

DPANN Archaea from Vázquez-Campos et al (2021)

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Order *Anstonellales*

Etymology

[Ans.to.nel.la'les] **N.L. fem. dim. n.** *Anstonella*, referring to the type genus *Anstonella*; *-ales*, ending to denote an order; **N.L. fem. pl. n.** *Anstonellales*, the *Anstonella* order

Nomenclatural type

Genus *Anstonella*

Description

The order *Anstonellales* is circumscribed based on two independent concatenated protein phylogenies of 122 and 93 markers, and supported by the rank normalisation approach as per Parks et al. (2018). It constitutes the most inclusive clade that includes the families *Anstonellaceae*, and *Bilamarchaeaceae*. The type genus is *Anstonella*.

The order is equivalent to the lineage LFWA-IIIc in this manuscript, and o__UBA10214 in the GTDB r89/r202 (Parks et al., 2017).

Classification

Archaea » *Microcaldota* » *Microcaldia* » *Anstonellales*

References

Effective publication: Vázquez-Campos et al., 2021 [1]

Registry URL

<https://seqco.de/i:23471>

Order *Burarchaeales*

Etymology

[Bur.ar.chae.a'les] **N.L. neut. n.** *Burarchaeum*, referring to the type genus *Burarchaeum*; *-ales*, ending to denote an order; **N.L. fem. pl. n.** *Burarchaeales*, the *Burarchaeum* order

Nomenclatural type

Genus *Burarchaeum*

Description

The order *Burarchaeales* is circumscribed based on two independent concatenated protein phylogenies of 122 and 93 markers, and supported by the rank normalisation approach as per Parks et al. (2018). The description is the same as that of its sole genus and species. The type genus is *Burarchaeum*.

The order is equivalent to LFWA-IIIc in this manuscript and o__B9-G16 in GTDB r202 (Parks et al., 2017).

Classification

Archaea » *Microcaldota* » *Microcaldia* » *Burarchaeales*

References

Effective publication: Vázquez-Campos et al., 2021 [1]

Registry URL

<https://seqco.de/i:23464>

Order *Gugararchaeales*

Etymology

[Gu.gar.ar.chae.a'les] **N.L. neut. n.** *Gugararchaeum*, referring to the type genus *Gugararchaeum*; *-ales*, ending to denote an order; **N.L. fem. pl. n.** *Gugararchaeales*, the *Gugararchaeum* order

Nomenclatural type

Genus *Gugararchaeum*

Description

The order *Gugararchaeales* is circumscribed based on two independent concatenated protein phylogenies of 122 and 93 markers, and supported by the rank normalisation approach as per Parks et al. (2018). The description is the same as that of its sole genus and species. The type genus is *Gugararchaeum*. The order is equivalent to LFWA-IIIa in this manuscript and appears as o_CABMDC01 in GTDB r202 (Parks et al., 2017).

Classification

Archaea » *Microcaldota* » *Microcaldia* » *Gugararchaeales*

References

Effective publication: Vázquez-Campos et al., 2021 [1]

Registry URL

<https://seqco.de/i:23460>

Order *Norongarragalinales*

Etymology

[No.ron.gar.ra.ga.li.na'les] **N.L. fem. n.** *Norongarragalina*, referring to the type genus *Norongarragalina*; *-ales*, ending to denote an order; **N.L. fem. pl. n.** *Norongarragalinales*, the *Norongarragalina* order

Nomenclatural type

Genus *Norongarragalina*

Description

The order *Norongarragalinales* is circumscribed based on two independent concatenated protein phylogenies of 122 and 93 markers, and supported by the rank normalisation approach as per Parks et al. (2018). The description is the same as that of its sole genus and species. The type genus is *Norongarragalina*. This order is equivalent to LFWA-II in this manuscript, and o_UBA8480 in GTDB r89/r202 (Parks et al., 2017).

Classification

Archaea » *Microcaldota* » *Microcaldia* » *Norongarragalinales*

References

Effective publication: Vázquez-Campos et al., 2021 [1]

Registry URL

<https://seqco.de/i:23477>

Order *Tiddalikarchaeales*

Etymology

[Tid.da.lik.ar.chae.a'les] **N.L. neut. n.** *Tiddalikarchaeum*, referring to the type genus *Tiddalikarchaeum*; **-ales**, ending to denote an order; **N.L. fem. pl. n.** *Tiddalikarchaeales*, the *Tiddalikarchaeum* order

Nomenclatural type

Genus *Tiddalikarchaeum*

Description

The order *Tiddalikarchaeales* is circumscribed based on two independent concatenated protein phylogenies of 122 and 93 markers, and supported by the rank normalisation approach as per Parks et al. (2018). The description is the same as that of its sole genus and species. The type genus is *Tiddalikarchaeum*.

The order is equivalent to CG07-land from Probst et al. (2018) or o__CG07-land in GTDB r89/r202 (Parks et al., 2017).

Classification

Archaea » *Nanobdellota* » *Nanobdellia* » *Tiddalikarchaeales*

References

Effective publication: Vázquez-Campos et al., 2021 [1]

Registry URL

<https://seqco.de/i:23451>

Family *Anstonellaceae*

Etymology

[Ans.to.nel.la'ce.ae] **N.L. fem. dim. n.** *Anstonella*, referring to the type genus *Anstonella*; **-aceae**, ending to denote a family; **N.L. fem. pl. n.** *Anstonellaceae*, the *Anstonella* family

Nomenclatural type

Genus *Anstonella*

Description

The family *Anstonellaceae* is circumscribed based on two independent concatenated protein phylogenies of 122 and 93 markers, and supported by the rank normalisation approach as per Parks et al. (2018). The description is the same as that of its sole genus and species. The type genus is *Anstonella*.

This family is equivalent to f__UBA10161 in the GTDB r89/r202 (Parks et al., 2017).

Classification

Archaea » *Microcaldota* » *Microcaldia* » *Anstonellales* » *Anstonellaceae*

References

Effective publication: Vázquez-Campos et al., 2021 [1]

Registry URL

<https://seqco.de/i:23467>

Family *Bilamarchaeaceae*

Etymology

[Bi.lam.ar.chae.a'ce.ae] **N.L. neut. n.** *Bilamarchaeum*, referring to the type genus *Bilamarchaeum*; *-aceae*, ending to denote a family; **N.L. fem. pl. n.** *Bilamarchaeaceae*, the *Bilamarchaeum* family

Nomenclatural type

Genus *Bilamarchaeum*

Description

The family *Bilamarchaeaceae* is circumscribed based on two independent concatenated protein phylogenies of 122 and 93 markers, and supported by the rank normalisation approach as per Parks et al. (2018). The description is the same as that of its sole genus and species. The type genus is *Bilamarchaeum*.

This family is equivalent to f__UBA10214 in the GTDB r89/r202 (Parks et al., 2017).

Classification

Archaea » *Microcaldota* » *Microcaldia* » *Anstonellales* » *Bilamarchaeaceae*

References

Effective publication: Vázquez-Campos et al., 2021 [1]

Registry URL

<https://seqco.de/i:23470>

Family *Burarchaeaceae*

Etymology

[Bur.ar.chae.a'ce.ae] **N.L. neut. n.** *Burarchaeum*, referring to the type genus *Burarchaeum*; *-aceae*, ending to denote a family; **N.L. fem. pl. n.** *Burarchaeaceae*, the *Burarchaeum* family

Nomenclatural type

Genus *Burarchaeum*

Description

The family *Burarchaeaceae* is circumscribed based on two independent concatenated protein phylogenies of 122 and 93 markers, and supported by the rank normalisation approach as per Parks et al. (2018). The description is the same as that of its sole genus and species. The type genus is *Burarchaeum*.

The family is equivalent to f__B9-G16 in GTDB r202 (Parks et al., 2017).

Classification

Archaea » *Microcaldota* » *Microcaldia* » *Burarchaeales* » *Burarchaeaceae*

References

Effective publication: Vázquez-Campos et al., 2021 [1]

Registry URL

<https://seqco.de/i:23463>

Family *Gugararchaeaceae*

Etymology

[Gu.gar.ar.chae.a'ce.ae] **N.L. neut. n.** *Gugararchaeum*, referring to the type genus *Gugararchaeum*; *-aceae*, ending to denote a family; **N.L. fem. pl. n.** *Gugararchaeaceae*, the *Gugararchaeum* family

Nomenclatural type

Genus *Gugararchaeum*

Description

The family *Gugararchaeaceae* is circumscribed based on two independent concatenated protein phylogenies of 122 and 93 markers, and supported by the rank normalisation approach as per Parks et al. (2018). The description is the same as that of its sole genus and species. The type genus is *Gugararchaeum*.

The family appears in GTDB r202 (Parks et al., 2017) as f__CABMDC01.

Classification

Archaea » *Microcaldota* » *Microcaldia* » *Gugararchaeales* » *Gugararchaeaceae*

References

Effective publication: Vázquez-Campos et al., 2021 [1]

Registry URL

<https://seqco.de/i:23459>

Family *Norongarragalinaceae*

Etymology

[No.ron.gar.ra.ga.li.na'ce.ae] **N.L. fem. n.** *Norongarragalina*, referring to the type genus *Norongarragalina*; *-aceae*, ending to denote a family; **N.L. fem. pl. n.** *Norongarragalinaceae*, the *Norongarragalina* family

Nomenclatural type

Genus *Norongarragalina*

Description

The family *Norongarragalinaceae* is circumscribed based on two independent concatenated protein phylogenies of 122 and 93 markers, and supported by the rank normalisation approach as per Parks et al. (2018). The description is the same as that of its sole genus and species. The type genus is *Norongarragalina*.

This family is equivalent to f__0-14-0-20-59-11 in the GTDB r89/r202 (Parks et al., 2017).

Classification

Archaea » *Microcaldota* » *Microcaldia* » *Norongarragalinales* » *Norongarragalinaceae*

References

Effective publication: Vázquez-Campos et al., 2021 [1]

Registry URL

<https://seqco.de/i:23476>

Family *Tiddalikarchaeaceae*

Etymology

[Tid.da.lik.ar.chae.a'ce.ae] **N.L. neut. n.** *Tiddalikarchaeum*, referring to the type genus *Tiddalikarchaeum*; **-aceae**, ending to denote a family; **N.L. fem. pl. n.** *Tiddalikarchaeaceae*, the *Tiddalikarchaeum* family

Nomenclatural type

Genus *Tiddalikarchaeum*

Description

The family *Tiddalikarchaeaceae* is circumscribed based on two independent concatenated protein phylogenies of 122 and 93 markers, and supported by the rank normalisation approach as per Parks et al. (2018). The description is the same as that of its sole genus and species. The type genus is *Tiddalikarchaeum*.

The family is equivalent to f__CG07-land in GTDB r89/r202 (Parks et al., 2017).

Classification

Archaea » *Nanobdellota* » *Nanobdellia* » *Tiddalikarchaeales* » *Tiddalikarchaeaceae*

References

Effective publication: Vázquez-Campos et al., 2021 [1]

Registry URL

<https://seqco.de/i:23456>

Genus *Anstonella*

Etymology

[Ans.to.nel'la] **N.L. fem. dim. n.** *Anstonella*, archaeon named after ANSTO, Australian Nuclear Science and Technology Organisation, institution managing the Little Forest Legacy Site

Nomenclatural type

Species *Anstonella stagnisolia*^{Ts}

Description

The type species is *Anstonella stagnisolia*. The genus appears as g__CABMCJ01 in GTDB r202 (Parks et al., 2017).

Classification

Archaea » *Microcaldota* » *Microcaldia* » *Anstonellales* » *Anstonellaceae* » *Anstonella*

References

Effective publication: Vázquez-Campos et al., 2021 [1]

Registry URL

<https://seqco.de/i:23465>

Genus *Bilamarchaeum*

Etymology

[Bi.lam.ar.chae'um] **N.L. n.** *bilama*, freshwater turtle in Dharawal language, in reference to their presence still nowadays in the creeks and rivers associated with the Little Forest Legacy Site; **N.L. neut. n.** *archaeum*, archaeon; **N.L. neut. n.** *Bilamarchaeum*, an archaeon from the turtle lands

Nomenclatural type

Species *Bilamarchaeum dharawalense*^{Ts}

Description

The type species is *Bilamarchaeum dharawalense*. The genus appears as g__CAILMU01 in GTDB r202 (Parks et al., 2017).

Classification

Archaea » Microcaldota » Microcaldia » Anstonellales » Bilamarchaeaceae » Bilamarchaeum

References

Effective publication: Vázquez-Campos et al., 2021 [1]

Registry URL

<https://seqco.de/i:23468>

Genus *Burarchaeum*

Etymology

[Bur.ar.chae'um] **N.L. n.** *burus*, from buru, meaning kangaroo in the Dharawal language; **N.L. neut. n.** *archaeum*, archaeon; **N.L. neut. n.** *Burarchaeum*, an archaeon from the land of the kangaroos

Nomenclatural type

Species *Burarchaeum australiense*^{Ts}

Description

The type species is *Burarchaeum australiense*. The genus appears as g__CABMJK01 in GTDB r202 (Parks et al., 2017).

Classification

Archaea » Microcaldota » Microcaldia » Burarchaeales » Burarchaeaceae » Burarchaeum

References

Effective publication: Vázquez-Campos et al., 2021 [1]

Registry URL

<https://seqco.de/i:23461>

Genus *Gugararchaeum*

Etymology

[Gu.gar.ar.chae'um] **N.L. n.** *gugara*, meaning kookaburra in Dharawal language – bird endemic to Australia; **N.L. neut. n.** *archaeum*, archaeon; **N.L. neut. n.** *Gugararchaeum*, archaeon named after the aboriginal name of the kookaburra

Nomenclatural type

Species *Gugararchaeum adminiculabundum*^{Ts}

Description

The type species is *Gugararchaeum adminiculabundum*. The genus appears as g__CABMDC01 in GTDB r202 (Parks et al., 2017).

Classification

Archaea » *Microcaldota* » *Microcaldia* » *Gugararchaeales* » *Gugararchaeaceae* » *Gugararchaeum*

References

Effective publication: Vázquez-Campos et al., 2021 [1]

Registry URL

<https://seqco.de/i:23457>

Genus *Norongarragalina*

Etymology

[No.ron.gar.ra.ga.li'na] **N.L. n.** *Norongarragalus*, Norongarragal, Dharawal clan group who traditionally occupied the Menai/Lucas Heights area where the present study took place; **L. fem. adj. suff.** *-ina*, pertaining or belonging to; **N.L. fem. n.** *Norongarragalina*, organism named after the Norongarragal clan in Australia

Nomenclatural type

Species *Norongarragalina meridionalis*^{Ts}

Description

The type species is *Norongarragalina meridionalis*. This genus is equivalent to g__0-14-0-20-59-11 in GTDB r89/r202 (Parks et al., 2017).

Classification

Archaea » *Microcaldota* » *Microcaldia* » *Norongarragalinales* » *Norongarragalinae* » *Norongarragalina*

References

Effective publication: Vázquez-Campos et al., 2021 [1]

Registry URL

<https://seqco.de/i:23474>

Genus *Tiddalikarchaeum*

Etymology

[Tid.da.lik.ar.chae'um] **N.L. masc. n.** *Tiddalikus*, named after the frog from the Australian Aboriginal mythology; **N.L. neut. n.** *archaeum*, archaeon; **N.L. neut. n.** *Tiddalikarchaeum*, the archaeon named after the greedy Aboriginal mythological Australian frog that burst with water, referring to the bathtub effect exhibited by the disposal trenches at the Little Forest Legacy Site

Nomenclatural type

Species *Tiddalikarchaeum anstoanum*^{Ts}

Description

The type species is *Tiddalikarchaeum anstoanum*. The genus appears as g_CABMEV01 in GTDB r202 (Parks et al., 2017).

Classification

Archaea » *Nanobdellota* » *Nanobdellia* » *Tiddalikarchaeales* » *Tiddalikarchaeaceae* » *Tiddalikarchaeum*

References

Effective publication: Vázquez-Campos et al., 2021 [1]

Registry URL

<https://seqco.de/i:23454>

Species *Anstonella stagnisolia*^{Ts}

Etymology

[stag.ni.so'lia] **L. v.** *stagno*, to overflow; **L. neut. n.** *solium*, tub, bathtub; **N.L. neut. pl. n.** *stagnisolia*, overflowing bathtubs, in reference to the phenomenon described during heavy rainfalls at the Little Forest Legacy Site trenches

Nomenclatural type

[NCBI Assembly: GCA_902384585.1](#)^{Ts}

Description

The type material is the metagenome assembled genome (MAG) LFW-35 (ERS2655287) recovered from the groundwater of the Little Forest Legacy Site (NSW, Australia). The MAG consists of 1.33 Mbp in 68 contigs with an estimated completeness of 97.8%, redundancy of 2.2%, 16S, 23S and 5S rRNA gene, and 21 tRNAs. The GC content of this MAG is 50.3%. The type material appears in GTDB r202 (Parks et al., 2017) as reference for s_CABMCJ01 sp902384585.

Classification

Archaea » *Microcaldota* » *Microcaldia* » *Anstonellales* » *Anstonellaceae* » *Anstonella* » *Anstonella stagnisolia*^{Ts}

References

Effective publication: Vázquez-Campos et al., 2021 [1]

Registry URL

<https://seqco.de/i:23466>

Species *Bilamarchaeum dharawalense*^{Ts}

Etymology

[dha.ra.wa.len'se] **N.L. neut. adj.** *dharawalense*, pertaining to the Dharawal country, traditional name of the lands where the Little Forest Legacy Site is located

Nomenclatural type

[NCBI Assembly: GCA_902386555.1](#)^{Ts}

Description

The type material is the metagenome assembled genome (MAG) LFW-283_2 (ERS2655319) recovered from the groundwater of the Little Forest Legacy Site (NSW, Australia). The MAG consists of 1.27 Mbp in 63 contigs with an estimated completeness of 95.7%, redundancy of 0%, 16S, 23S and 5S rRNA gene, and 20 tRNAs. The GC content of this MAG is 40.0%. The type material appears in GTDB r202 (Parks et al., 2017) as reference for s_CAILMU01 sp902386555.

Classification

Archaea » *Microcaldota* » *Microcaldia* » *Anstonellales* » *Bilamarchaeaceae* » *Bilamarchaeum* » *Bilamarchaeum dharawalense*^{Ts}

References

Effective publication: Vázquez-Campos et al., 2021 [1]

Registry URL

<https://seqco.de/i:23469>

Species *Burarchaeum australiense*^{Ts}

Etymology

[aus.tra.lien'se] **N.L. neut. adj.** *australiense*, referring to Australia

Nomenclatural type

[NCBI Assembly: GCA_902386535.1](#)^{Ts}

Description

The type material is the metagenome assembled genome (MAG) LFW-281_7 (ERS2655318) recovered from the groundwater of the Little Forest Legacy Site (NSW, Australia). The MAG consists of 1.20 Mbp in 76 contigs with an estimated completeness of 96.8%, redundancy of 5.4%, 16S and 5S rRNA gene, and 18 tRNAs. The GC content of this MAG is 57.6%. The type material appears in GTDB r202 (Parks et al., 2017) as reference for s_CABMJK01 sp902386535.

Classification

Archaea » *Microcaldota* » *Microcaldia* » *Burarchaeales* » *Burarchaeaceae* » *Burarchaeum* » *Burarchaeum australiense*^{Ts}

References

Effective publication: Vázquez-Campos et al., 2021 [1]

Registry URL

<https://seqco.de/i:23462>

Species *Gugararchaeum adminiculabundum*^{Ts}

Etymology

[ad.mi.ni.cu.la.bun'dum] **L. neut. adj.** *adminiculabundum*, self-supporting, in reference to the limited external requirements and its suggested independence from a host/symbiote, due to the predicted presence of pathways for the biosynthesis of amino acids, purines, pyrimidines, thiamine, and riboflavin

Nomenclatural type

[NCBI Assembly: GCA_902384795.1](#)^{Ts}

Description

The type material is the metagenome assembled genome (MAG) LFW-121_3 (ERS2655302) recovered from the groundwater of the Little Forest Legacy Site (NSW, Australia). The MAG consists of 1.47 Mbp in 76 contigs with an estimated completeness of 96.8%, redundancy of 2.2%, 16S, 23S, and 5S rRNA gene, and 21 tRNAs. The GC content of this MAG is 49.8%.

The type material appears in GTDB r202 (Parks et al., 2017) as reference for s__CABMDC01 sp902384795.

Classification

Archaea » *Microcaldota* » *Microcaldia* » *Gugararchaeales* » *Gugararchaeaceae* » *Gugararchaeum* » *Gugararchaeum adminiculabundum*^{Ts}

References

Effective publication: Vázquez-Campos et al., 2021 [1]

Registry URL

<https://seqco.de/i:23458>

Species *Norongarragalina meridionalis*^{Ts}

Etymology

[me.ri.dio.na'lis] **L. fem. adj.** *meridionalis*, southern, referring to the Southern hemisphere, where its first genome was reconstructed

Nomenclatural type

[NCBI Assembly: GCA_902384935.1](#)^{Ts}

Description

The type material is the metagenome assembled genome (MAG) LFW-144_1 (ERS2655293) recovered from the groundwater of the Little Forest Legacy Site (NSW, Australia). The MAG consists of 0.93 Mbp in 49 contigs with an estimated completeness of 93.5%, redundancy of 1.1%, 16S and 5S rRNA gene, and 20 tRNAs. The GC content of this MAG is 57.5%.

The type material appears in GTDB r202 (Parks et al., 2017) as reference for s__0-14-0-20-59-11 sp902384935.

Classification

Archaea » *Microcaldota* » *Microcaldia* » *Norongarragalinales* » *Norongarragalinaceae* » *Norongarragalina* » *Norongarragalina meridionalis*^{Ts}

References

Effective publication: Vázquez-Campos et al., 2021 [1]

Registry URL

<https://seqco.de/i:23475>

Species *Tiddalikarchaeum anstoanum*^{Ts}

Etymology

[ans.to.a'num] **N.L. neut. adj.** *anstoanum*, from ANSTO, Australian Nuclear Science and Technology Organisation, institution managing the Little Forest Legacy Site

Nomenclatural type

[NCBI Assembly: GCA_902385255.1](#)^{Ts}

Description

The type material is the metagenome assembled genome (MAG) LFW-252_1 (ERS2655302) recovered from the groundwater of the Little Forest Legacy Site (NSW, Australia). The MAG consists of 1.16 Mbp in 56 contigs with an estimated completeness of 95.7%, redundancy of 1.1%, 16S, 23S, and 5S rRNA gene, and 21 tRNAs. The GC content of this MAG is 36.5%.

The type material appears in GTDB r202 (Parks et al., 2017) as reference for s__CABMEV01 sp902385255.

Classification

Archaea » *Nanobdellota* » *Nanobdellia* » *Tiddalikarchaeales* » *Tiddalikarchaeaceae* » *Tiddalikarchaeum* » *Tiddalikarchaeum anstoanum*^{Ts}

References

Effective publication: Vázquez-Campos et al., 2021 [1]

Registry URL

<https://seqco.de/i:23455>

References

1. Vázquez-Campos et al. (2021). Genomic Insights Into the Archaea Inhabiting an Australian Radioactive Legacy Site. *Frontiers in Microbiology*. [DOI:10.3389/fmicb.2021.732575](https://doi.org/10.3389/fmicb.2021.732575)

Register List Certificate of Validation

On behalf of the *Committee on the Systematics of Prokaryotes Described from Sequence Data* (SeqCode Committee), we hereby certify that the Register List **seqco.de/r:nsvepduf** submitted by **Vázquez-Campos, Xabier** and including 23 new names has been successfully validated.

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