# Article information:

Anaerobic methanotroph ‘Candidatus Methanoperedens nitroreducens’ has a pleomorphic life cycle | Nature Microbiology
[https://www.nature.com/articles/s41564-022-01292-9?utm\_source=nmicrobiol\_etoc=email=toc\_41564\_8\_2=20230204](https://www.nature.com/articles/s41564-022-01292-9?utm_source=nmicrobiol_etoc&utm_medium=email&utm_campaign=toc_41564_8_2&utm_content=20230204)

# Article summary:

1. The article discusses the discovery of a pleomorphic life cycle in the anaerobic methanotroph ‘Candidatus Methanoperedens nitroreducens’.

2. This species was found to have three distinct phenotypes, with some cells storing carbon as polyhydroxyalkanoates.

3. The phenotypic variation of ‘Ca. M. nitroreducens’ is thought to aid their survival and dispersal in sub-optimal environmental conditions.

# Article rating:

Appears well balanced: The article presents the information in a reliable and balanced way, without biases and prejudices. The claims made in the article are well supported and, where applicable, all sides of the argument are given opportunity to present their point of view. The article appears trustworthy and reliable.

# Article analysis:

The article is generally reliable and trustworthy, providing evidence for its claims through meta-omics and fluorescence in situ hybridization (FISH). It also provides a comprehensive overview of the importance of anaerobic oxidation of methane (AOM) and the role of ANME archaea in this process, as well as discussing the potential role of archaellum in extracellular electron transfer (EET). The article does not appear to be biased or one-sided, presenting both sides equally and exploring counterarguments where appropriate. There are no unsupported claims or missing points of consideration, and all evidence for the claims made is provided. There is no promotional content or partiality present, and possible risks are noted where relevant. In conclusion, this article can be considered reliable and trustworthy overall.

# Topics for further research:

* Methane oxidation pathways
* ANME archaea diversity
* Archaellum structure and function
* Extracellular electron transfer mechanisms
* Microbial interactions in AOM
* Environmental impacts of AOM

# Report location:

<https://www.fullpicture.app/item/b2b472e957fc45203e5d1f4b0ea804d5>