

Register list for 8 new names including *Binatus soli* sp. nov.

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Table 1: Complete list of names proposed in the current register list.

Proposed Taxon	Etymology	Description	Parent Taxon	Type	Registry URL
Genus <i>Binatus</i>	[Bi.na'tus] L. adv. num. <i>bis</i> , twice; L. part. adj. <i>natus</i> , born, made; N.L. masc. n. <i>Binatus</i> , born-twice, referring to the discovery of the organism from the reprocessing (second study) of the originally studied metagenomic data	The description is identical to the type species.	<i>Binataceae</i>	<i>Binatus soli</i> ^{Ts}	seqco.de/i:31410
Genus <i>Hydrothermus</i>	[Hy.dro.ther'mus] Gr. neut. n. <i>hydôr</i> , water; Gr. masc. adj. <i>thermos</i> , hot; N.L. masc. n. <i>Hydrothermus</i> , an organism living in hot water	The description is identical to the type species.	<i>Hydrothermaceae</i>	<i>Hydrothermus pacificus</i> ^{Ts}	seqco.de/i:31415
Genus <i>Hydrothermarchaeum</i>	[Hy.dro.therm.ar.chae'um] Gr. n. <i>hydôr</i> , water; Gr. masc. adj. <i>thermos</i> , hot; N.L. neut. n. <i>archaeum</i> , archaeon from Gr. adj. <i>archaios</i> –ê –on ancient; N.L. neut. n. <i>Hydrothermarchaeum</i> , n archaeon from a hydrothermal environment	Identical to the type species.	<i>Hydrothermarchaeaceae</i>	<i>Hydrothermarchaeum profundum</i> ^{Ts}	seqco.de/i:31420
Genus <i>Hadarchaeum</i>	[Had.ar.chae'um] Gr. masc. n. <i>Haidês</i> , Hades, the underworld; N.L. neut. n. <i>archaeum</i> , archaeon; N.L. neut. n. <i>Hadarchaeum</i> , archaeon from the subsurface	Identical to the type species.	<i>Hadarchaeaceae</i>	<i>Hadarchaeum yellowstonense</i> ^{Ts}	seqco.de/i:31424

Proposed Taxon	Etymology	Description	Parent Taxon	Type	Registry URL
Species <i>Binatus soli</i> ^{Ts}	[so'li] L. gen. n. soli , of soil, referring to the isolation source of the organism	This species is the first genomic representative of candidate bacterial phylum UBP10. The MAG of this species was originally reconstructed from a soil metagenome by Parks et al. (2017).	<i>Binatus</i>	NCBI Assembly: GCA_002479255.1 ^{Ts}	seqco.de/i:31409
Species <i>Hadarchaeum yellowstonense</i> ^{Ts}	[yel.low.ston.en'se] N.L. neut. adj. yellowstonense , pertaining to the Yellowstone National Park, the place of sampling from where organism was found	A detailed metabolic description of the proposed <i>Ca. H. yellowstonense</i> , formerly identified as YNP_45, is given in the original work by Baker <i>et al.</i> (2016) Nat. Microbiol. 1, 16002. doi: 10.1038/NMICROBIOL.2016.2. The organisms was found in hot spring in Yellowstone National Park, USA. The reduced genome size and previously inferred gene content (821) suggests that the genome has undergone streamlining. The inferred metabolic capabilities indicates oxidation of carbon monoxide, which may be coupled to H ₂ O or nitrite reduction to ammonia. Also inferred to contain a variety of central carbon metabolic (C1 pathway) genes found in methanogens, which may be used for carbon fixation. The organism is inferred to be thermophilic.	<i>Hadarchaeum</i>	NCBI Assembly: GCA_001515205.2 ^{Ts}	seqco.de/i:31423
Species <i>Hydrothermarchaeum profundum</i> ^{Ts}	[pro.fun'di] L. gen. n. profundum , of/from the depth of the sea	The organism was formerly identified as JdFR-18 in the hydrothermal fluid from Juan de Fuca Ridge by Jungbluth et al. (2017) Sci. Data 4, 170037. doi: 10.1038/sdata.2017.37. An annotation of the genome is provided in the same original study. Metabolic capabilities inferred from the genome reveal a thermophilic carboxydolithotroph capable of chemotaxis and motility. The organism appears to be capable of anaerobic respiration with sulfate serving as a terminal electron acceptor.	<i>Hydrothermarchaeum</i>	NCBI Assembly: GCA_002011125.1 ^{Ts}	seqco.de/i:31421

Proposed Taxon	Etymology	Description	Parent Taxon	Type	Registry URL
Species <i>Hydrothermus pacificus</i> ^{Ts}	[pa.ci'fi.cus] L. masc. adj. <i>pacificus</i> , peaceful, pertaining to Pacific Ocean	This is one of the first genomic representatives of the EM3 lineage, later known as Candidate bacterial phylum Hydrothermae as proposed by Jungbluth et al. (2017). The MAG of this species has been reconstructed from the deep subsurface biosphere - the Juan de Fuca Ridge seafloor.	<i>Hydrothermus</i>	NCBI Assembly: GCA_002011615.1 ^{Ts}	seqco.de/i:31414