

***Herpetosiphon poelensis* sp. nov., a filamentous predatory bacterium isolated from sandy soil and *Herpetosiphon giganteus*.**

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Abstract

Three filamentous gliding bacteria from the German Collection of Microorganisms and Cell Cultures, Hp g11, Hp g471 and Hp g472, were subjected to a phylogenetic analysis. These organisms had previously been classified as members of the genus *Herpetosiphon* based on their growth physiology and morphology. However, a taxonomic assignment at the species level had not been carried out. Analysis of 16S rRNA sequences now confirmed the close relationship of strain Hp g472 to *Herpetosiphon aurantiacus* DSM 785T (98.6 % nucleotide identity) and *Herpetosiphon geysericola* DSM 7119T (97.7 %). The results of DNA-DNA hybridization experiments further implied that strain Hp g472 should be classified as a distinct species. The DNA G+C content of strain Hp g472 was 49.9 mol%. The major quinone was MK-10 and the predominant cellular fatty acids were C18 : 1, C16 : 1 and C16 : 0. Based on phenotypic, chemotaxonomic and phylogenetic data it was concluded that strain Hp g472 represents a novel species of the genus *Herpetosiphon*, for which the name *Herpetosiphon gulosus* sp. nov. is proposed. The type strain is Hp g472T

(=DSM 52871T=NBRC 112829T). In contrast to Hp g472T, the strains Hp g11 and Hp g471 exhibited closest 16S rRNA gene sequence similarity (>99 %) with 'Herpetosiphon giganteus' Hp a2. The distinctive genotypic and phenotypic properties of the latter supported the revival of the name as *Herpetosiphon giganteus* (ex Reichenbach & Golecki, 1975) sp. nov., nom. rev. We propose the previously deposited reference strain DSM 589T=NBRC 112828T as the type strain.

Beteiligte Forschungseinheiten

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