sis. N.L. fem. adj. *australiensis* of Australia, where the isolate originated).

Illegitimate basonym: *Quadricoccus australiensis* Maszenan *et al.* 2002.

The description of the species is as given for *Quadricoccus australiensis* in Maszenan *et al.* (2002).

The type strain is Ben 117^T (=NCIMB 13738^T=CIP 107055^T).

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