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## ***Paenibacillus polygoni* sp. nov., an endophytic bacterium isolated from *Polygonum lapathifolium* L. in wetland**

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Markus Göker and Aharon Oren

A Gram-stain-positive, aerobic, rod-shaped, non-motile, yellowish and glossy strain, C31<sup>T</sup>, was isolated from a wetland plant *Polygonum lapathifolium* L. located south of Poyang Lake, Jiangxi Province, PR China. Phylogenetic analysis based on 16S rRNA gene sequences indicated that strain C31<sup>T</sup> showed similarity values of lower than 97.0% to other type species belonging to the genus *Paenibacillus*. The genomic average nucleotide identity values between strain C31<sup>T</sup> and its reference type species ranged from 68.9–70.9% and the digital DNA–DNA hybridization values were lower than 27.8%. The genomic DNA G+C content of strain C31<sup>T</sup> was 41.9 mol%. The optimal growth temperature, pH and NaCl concentration were 37 °C, pH 7 and 0.5%, respectively. The major cellular fatty acids (>5.0%) of strain C31<sup>T</sup> were anteiso-C<sub>15:0</sub> (73.7%), anteiso-C<sub>17:0</sub> (8.4%) and iso-C<sub>15:0</sub> (5.2%). The polar lipids of strain C31<sup>T</sup> were diphosphatidylglycerol, phosphatidylglycerol, phosphatidylethanolamine and unidentified phospholipids. The respiratory quinone was MK-7. Based on these phylogenetic and phenotypic characterizations, strain C31<sup>T</sup> represents a novel species within the genus *Paenibacillus*. Therefore, the proposed name for this newly identified species is *Paenibacillus polygoni* sp. nov. and the type strain is C31<sup>T</sup> (=CCTCC AB 2022349<sup>T</sup>=KCTC 43565<sup>T</sup>).

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