

Species *Planktophila perrara*

Etymology

[per'ra.ra] **N.L. fem. adj.** *perrara*, very rare, indicating its low abundance in the environment

Nomenclatural type

[Genome sc|0004107](#) ^{Is}

Description

Etymology. It is named 'perrarus', from Latin prefix 'per-' meaning very and 'rarus' meaning rare, indicating its low abundance in the environment.

Brief description. *Planktophila perrarus* MRE-203 (ENA accession number GCA_965268015) was isolated from the epilimnion (0.5m depth) of Římov Reservoir, Czech Republic (date: 2021-11-01) and it is the only isolated representative of the species. It has a complete circular genome with a size of 1,318,636 bp, a GC content of 48.28%, and a coding density of 95.4%. It encodes one rRNA operon and 38 tRNA genes. It encodes for both actinorhodopsin and heliorhodopsin, as well as the capacity to *de novo* synthesize retinal. It is extremely rare in the environment and in low abundances; recruitment analysis in >1700 metagenomes showed that it was never found with a coverage per Gb higher than 1. In low abundances, it was recovered from Lake Ontario (USA), the coast of the Baltic Sea and the hypolimnion of Římov Reservoir (Czech Republic). The closest relative is *Planktophila hypolimnetica* MRH-37, with whom shared an average nucleotide identity of 75.95%. The Current GTDB classification (r220) is

d__Bacteria;p__Actinomycetota;c__Actinomycetia;o__Nanopelagicales;f__Nanopelagicaceae;
g__Planktophila; s__.

Classification

Bacteria » *Actinomycetota* » *Actinomycetes* » *Nanopelagicales* » *Nanopelagicaceae* »
Planktophila » *Planktophila perrara*

References

Effective publication: Chiriac et al., 2025 [1]

Registry URL

<https://seqco.de/i:51473>

References

1. Chiriac et al. (2025). Ecological success in freshwater lakes: insights from novel cultivated lineages of the abundant Nanopelagicales order. *Microbiome*. DOI: [10.1186/s40168-025-02272-x](https://doi.org/10.1186/s40168-025-02272-x)