

Description of *Abyssibacteraceae* fam. nov.

Abyssibacteraceae (N.L. fem. pl. n. *Abyssibacteraceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is OUC007. The type genus for the taxon is *Abyssibacter*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Nevskiales*.

Description of *Abyssicoccaceae* fam. nov.

Abyssicoccaceae (N.L. fem. pl. n. *Abyssicoccaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is DSM-29158. The type genus for the taxon is *Abyssicoccus*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Staphylococcales*.

Description of *Candidatus Abyssisolibacteraceae* fam. nov.

Candidatus Abyssisolibacteraceae (N.L. fem. pl. n. *Abyssisolibacteraceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is MCWD3. The type genus for the taxon is *Candidatus Abyssisolibacter*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Tissierellales*.

Description of *Acetobacteroidaceae* fam. nov.

Acetobacteroidaceae (N.L. fem. pl. n. *Acetobacteroidaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is ZOR0009. The type genus for the taxon is *Acetobacteroides*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Bacteroidales*.

Description of *Candidatus Acidoferraceae* fam. nov.

Candidatus Acidoferraceae (N.L. fem. pl. n. *Acidoferraceae* a name created from the name of

the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is UBA7541. The type genus for the taxon is *Candidatus Acidoferrum*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Acidoferrales*.

Description of *Candidatus Acidulodesulfobacteriaceae* fam. nov.

Candidatus Acidulodesulfobacteriaceae (N.L. fem. pl. n. *Acidulodesulfobacteriaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is SZUA-79. The type genus for the taxon is *Candidatus Acidulodesulfobacterium*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Acidulodesulfobacterales*.

Description of *Candidatus Acidulodesulfobacteriota* phyl. nov.

Candidatus Acidulodesulfobacteriota (N.L. neut. pl. n. *Acidulodesulfobacteriota* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is SZUA-79. The type genus for the taxon is *Candidatus Acidulodesulfobacterium*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Bacteria*.

Description of *Actinomarinicolaceae* fam. nov.

Actinomarinicolaceae (N.L. fem. pl. n. *Actinomarinicolaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is SKKL01. The type genus for the taxon is *Actinomarinicola*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Acidimicrobiales*.

Description of *Candidatus Adamsellaceae* fam. nov.

Candidatus Adamsellaceae (N.L. fem. pl. n. *Adamsellaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy

Database (GTDB) release R207. The GTDB placeholder designation for this taxon is CAJFVJ01. The type genus for the taxon is *Candidatus Adamsella*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Gastranaerophilales*.

Description of *Candidatus Allochristensenellaceae* fam. nov.

Candidatus Allochristensenellaceae (N.L. fem. pl. n. *Allochristensenellaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is QAND01. The type genus for the taxon is *Candidatus Allochristensenella*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Christensenellales*.

Description of *Candidatus Alloclostridiaceae* fam. nov.

Candidatus Alloclostridiaceae (N.L. fem. pl. n. *Alloclostridiaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is UBA3700. The type genus for the taxon is *Candidatus Alloclostridium*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Christensenellales*.

Description of *Ammoniphilaceae* fam. nov.

Ammoniphilaceae (N.L. fem. pl. n. *Ammoniphilaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is RAOX-1. The type genus for the taxon is *Ammoniphilus*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Aneurinibacillales*.

Description of *Anaerobacteriaceae* fam. nov.

Anaerobacteriaceae (N.L. fem. pl. n. *Anaerobacteriaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is DSM-27016. The type genus for the taxon is *Anaerobacterium*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Acetivibrionales*.

Description of *Anoxybacteraceae* fam. nov.

Anoxybacteraceae (N.L. fem. pl. n. *Anoxybacteraceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is DY22613. The type genus for the taxon is *Anoxybacter*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Anoxybacterales*.

Description of *Anoxybacterales* ord. nov.

Anoxybacterales (N.L. fem. pl. n. *Anoxybacterales* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is DY22613. The type genus for the taxon is *Anoxybacter*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Halanaerobiia*.

Description of *Candidatus Aphodocolaceae* fam. nov.

Candidatus Aphodocolaceae (N.L. fem. pl. n. *Aphodocolaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is UBA660. The type genus for the taxon is *Candidatus Aphodocola*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Aphodocolales*.

Description of *Candidatus Aphodocolales* ord. nov.

Candidatus Aphodocolales (N.L. fem. pl. n. *Aphodocolales* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is RF39. The type genus for the taxon is *Candidatus Aphodocola*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Bacilli*.

Description of *Candidatus Aphodomorphaceae* fam. nov.

Candidatus Aphodomorphaceae (N.L. fem. pl. n. *Aphodomorphaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is CAG-138. The type genus for the taxon is *Candidatus Aphodomorpha*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Christensenellales*.

Description of *Candidatus Aphodoplasmataceae* fam. nov.

Candidatus Aphodoplasmataceae (N.L. fem. pl. n. *Aphodoplasmataceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is UMGS1253. The type genus for the taxon is *Candidatus Aphodoplasma*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Avimonoglobales*.

Description of *Aquicellaceae* fam. nov.

Aquicellaceae (N.L. fem. pl. n. *Aquicellaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is DSM-16500. The type genus for the taxon is *Aquicella*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Aquicellales*.

Description of *Aquicellales* ord. nov.

Aquicellales (N.L. fem. pl. n. *Aquicellales* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is DSM-16500. The type genus for the taxon is *Aquicella*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Gammaproteobacteria*.

Description of *Aureibacillaceae* fam. nov.

Aureibacillaceae (N.L. fem. pl. n. *Aureibacillaceae* a name created from the name of the type

genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is DSM-28697. The type genus for the taxon is *Aureibacillus*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Bacillales_D*.

Description of *Candidatus Auroraceae* fam. nov.

Candidatus Auroraceae (N.L. fem. pl. n. *Auroraceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is LV9. The type genus for the taxon is *Candidatus Aurora*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Gloeobacterales*.

Description of *Candidatus Avidehalobacteraceae* fam. nov.

Candidatus Avidehalobacteraceae (N.L. fem. pl. n. *Avidehalobacteraceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is UBA5755. The type genus for the taxon is *Candidatus Avidehalobacter*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Avidehalobacterales*.

Description of *Candidatus Avidehalobacterales* ord. nov.

Candidatus Avidehalobacterales (N.L. fem. pl. n. *Avidehalobacterales* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is UBA4068. The type genus for the taxon is *Candidatus Avidehalobacter*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Dehalobacteriia*.

Description of *Candidatus Avimonoglobaceae* fam. nov.

Candidatus Avimonoglobaceae (N.L. fem. pl. n. *Avimonoglobaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy

Database (GTDB) release R207. The GTDB placeholder designation for this taxon is UBA1381. The type genus for the taxon is *Candidatus Avimonoglobus*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Avimonoglobales*.

Description of *Candidatus Avimonoglobales* ord. nov.

Candidatus Avimonoglobales (N.L. fem. pl. n. *Avimonoglobales* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is UBA1381. The type genus for the taxon is *Candidatus Avimonoglobus*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Clostridia*.

Description of *Candidatus Avispirillaceae* fam. nov.

Candidatus Avispirillaceae (N.L. fem. pl. n. *Avispirillaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is CAG-272. The type genus for the taxon is *Candidatus Avispirillum*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Oscillospirales*.

Description of *Candidatus Bathyoplasmataceae* fam. nov.

Candidatus Bathyoplasmataceae (N.L. fem. pl. n. *Bathyoplasmataceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is MAG-NZ. The type genus for the taxon is *Candidatus Bathyoplasma*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Bathyoplasmatales*.

Description of *Candidatus Bathyoplasmatales* ord. nov.

Candidatus Bathyoplasmatales (N.L. fem. pl. n. *Bathyoplasmatales* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is MAG-NZ. The type genus for the taxon is *Candidatus Bathyoplasma*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Bacilli*.

Description of *Brockiaceae* fam. nov.

Brockiaceae (N.L. fem. pl. n. *Brockiaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is DSM-22653. The type genus for the taxon is *Brockia*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Brockiales*.

Description of *Brockiales* ord. nov.

Brockiales (N.L. fem. pl. n. *Brockiales* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is DSM-22653. The type genus for the taxon is *Brockia*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Bacilli*.

Description of *Candidatus Caccoplasmataceae* fam. nov.

Candidatus Caccoplasmataceae (N.L. fem. pl. n. *Caccoplasmataceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is G3-4614. The type genus for the taxon is *Candidatus Caccoplasma*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Bacteroidales*.

Description of *Candidatus Caccosmataceae* fam. nov.

Candidatus Caccosmataceae (N.L. fem. pl. n. *Caccosmataceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is CAG-631. The type genus for the taxon is *Candidatus Caccosoma*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Caccosmatales*.

Description of *Candidatus Caccosomatales* ord. nov.

Candidatus Caccosomatales (N.L. fem. pl. n. *Caccosomatales* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is RFN20. The type genus for the taxon is *Candidatus Caccosoma*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Bacilli*.

Description of *Caldibacillales* ord. nov.

Caldibacillales (N.L. fem. pl. n. *Caldibacillales* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is DSM-16016. The type genus for the taxon is *Caldibacillus*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Bacilli*.

Description of *Candidatus Caldipriscaceae* fam. nov.

Candidatus Caldipriscaceae (N.L. fem. pl. n. *Caldipriscaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is LBFQ01. The type genus for the taxon is *Candidatus Caldipriscus*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Caldipriscales*.

Description of *Candidatus Caldiprisciales* ord. nov.

Candidatus Caldiprisciales (N.L. fem. pl. n. *Caldiprisciales* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is LBFQ01. The type genus for the taxon is *Candidatus Caldipriscus*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Hydrothermia*.

Description of *Calorimonadaceae* fam. nov.

Calorimonadaceae (N.L. fem. pl. n. *Calorimonadaceae* a name created from the name of the

type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is UBA4877. The type genus for the taxon is *Calorimonas*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Thermoanaerobacterales*.

Description of *Capillibacteriaceae* fam. nov.

Capillibacteriaceae (N.L. fem. pl. n. *Capillibacteriaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is UBA10575. The type genus for the taxon is *Capillibacterium*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Capillibacteriales*.

Description of *Capillibacteriales* ord. nov.

Capillibacteriales (N.L. fem. pl. n. *Capillibacteriales* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is UBA10575. The type genus for the taxon is *Capillibacterium*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Hydrogenisporia*.

Description of *Cerasicoccaceae* fam. nov.

Cerasicoccaceae (N.L. fem. pl. n. *Cerasicoccaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is KCTC-12870. The type genus for the taxon is *Cerasicoccus*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Opitutales*.

Description of *Candidatus Chazhembtobacteriales* ord. nov.

Candidatus Chazhembtobacteriales (N.L. fem. pl. n. *Chazhembtobacteriales* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy

Database (GTDB) release R207. The GTDB placeholder designation for this taxon is UBA1400. The type genus for the taxon is *Candidatus Chazhembtobacterium*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Microgenomatia*.

Description of *Chitinivoraceae* fam. nov.

Chitinivoraceae (N.L. fem. pl. n. *Chitinivoraceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is SCOH01. The type genus for the taxon is *Chitinivorax*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Burkholderiales*.

Description of *Candidatus Coprenecaceae* fam. nov.

Candidatus Coprenecaceae (N.L. fem. pl. n. *Coprenecaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is UBA932. The type genus for the taxon is *Candidatus Coprenecus*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Bacteroidales*.

Description of *Coralimargaritaceae* fam. nov.

Coralimargaritaceae (N.L. fem. pl. n. *Coralimargaritaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is DSM-45221. The type genus for the taxon is *Coralimargarita*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Opitutales*.

Description of *Candidatus Cryptoclostridiaceae* fam. nov.

Candidatus Cryptoclostridiaceae (N.L. fem. pl. n. *Cryptoclostridiaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is UBA7702. The type genus for the taxon is *Candidatus Cryptoclostridium*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Cryptoclostridiales*.

Description of *Candidatus* Cryptoclostridiales ord. nov.

Candidatus Cryptoclostridiales (N.L. fem. pl. n. *Cryptoclostridiales* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is UBA7702. The type genus for the taxon is *Candidatus* Cryptoclostridium.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Dehalobacteriia*.

Description of *Candidatus* Cyanobiales ord. nov.

Candidatus Cyanobiales (N.L. fem. pl. n. *Cyanobiales* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is PCC-6307. The type genus for the taxon is *Candidatus* Cyanobium.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Cyanobacteriia*.

Description of *Candidatus* Cyclonatronaceae fam. nov.

Candidatus Cyclonatronaceae (N.L. fem. pl. n. *Cyclonatronaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is PXAI01. The type genus for the taxon is *Candidatus* Cyclonatronum.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Balneolales*.

Description of *Candidatus* Cytomitobacteraceae fam. nov.

Candidatus Cytomitobacteraceae (N.L. fem. pl. n. *Cytomitobacteraceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is 1604HC. The type genus for the taxon is *Candidatus* Cytomitobacter.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Rickettsiales*.

Description of *Dasaniaceae* fam. nov.

Dasaniaceae (N.L. fem. pl. n. *Dasaniaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is DSM-21967. The type genus for the taxon is *Dasania*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Pseudomonadales*.

Description of *Defluviicoccaceae* fam. nov.

Defluviicoccaceae (N.L. fem. pl. n. *Defluviicoccaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is UXAT02. The type genus for the taxon is *Defluviicoccus*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Rhodospirillales*.

Description of *Dendrosporobacterales* ord. nov.

Dendrosporobacterales (N.L. fem. pl. n. *Dendrosporobacterales* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is DSM-1736. The type genus for the taxon is *Dendrosporobacter*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Negativicutes*.

Description of *Desertibacillaceae* fam. nov.

Desertibacillaceae (N.L. fem. pl. n. *Desertibacillaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is KJ1-10-99. The type genus for the taxon is *Desertibacillus*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Bacillales_H*.

Description of *Desmosporaceae* fam. nov.

Desmosporaceae (N.L. fem. pl. n. *Desmosporaceae* a name created from the name of the type

genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is DSM-45169. The type genus for the taxon is *Desmospora*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Thermoactinomycetales*.

Description of *Candidatus Desulfaltiaceae* fam. nov.

Candidatus Desulfaltiaceae (N.L. fem. pl. n. *Desulfaltiaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is ETH-SRB1. The type genus for the taxon is *Candidatus Desulfaltia*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Desulfobacterales*.

Description of *Candidatus Desulfatibiaceae* fam. nov.

Candidatus Desulfatibiaceae (N.L. fem. pl. n. *Desulfatibiaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is UBA11574. The type genus for the taxon is *Candidatus Desulfatibia*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Desulfobacterales*.

Description of *Desulfosalsimonadaceae* fam. nov.

Desulfosalsimonadaceae (N.L. fem. pl. n. *Desulfosalsimonadaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is SURF-3. The type genus for the taxon is *Desulfosalsimonas*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Desulfobacterales*.

Description of *Desulfosomataceae* fam. nov.

Desulfosomataceae (N.L. fem. pl. n. *Desulfosomataceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy

Database (GTDB) release R207. The GTDB placeholder designation for this taxon is DSM-9756. The type genus for the taxon is *Desulfosoma*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Syntrophobacterales*.

Description of *Candidatus Egerieisomataceae* fam. nov.

Candidatus Egerieisomataceae (N.L. fem. pl. n. *Egerieisomataceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is UBA1255. The type genus for the taxon is *Candidatus Egerieisoma*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Egerieisomatales*.

Description of *Candidatus Egerieisomatales* ord. nov.

Candidatus Egerieisomatales (N.L. fem. pl. n. *Egerieisomatales* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is UBA1212. The type genus for the taxon is *Candidatus Egerieisoma*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Clostridia*.

Description of *Candidatus Enteromonadaceae* fam. nov.

Candidatus Enteromonadaceae (N.L. fem. pl. n. *Enteromonadaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is CAG-826. The type genus for the taxon is *Candidatus Enteromonas*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Caccosomatales*.

Description of *Candidatus Enterosomataceae* fam. nov.

Candidatus Enterosomataceae (N.L. fem. pl. n. *Enterosomataceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is CAG-288. The type genus for the taxon is *Candidatus Enterosoma*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Caccosomatales*.

Description of *Candidatus* Enterousiaceae fam. nov.

Candidatus Enterousiaceae (N.L. fem. pl. n. *Enterousiaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is Rs-D84. The type genus for the taxon is *Candidatus* Enterousia.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Enterousiales*.

Description of *Candidatus* Enterousiales ord. nov.

Candidatus Enterousiales (N.L. fem. pl. n. *Enterousiales* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is Rs-D84. The type genus for the taxon is *Candidatus* Enterousia.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Alphaproteobacteria*.

Description of *Candidatus* Entomospiraceae fam. nov.

Candidatus Entomospiraceae (N.L. fem. pl. n. *Entomospiraceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is WRBN01. The type genus for the taxon is *Candidatus* Entomospira.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Entomospirales*.

Description of *Candidatus* Entomospirales ord. nov.

Candidatus Entomospirales (N.L. fem. pl. n. *Entomospirales* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is WRBN01. The type genus for the taxon is *Candidatus* Entomospira.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Spirochaetia*.

Description of *Candidatus* Ethanoperedentaceae fam. nov.

Candidatus Ethanoperedentaceae (N.L. fem. pl. n. *Ethanoperedentaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is EX4572-44. The type genus for the taxon is *Candidatus* Ethanoperedens.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Methanosarcinales*.

Description of *Exilispiraceae* fam. nov.

Exilispiraceae (N.L. fem. pl. n. *Exilispiraceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is JAAYUW01. The type genus for the taxon is *Exilispira*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Exilispirales*.

Description of *Exilispirales* ord. nov.

Exilispirales (N.L. fem. pl. n. *Exilispirales* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is JAAYUW01. The type genus for the taxon is *Exilispira*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Exilispiria*.

Description of *Candidatus* Faecicolaceae fam. nov.

Candidatus Faecicolaceae (N.L. fem. pl. n. *Faecicolaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is CAG-917. The type genus for the taxon is *Candidatus* Faecicola.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Christensenellales*.

Description of *Candidatus* Faecimorphaceae fam. nov.

Candidatus Faecimorphaceae (N.L. fem. pl. n. *Faecimorphaceae* a name created from the name

of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is UBA1390. The type genus for the taxon is *Candidatus* Faecimorpha.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Lachnospirales*.

Description of *Falsibacillaceae* fam. nov.

Falsibacillaceae (N.L. fem. pl. n. *Falsibacillaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is DSM-25281. The type genus for the taxon is *Falsibacillus*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Bacillales_B*.

Description of *Candidatus* Fermentimicrarchaeaceae fam. nov.

Candidatus Fermentimicrarchaeaceae (N.L. fem. pl. n. *Fermentimicrarchaeaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is DTGH01. The type genus for the taxon is *Candidatus* Fermentimicrarchaeum.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Fermentimicrarchaeales*.

Description of *Candidatus* Fermentimicrarchaeales ord. nov.

Candidatus Fermentimicrarchaeales (N.L. fem. pl. n. *Fermentimicrarchaeales* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is DTNL01. The type genus for the taxon is *Candidatus* Fermentimicrarchaeum.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Micrarchaeia*.

Description of *Candidatus* Fimimonadaceae fam. nov.

Candidatus Fimimonadaceae (N.L. fem. pl. n. *Fimimonadaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy

Database (GTDB) release R207. The GTDB placeholder designation for this taxon is CAG-314. The type genus for the taxon is *Candidatus Fimimonas*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Christensenellales*.

Description of *Candidatus Finniellaceae* fam. nov.

Candidatus Finniellaceae (N.L. fem. pl. n. *Finniellaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is UBA11393. The type genus for the taxon is *Candidatus Finniella*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Paracaedibacterales*.

Description of *Fodinicolaceae* fam. nov.

Fodinicolaceae (N.L. fem. pl. n. *Fodinicolaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is HKI-0501. The type genus for the taxon is *Fodinicola*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Mycobacteriales*.

Description of *Candidatus Forterreaceae* fam. nov.

Candidatus Forterreaceae (N.L. fem. pl. n. *Forterreaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is CSSED10-239. The type genus for the taxon is *Candidatus Forterrea*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Forterreales*.

Description of *Candidatus Forterreales* ord. nov.

Candidatus Forterreales (N.L. fem. pl. n. *Forterreales* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is 0-14-0-20-30-16. The type genus for the taxon is *Candidatus Forterrea*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Iainarchaeia*.

Description of *Candidatus Gallibacteroidaceae* fam. nov.

Candidatus Gallibacteroidaceae (N.L. fem. pl. n. *Gallibacteroidaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is CHK158-818. The type genus for the taxon is *Candidatus Gallibacteroides*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Bacteroidales*.

Description of *Candidatus Gallispiraceae* fam. nov.

Candidatus Gallispiraceae (N.L. fem. pl. n. *Gallispiraceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is CAG-274. The type genus for the taxon is *Candidatus Gallispira*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Lachnospirales*.

Description of *Candidatus Geddesellaceae* fam. nov.

Candidatus Geddesellaceae (N.L. fem. pl. n. *Geddesellaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is UBA644. The type genus for the taxon is *Candidatus Geddesella*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Oscillospirales*.

Description of *Candidatus Geohydrothermomicrobiaceae* fam. nov.

Candidatus Geohydrothermomicrobiaceae (N.L. fem. pl. n. *Geohydrothermomicrobiaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is JACVIW01. The type genus for the taxon is *Candidatus Geohydrothermomicrobium*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Geohydrothermomicrobiales*.

Description of *Candidatus Geohydrothermomicrobiales* ord. nov.

Candidatus Geohydrothermomicrobiales (N.L. fem. pl. n. *Geohydrothermomicrobiales* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is Fen-727. The type genus for the taxon is *Candidatus Geohydrothermomicrobium*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Geothermincolia*.

Description of *Gorillibacteriaceae* fam. nov.

Gorillibacteriaceae (N.L. fem. pl. n. *Gorillibacteriaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is NBRC-103111. The type genus for the taxon is *Gorillibacterium*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Paenibacillales*.

Description of *Candidatus Guanabaribacteriaceae* fam. nov.

Candidatus Guanabaribacteriaceae (N.L. fem. pl. n. *Guanabaribacteriaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is B3-B38. The type genus for the taxon is *Candidatus Guanabaribacterium*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Guanabaribacteriales*.

Description of *Candidatus Guanabaribacteriales* ord. nov.

Candidatus Guanabaribacteriales (N.L. fem. pl. n. *Guanabaribacteriales* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is B3-B38. The type genus for the taxon is *Candidatus Guanabaribacterium*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Guanabaribacteriia*.

Description of *Halocellaceae* fam. nov.

Halocellaceae (N.L. fem. pl. n. *Halocellaceae* a name created from the name of the type genus

by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is DTU029. The type genus for the taxon is *Halocella*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Halanaerobiales*.

Description of *Halofilales* ord. nov.

Halofilales (N.L. fem. pl. n. *Halofilales* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is XJ16. The type genus for the taxon is *Halofilum*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Gammaproteobacteria*.

Description of *Halostellaceae* fam. nov.

Halostellaceae (N.L. fem. pl. n. *Halostellaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is QS-9-68-17. The type genus for the taxon is *Halostella*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Halobacteriales*.

Description of *Candidatus* *Harrysmithimonadaceae* fam. nov.

Candidatus *Harrysmithimonadaceae* (N.L. fem. pl. n. *Harrysmithimonadaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is CAJFEE01. The type genus for the taxon is *Candidatus* *Harrysmithimonas*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Harrysmithimonadales*.

Description of *Candidatus* *Harrysmithimonadales* ord. nov.

Candidatus *Harrysmithimonadales* (N.L. fem. pl. n. *Harrysmithimonadales* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy

Database (GTDB) release R207. The GTDB placeholder designation for this taxon is CAJFEE01. The type genus for the taxon is *Candidatus Harrysmithimonas*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Bacilli*.

Description of *Hydrogenisporaceae* fam. nov.

Hydrogenisporaceae (N.L. fem. pl. n. *Hydrogenisporaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is UBA8346. The type genus for the taxon is *Hydrogenispora*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Hydrogenisporales*.

Description of *Hydrogenisporales* ord. nov.

Hydrogenisporales (N.L. fem. pl. n. *Hydrogenisporales* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is UBA8346. The type genus for the taxon is *Hydrogenispora*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Hydrogenisporia*.

Description of *Candidatus Hydrothermota* phyl. nov.

Candidatus Hydrothermota (N.L. neut. pl. n. *Hydrothermota* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is WOR-3. The type genus for the taxon is *Candidatus Hydrothermus*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Bacteria*.

Description of *Inmiraniaceae* fam. nov.

Inmiraniaceae (N.L. fem. pl. n. *Inmiraniaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is DSM-100275. The type genus for the taxon is *Inmirania*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Inmiraniales*.

Description of *Inmiraniales* ord. nov.

Inmiraniales (N.L. fem. pl. n. *Inmiraniales* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is DSM-100275. The type genus for the taxon is *Inmirania*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Gammaproteobacteria*.

Description of *Inquilinales* ord. nov.

Inquilinales (N.L. fem. pl. n. *Inquilinales* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is DSM-16000. The type genus for the taxon is *Inquilinus*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Alphaproteobacteria*.

Description of *Isachenkoniaceae* fam. nov.

Isachenkoniaceae (N.L. fem. pl. n. *Isachenkoniaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is T1SED10-28. The type genus for the taxon is *Isachenkonionia*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Peptostreptococcales*.

Description of *Candidatus Kariarchaeales* ord. nov.

Candidatus Kariarchaeales (N.L. fem. pl. n. *Kariarchaeales* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is UBA460. The type genus for the taxon is *Candidatus Kariarchaeum*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Heimdallarchaeia*.

Description of *Candidatus Kaustiaceae* fam. nov.

Candidatus Kaustiaceae (N.L. fem. pl. n. *Kaustiaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is Im1. The type genus for the taxon is *Candidatus* Kaustia.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Rhizobiales*.

Description of *Limibacillaceae* fam. nov.

Limibacillaceae (N.L. fem. pl. n. *Limibacillaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is CECT-8803. The type genus for the taxon is *Limibacillus*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Kiloniellales*.

Description of *Candidatus Limimorphaceae* fam. nov.

Candidatus Limimorphaceae (N.L. fem. pl. n. *Limimorphaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is F082. The type genus for the taxon is *Candidatus* Limimorpha.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Bacteroidales*.

Description of *Limisphaeraceae* fam. nov.

Limisphaeraceae (N.L. fem. pl. n. *Limisphaeraceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is NGM72-4. The type genus for the taxon is *Limisphaera*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Pedosphaerales*.

Description of *Longirhabdaceae* fam. nov.

Longirhabdaceae (N.L. fem. pl. n. *Longirhabdaceae* a name created from the name of the type

genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is SCSIO-06110. The type genus for the taxon is *Longirhabdus*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Paenibacillales*.

Description of *Lottiidibacillaceae* fam. nov.

Lottiidibacillaceae (N.L. fem. pl. n. *Lottiidibacillaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is SA5d-4. The type genus for the taxon is *Lottiidibacillus*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Bacillales_E*.

Description of *Luciferaceae* fam. nov.

Luciferaceae (N.L. fem. pl. n. *Luciferaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is UPPP01. The type genus for the taxon is *Lucifera*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Sporomusales*.

Description of *Candidatus Macondimonadaceae* fam. nov.

Candidatus Macondimonadaceae (N.L. fem. pl. n. *Macondimonadaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is UBA5335. The type genus for the taxon is *Candidatus Macondimonas*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Macondimonadales*.

Description of *Candidatus Macondimonadales* ord. nov.

Candidatus Macondimonadales (N.L. fem. pl. n. *Macondimonadales* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy

Database (GTDB) release R207. The GTDB placeholder designation for this taxon is UBA5335. The type genus for the taxon is *Candidatus* Macondimonas.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Gammaproteobacteria*.

Description of *Candidatus* Manganitrophaceae fam. nov.

Candidatus Manganitrophaceae (N.L. fem. pl. n. *Manganitrophaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is SCUR01. The type genus for the taxon is *Candidatus* Manganitrophus.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Manganitrophales*.

Description of *Candidatus* Manganitrophales ord. nov.

Candidatus Manganitrophales (N.L. fem. pl. n. *Manganitrophales* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is SBBL01. The type genus for the taxon is *Candidatus* Manganitrophus.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Nitrospiria*.

Description of *Candidatus* Maribacillaceae fam. nov.

Candidatus Maribacillaceae (N.L. fem. pl. n. *Maribacillaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is UBA6769. The type genus for the taxon is *Candidatus* Maribacillus.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Bacillales_G*.

Description of *Marispirochaetales* ord. nov.

Marispirochaetales (N.L. fem. pl. n. *Marispirochaetales* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is JC444. The type genus for the taxon is *Marispirochaeta*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Spirochaetia*.

Description of *Marivibrionaceae* fam. nov.

Marivibrionaceae (N.L. fem. pl. n. *Marivibrionaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is GCA-2696645. The type genus for the taxon is *Marivibrio*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Marivibrionales*.

Description of *Marivibrionales* ord. nov.

Marivibrionales (N.L. fem. pl. n. *Marivibrionales* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is UBA8366. The type genus for the taxon is *Marivibrio*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Alphaproteobacteria*.

Description of *Candidatus Merdicolaceae* fam. nov.

Candidatus Merdicolaceae (N.L. fem. pl. n. *Merdicolaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is CAG-508. The type genus for the taxon is *Candidatus Merdicola*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Merdicolales*.

Description of *Candidatus Merdicolales* ord. nov.

Candidatus Merdicolales (N.L. fem. pl. n. *Merdicolales* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is TANB77. The type genus for the taxon is *Candidatus Merdicola*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Clostridia*.

Description of *Candidatus Merdimorphaceae* fam. nov.

Candidatus Merdimorphaceae (N.L. fem. pl. n. *Merdimorphaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is UBA1820. The type genus for the taxon is *Candidatus Merdimorpha*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Flavobacteriales*.

Description of *Candidatus Merdousiaceae* fam. nov.

Candidatus Merdousiaceae (N.L. fem. pl. n. *Merdousiaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is CAG-312. The type genus for the taxon is *Candidatus Merdousia*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Opitutales*.

Description of *Candidatus Micropelagiaceae* fam. nov.

Candidatus Micropelagiaceae (N.L. fem. pl. n. *Micropelagiaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is RS24. The type genus for the taxon is *Candidatus Micropelagius*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Parvibaculales*.

Description of *Candidatus Moanabacteraceae* fam. nov.

Candidatus Moanabacteraceae (N.L. fem. pl. n. *Moanabacteraceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is UBA2987. The type genus for the taxon is *Candidatus Moanabacter*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Opitutales*.

Description of *Natranaerovirgaceae* fam. nov.

Natranaerovirgaceae (N.L. fem. pl. n. *Natranaerovirgaceae* a name created from the name of the

type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is DSM-24629. The type genus for the taxon is *Natranaerovirga*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Lachnospirales*.

Description of *Candidatus Natronoplasmataceae* fam. nov.

Candidatus Natronoplasmataceae (N.L. fem. pl. n. *Natronoplasmataceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is PWKY01. The type genus for the taxon is *Candidatus Natronoplasma*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Natronoplasmales*.

Description of *Candidatus Natronoplasmales* ord. nov.

Candidatus Natronoplasmales (N.L. fem. pl. n. *Natronoplasmales* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is PWKY01. The type genus for the taxon is *Candidatus Natronoplasma*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Thermoplasmata*.

Description of *Nialliaceae* fam. nov.

Nialliaceae (N.L. fem. pl. n. *Nialliaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is DSM-18226. The type genus for the taxon is *Niallia*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Bacillales_B*.

Description of *Candidatus Oleimmundimicrobiales* ord. nov.

Candidatus Oleimmundimicrobiales (N.L. fem. pl. n. *Oleimmundimicrobiales* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy

Database (GTDB) release R207. The GTDB placeholder designation for this taxon is UBA3085. The type genus for the taxon is *Candidatus Oleimmundimicrobium*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Aquicultoria*.

Description of *Oleispiraceae* fam. nov.

Oleispiraceae (N.L. fem. pl. n. *Oleispiraceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is DSM-6294. The type genus for the taxon is *Oleispira*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Pseudomonadales*.

Description of *Candidatus Onthenecaceae* fam. nov.

Candidatus Onthenecaceae (N.L. fem. pl. n. *Onthenecaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is CAG-74. The type genus for the taxon is *Candidatus Onthenecus*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Christensenellales*.

Description of *Candidatus Onthomorphaceae* fam. nov.

Candidatus Onthomorphaceae (N.L. fem. pl. n. *Onthomorphaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is P3. The type genus for the taxon is *Candidatus Onthomorpha*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Bacteroidales*.

Description of *Candidatus Onthoplasmataceae* fam. nov.

Candidatus Onthoplasmataceae (N.L. fem. pl. n. *Onthoplasmataceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is UBA1242. The type genus for the taxon is *Candidatus Onthoplasma*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Christensenellales*.

Description of *Candidatus Parachristensenellaceae* fam. nov.

Candidatus Parachristensenellaceae (N.L. fem. pl. n. *Parachristensenellaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is UMGS416. The type genus for the taxon is *Candidatus Parachristensenella*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Christensenellales*.

Description of *Pasteuriales* ord. nov.

Pasteuriales (N.L. fem. pl. n. *Pasteuriales* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is RES148. The type genus for the taxon is *Pasteuria*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Bacilli*.

Description of *Pelagibaculaceae* fam. nov.

Pelagibaculaceae (N.L. fem. pl. n. *Pelagibaculaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is HP12. The type genus for the taxon is *Pelagibaculum*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Pelagibaculales*.

Description of *Pelagibaculales* ord. nov.

Pelagibaculales (N.L. fem. pl. n. *Pelagibaculales* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is HP12. The type genus for the taxon is *Pelagibaculum*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Gammaproteobacteria*.

Description of *Pelomicrobiaceae* fam. nov.

Pelomicrobiaceae (N.L. fem. pl. n. *Pelomicrobiaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is UBA6910. The type genus for the taxon is *Pelomicrobium*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Burkholderiales*.

Description of *Permianibacteraceae* fam. nov.

Permianibacteraceae (N.L. fem. pl. n. *Permianibacteraceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is DSM-103792. The type genus for the taxon is *Permianibacter*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Enterobacterales*.

Description of *Petroclostridiaceae* fam. nov.

Petroclostridiaceae (N.L. fem. pl. n. *Petroclostridiaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is SK-Y3. The type genus for the taxon is *Petroclostridium*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Petroclostridiales*.

Description of *Petroclostridiales* ord. nov.

Petroclostridiales (N.L. fem. pl. n. *Petroclostridiales* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is SK-Y3. The type genus for the taxon is *Petroclostridium*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Clostridia*.

Description of *Planifilaceae* fam. nov.

Planifilaceae (N.L. fem. pl. n. *Planifilaceae* a name created from the name of the type genus by

addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is DSM-44946. The type genus for the taxon is *Planifilum*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Thermoactinomycetales*.

Description of *Polycladomycetaceae* fam. nov.

Polycladomycetaceae (N.L. fem. pl. n. *Polycladomycetaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is JIR-001. The type genus for the taxon is *Polycladomyces*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Thermoactinomycetales*.

Description of *Pradoshiaceae* fam. nov.

Pradoshiaceae (N.L. fem. pl. n. *Pradoshiaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is DSM-1321. The type genus for the taxon is *Pradoshia*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Bacillales_B*.

Description of *Candidatus Prometheoarchaeaceae* fam. nov.

Candidatus Prometheoarchaeaceae (N.L. fem. pl. n. *Prometheoarchaeaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is MK-D1. The type genus for the taxon is *Candidatus Prometheoarchaeum*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Prometheoarchaeales*.

Description of *Candidatus Prometheoarchaeales* ord. nov.

Candidatus Prometheoarchaeales (N.L. fem. pl. n. *Prometheoarchaeales* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy

Database (GTDB) release R207. The GTDB placeholder designation for this taxon is CR-4. The type genus for the taxon is *Candidatus Prometheoarchaeum*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Lokiarchaeia*.

Description of *Candidatus Protoclostridiaceae* fam. nov.

Candidatus Protoclostridiaceae (N.L. fem. pl. n. *Protoclostridiaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is CAG-552. The type genus for the taxon is *Candidatus Protoclostridium*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Christensenellales*.

Description of *Pseudobacteroidaceae* fam. nov.

Pseudobacteroidaceae (N.L. fem. pl. n. *Pseudobacteroidaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is DSM-2933. The type genus for the taxon is *Pseudobacteroides*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Acetivibrionales*.

Description of *Pseudofulvimonadaceae* fam. nov.

Pseudofulvimonadaceae (N.L. fem. pl. n. *Pseudofulvimonadaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is UBA2363. The type genus for the taxon is *Pseudofulvimonas*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Xanthomonadales*.

Description of *Pseudothermotogaceae* fam. nov.

Pseudothermotogaceae (N.L. fem. pl. n. *Pseudothermotogaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is DSM-5069. The type genus for the taxon is *Pseudothermotoga*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Thermotogales*.

Description of *Pyruvatibacteraceae* fam. nov.

Pyruvatibacteraceae (N.L. fem. pl. n. *Pyruvatibacteraceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is CGMCC-115125. The type genus for the taxon is *Pyruvatibacter*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Parvibaculales*.

Description of *Rectinemataceae* fam. nov.

Rectinemataceae (N.L. fem. pl. n. *Rectinemataceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is UBA8932. The type genus for the taxon is *Rectinema*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Treponematales*.

Description of *Candidatus Reidiellaceae* fam. nov.

Candidatus Reidiellaceae (N.L. fem. pl. n. *Reidiellaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is GCF-013343005. The type genus for the taxon is *Candidatus Reidiella*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Reidiellales*.

Description of *Candidatus Reidiellales* ord. nov.

Candidatus Reidiellales (N.L. fem. pl. n. *Reidiellales* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is GCF-013343005. The type genus for the taxon is *Candidatus Reidiella*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Gammaproteobacteria*.

Description of *Rhabdothermincolaceae* fam. nov.

Rhabdothermincolaceae (N.L. fem. pl. n. *Rhabdothermincolaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is UBA8139. The type genus for the taxon is *Rhabdothermincola*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Acidimicrobiales*.

Description of *Rhodocytophagaceae* fam. nov.

Rhodocytophagaceae (N.L. fem. pl. n. *Rhodocytophagaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is 172606-1. The type genus for the taxon is *Rhodocytophaga*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Cytophagales*.

Description of *Candidatus Roseilineaceae* fam. nov.

Candidatus Roseilineaceae (N.L. fem. pl. n. *Roseilineaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is J036. The type genus for the taxon is *Candidatus Roseilinea*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Thermoflexales*.

Description of *Salinispirales* ord. nov.

Salinispirales (N.L. fem. pl. n. *Salinispirales* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is DSM-27196. The type genus for the taxon is *Salinispira*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Spirochaetia*.

Description of *Candidatus Scatocolaceae* fam. nov.

Candidatus Scatocolaceae (N.L. fem. pl. n. *Scatocolaceae* a name created from the name of the

type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is CAG-239. The type genus for the taxon is *Candidatus Scatocola*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Scatocolales*.

Description of *Candidatus Scatocolales* ord. nov.

Candidatus Scatocolales (N.L. fem. pl. n. *Scatocolales* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is RF32. The type genus for the taxon is *Candidatus Scatocola*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Alphaproteobacteria*.

Description of *Sediminispirochaetales* ord. nov.

Sediminispirochaetales (N.L. fem. pl. n. *Sediminispirochaetales* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is DSM-16054. The type genus for the taxon is *Sediminispirochaeta*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Spirochaetia*.

Description of *Candidatus Senegaliaceae* fam. nov.

Candidatus Senegaliaceae (N.L. fem. pl. n. *Senegaliaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is SIT17. The type genus for the taxon is *Candidatus Senegalia*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Tissierellales*.

Description of *Candidatus Similichlamydiaceae* fam. nov.

Candidatus Similichlamydiaceae (N.L. fem. pl. n. *Similichlamydiaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy

Database (GTDB) release R207. The GTDB placeholder designation for this taxon is Parilichlamydiaceae. The type genus for the taxon is *Candidatus Similichlamydia*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Similichlamydiales*.

Description of *Candidatus Similichlamydiales* ord. nov.

Candidatus Similichlamydiales (N.L. fem. pl. n. *Similichlamydiales* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is Hat2. The type genus for the taxon is *Candidatus Similichlamydia*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Chlamydia*.

Description of *Sinobacteriaceae* fam. nov.

Sinobacteriaceae (N.L. fem. pl. n. *Sinobacteriaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is DSM-100316. The type genus for the taxon is *Sinobacterium*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Pseudomonadales*.

Description of *Candidatus Solincolaceae* fam. nov.

Candidatus Solincolaceae (N.L. fem. pl. n. *Solincolaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is RBG-13-55-18. The type genus for the taxon is *Candidatus Solincola*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Geothermincolales*.

Description of *Sporosalibacteriaceae* fam. nov.

Sporosalibacteriaceae (N.L. fem. pl. n. *Sporosalibacteriaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is VENL01. The type genus for the taxon is *Sporosalibacterium*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Tissierellales*.

Description of *Candidatus* Spyradenecaceae fam. nov.

Candidatus Spyradenecaceae (N.L. fem. pl. n. *Spyradenecaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is UBA1067. The type genus for the taxon is *Candidatus* Spyradenecus.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Spyradenecales*.

Description of *Candidatus* Spyradenecales ord. nov.

Candidatus Spyradenecales (N.L. fem. pl. n. *Spyradenecales* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is RFP12. The type genus for the taxon is *Candidatus* Spyradenecus.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Kiritimatiellae*.

Description of *Candidatus* Spyradocolaceae fam. nov.

Candidatus Spyradocolaceae (N.L. fem. pl. n. *Spyradocolaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is UBA1750. The type genus for the taxon is *Candidatus* Spyradocola.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Christensenellales*.

Description of *Candidatus* Spyradosomataceae fam. nov.

Candidatus Spyradosomataceae (N.L. fem. pl. n. *Spyradosomataceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is UBA953. The type genus for the taxon is *Candidatus* Spyradosoma.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Opitutales*.

Description of *Stellales* ord. nov.

Stellales (N.L. fem. pl. n. *Stellales* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is ATCC43930. The type genus for the taxon is *Stella*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Alphaproteobacteria*.

Description of *Candidatus Stercoripulliclostridiaceae* fam. nov.

Candidatus Stercoripulliclostridiaceae (N.L. fem. pl. n. *Stercoripulliclostridiaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is DTU072. The type genus for the taxon is *Candidatus Stercoripulliclostridium*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Christensenellales*.

Description of *Candidatus Sulfobiaceae* fam. nov.

Candidatus Sulfobiaceae (N.L. fem. pl. n. *Sulfobiaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is UBA6898. The type genus for the taxon is *Candidatus Sulfobium*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Thermodesulfovibrionales*.

Description of *Candidatus Sulfotelmatobacteraceae* fam. nov.

Candidatus Sulfotelmatobacteraceae (N.L. fem. pl. n. *Sulfotelmatobacteraceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is SbA1. The type genus for the taxon is *Candidatus Sulfotelmatobacter*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Acidobacteriales*.

Description of *Sulfuriflexaceae* fam. nov.

Sulfuriflexaceae (N.L. fem. pl. n. *Sulfuriflexaceae* a name created from the name of the type

genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is AKS1. The type genus for the taxon is *Sulfuriflexus*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Sulfuriflexales*.

Description of *Sulfuriflexales* ord. nov.

Sulfuriflexales (N.L. fem. pl. n. *Sulfuriflexales* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is AKS1. The type genus for the taxon is *Sulfuriflexus*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Gammaproteobacteria*.

Description of *Symmachiellaceae* fam. nov.

Symmachiellaceae (N.L. fem. pl. n. *Symmachiellaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is Mal52. The type genus for the taxon is *Symmachiella*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Planctomycetales*.

Description of *Candidatus* *Tabaqchaliaceae* fam. nov.

Candidatus *Tabaqchaliaceae* (N.L. fem. pl. n. *Tabaqchaliaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is CAJFTT01. The type genus for the taxon is *Candidatus* *Tabaqchalia*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Oscillospirales*.

Description of *Tagaeaceae* fam. nov.

Tagaeaceae (N.L. fem. pl. n. *Tagaeaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy

Database (GTDB) release R207. The GTDB placeholder designation for this taxon is CACIAM-22H2. The type genus for the taxon is *Tagaea*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Tagaeales*.

Description of *Tagaeales* ord. nov.

Tagaeales (N.L. fem. pl. n. *Tagaeales* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is CACIAM-22H2. The type genus for the taxon is *Tagaea*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Alphaproteobacteria*.

Description of *Terricaulaceae* fam. nov.

Terricaulaceae (N.L. fem. pl. n. *Terricaulaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is TH1-2. The type genus for the taxon is *Terricaulis*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Caulobacterales*.

Description of *Thermanaerosceptraceae* fam. nov.

Thermanaerosceptraceae (N.L. fem. pl. n. *Thermanaerosceptraceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is DRI-13. The type genus for the taxon is *Thermanaerosceptrum*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Thermanaerosceptrales*.

Description of *Thermanaerosceptrales* ord. nov.

Thermanaerosceptrales (N.L. fem. pl. n. *Thermanaerosceptrales* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is DRI-13. The type genus for the taxon is *Thermanaerosceptrum*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Peptococcia*.

Description of *Thermoclostridiaceae* fam. nov.

Thermoclostridiaceae (N.L. fem. pl. n. *Thermoclostridiaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is DSM-8532. The type genus for the taxon is *Thermoclostridium*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Acetivibrionales*.

Description of *Thermosulfuriphilaceae* fam. nov.

Thermosulfuriphilaceae (N.L. fem. pl. n. *Thermosulfuriphilaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is ST65. The type genus for the taxon is *Thermosulfuriphilus*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Thermodesulfobacteriales*.

Description of *Thioalbaceae* fam. nov.

Thioalbaceae (N.L. fem. pl. n. *Thioalbaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is DSM-26407. The type genus for the taxon is *Thioalbus*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Thioalbales*.

Description of *Thioalbales* ord. nov.

Thioalbales (N.L. fem. pl. n. *Thioalbales* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is DSM-26407. The type genus for the taxon is *Thioalbus*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Gammaproteobacteria*.

Description of *Candidatus Thioglobales* ord. nov.

Candidatus Thioglobales (N.L. fem. pl. n. *Thioglobales* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is PS1. The type genus for the taxon is *Candidatus Thioglobus*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Gammaproteobacteria*.

Description of *Thiogranaceae* fam. nov.

Thiogranaceae (N.L. fem. pl. n. *Thiogranaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is DSM-19610. The type genus for the taxon is *Thiogramum*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Thiogranales*.

Description of *Thiogranales* ord. nov.

Thiogranales (N.L. fem. pl. n. *Thiogranales* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is DSM-19610. The type genus for the taxon is *Thiogramum*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Gammaproteobacteria*.

Description of *Thiohalophilaceae* fam. nov.

Thiohalophilaceae (N.L. fem. pl. n. *Thiohalophilaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is UBA6429. The type genus for the taxon is *Thiohalophilus*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Thiohalophilales*.

Description of *Thiohalophilales* ord. nov.

Thiohalophilales (N.L. fem. pl. n. *Thiohalophilales* a name created from the name of the type

genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is UBA6429. The type genus for the taxon is *Thiohalophilus*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Gammaproteobacteria*.

Description of *Candidatus Thiopontiaceae* fam. nov.

Candidatus Thiopontiaceae (N.L. fem. pl. n. *Thiopontiaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is GCF-002020875. The type genus for the taxon is *Candidatus Thiopontia*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Thiopontiales*.

Description of *Candidatus Thiopontiales* ord. nov.

Candidatus Thiopontiales (N.L. fem. pl. n. *Thiopontiales* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is GCF-002020875. The type genus for the taxon is *Candidatus Thiopontia*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Gammaproteobacteria*.

Description of *Thiospirochaetaceae* fam. nov.

Thiospirochaetaceae (N.L. fem. pl. n. *Thiospirochaetaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is DSM-19205. The type genus for the taxon is *Thiospirochaeta*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Spirochaetales_E*.

Description of *Tistliaceae* fam. nov.

Tistliaceae (N.L. fem. pl. n. *Tistliaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy

Database (GTDB) release R207. The GTDB placeholder designation for this taxon is DSM-21159. The type genus for the taxon is *Tistlia*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Kiloniellales*.

Description of *Candidatus Udaeobacteraceae* fam. nov.

Candidatus Udaeobacteraceae (N.L. fem. pl. n. *Udaeobacteraceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is UBA10450. The type genus for the taxon is *Candidatus Udaeobacter*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Chthoniobacterales*.

Description of *Umboniibacteraceae* fam. nov.

Umboniibacteraceae (N.L. fem. pl. n. *Umboniibacteraceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is DSM-25080. The type genus for the taxon is *Umboniibacter*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Pseudomonadales*.

Description of *Candidatus Vampirococcaceae* fam. nov.

Candidatus Vampirococcaceae (N.L. fem. pl. n. *Vampirococcaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is X112. The type genus for the taxon is *Candidatus Vampirococcus*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Vampirococcales*.

Description of *Candidatus Vampirococcales* ord. nov.

Candidatus Vampirococcales (N.L. fem. pl. n. *Vampirococcales* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is Absconditabacterales. The type genus for the taxon is *Candidatus Vampirococcus*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Vampirococcia*.

Description of *Candidatus Velamenicoccaceae* fam. nov.

Candidatus Velamenicoccaceae (N.L. fem. pl. n. *Velamenicoccaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is UBA1572. The type genus for the taxon is *Candidatus Velamenicoccus*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Velamenicoccales*.

Description of *Candidatus Velamenicoccales* ord. nov.

Candidatus Velamenicoccales (N.L. fem. pl. n. *Velamenicoccales* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is UBA1572. The type genus for the taxon is *Candidatus Velamenicoccus*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Velamenicoccia*.

Description of *Candidatus Woodwardiaceae* fam. nov.

Candidatus Woodwardiaceae (N.L. fem. pl. n. *Woodwardiaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is CAG-382. The type genus for the taxon is *Candidatus Woodwardibium*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Oscillospirales*.

Description of *Xylanibacillaceae* fam. nov.

Xylanibacillaceae (N.L. fem. pl. n. *Xylanibacillaceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is K13. The type genus for the taxon is *Xylanibacillus*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Paenibacillales*.

Description of *Zestosphaeraceae* fam. nov.

Zestosphaeraceae (N.L. fem. pl. n. *Zestosphaeraceae* a name created from the name of the type genus by addition of an appropriate suffix).

A taxon identified and delineated according to the algorithms of the Genome Taxonomy Database (GTDB) release R207. The GTDB placeholder designation for this taxon is NBVN01. The type genus for the taxon is *Zestosphaera*.

According to the renamed version of GTDB release R207, this taxon belongs to the higher-level taxon *Sulfolobales*.