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REQUEST FOR AN OPINION FROM THE JUDICIAL
COMMISSION OF THE INTERNATIONAL COMMITTEE
ON NOMENCLATURE OF BACTERIA TO CONSERVE THE
GENERIC NAME RHIZOBIUM FRANK 1889

Editorial Board, Bergey's Manual Trust

The Editorial Board responsible for the preparation and editing of manuscripts for the 8th edition of Bergey's Manual of Determinative Bacteriology notes that in Index Bergeyana, page 900, the generic name Rhizobium Frank 1889, 339 is recorded as validly published but illegitimate under Rule 24a, which reads:

"A name of a taxon is illegitimate if it was nomenclaturally superfluous when published, i.e., if the taxon to which it was applied as circumscribed by its author included the type of a name which the author ought to have adopted under one or more of the rules."

The generic name Rhizobium was proposed by Frank 1889, 338 to replace the generic name Phytomyxa Schroeter 1886, 134 inasmuch as Phytomyxa had been proposed as the name of a genus of fungi rather than of bacteria. The type species of Phytomyxa is P. leguminosarum Schroeter 1886, 134; the type species of Rhizobium is R. leguminosarum Frank 1889. The two names are synonyms under the rules. The generic name Phytomyxa definitely has priority. It is proposed that the generic name Rhizobium Frank 1889 be conserved as a nomen genericum conservandum.

Phytomyxa as the generic name of bacteria producing nodules on the roots of leguminous plants has rarely been used in bacteriology, as indicated by the following statements:

1. The organism of leguminous nodules was placed in the fungus genus Schinzia as S. leguminosarum Frank 1879, 397. Schroeter 1886, 134 concluded that the organism was one of the slime molds and proposed the generic name Phytomyxa, including it among the Myxomycetes. Frank 1889, 448 recognized that Phytomyxa leguminosarum did not belong with the slime molds and renamed the organism Rhizobium leguminosarum. It is recognized that technically the fact that Schroeter included Phytomyxa incorrectly among the fungi does not render this generic name illegitimate.

2. In a report of a committee of the Society of American Bacteriologists (1917, 553) on the characterization and classification of bacterial types the genus Rhizobium Frank 1889 is recognized. Phytomyxa Schroeter 1886 is listed as a synonym. Included is the following comment:

"Phytomyxa Schroeter has priority over Rhizobium, but because of the confusion that would arise from the substitution of the older correct name for the better known term Rhizobium, the committee recommends the adoption of the latter."

Rhizobium Frank 1889 has been used in general by students of the organisms that produce nodules on the roots of legumes.

The following generic names have been used to include the nodule bacteria by various authors as follows:

Schinzia Frank 1879, 397.

Phytomyxa Schroeter 1886, 134; Maire and Tison 1909, 241.

Bacillus. Bacillus radiculicola Beijerinck 1888, 726;

Migula 1895, 28; Lehmann and Neumann 1896, 79;

Migula 1900, 772.

Rhizobium Frank 1889, 228; Buchanan 1918, 46; Winslow et al. 1917, 553; Committee of the Society of American

Bacteriologists; Bergey 1923, through seven editions

of Bergey's Manual of Determinative Bacteriology,

1923, 40 to 1957, 285; Rettger 1928, 225; Krasil'nikov

1949, 410; Wilson and Miles 1964, 415; Hauduroy et al.

1953, 469; Skerman 1959, 85 and Skerman 1967, 141.

Rhizobacterium Kirchner 1896, 221; Tesić and Todorović 1963, 282.

Bactridium Lotsy 1907, 342.

Rhizomonas Orla-Jensen 1909, 328.

Bacterium Lehmann and Neumann in later editions to 1927, 307.

Rhizobiomonas Tešić and Todorović 1963, 282.

In an international poll of 256 bacteriologists, 59 favored the recognition of Rhizobium and no one suggested rejection.

Attention is directed to the following Principle of the International Code of Nomenclature of Bacteria as emended at Moscow, 1966:

"Principle 1. The essential points in nomenclature are:

(2) to avoid or to reject the use of names which may cause error or ambiguity or throw science into confusion.

The generic name Phytomyxa Schroeter 1886 has priority but has almost never been used by bacteriologists since that date. Rhizobium has been used quite consistently.

It is proposed that the Judicial Commission approve the following recommendation:

1. That Rhizobium Frank 1889, 338 be conserved as a nomen genericum conservandum.
2. That the type species of the genus Rhizobium Frank be designated as Rhizobium leguminosarum Frank 1889, 338.

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