

**Table 4: 'Orphan' species. Species without any ribosomal SSU sequence in public repositories. (Updated)****LTP\_s100**

Taxon name	Author(s)	Type strain cited in its effective publication
<b><i>Acetivibrio ethanolgignens</i></b>	Robinson and Ritchie 1981, sp. nov.	strain 77-6 = ATCC 33324 = DSM 3005 = LMG 7055.
<b><i>Acetivibrio multivorans</i></b>	Tanaka et al. 1992, sp. nov.	strain PeC1 = ATCC 49731 = DSM 6139.
<b><i>Acetoanaerobium noterae</i></b>	Sleat et al. 1985, sp. nov. (Type species of the genus).	strain NOT-3 = ATCC 35199.
<b><i>Acetobacter pasteurianus</i> subsp. <i>paradoxus</i></b>	(Frateur 1950) De Ley and Frateur 1974, subspecies.	strain LMD 53.6 = LMG 1591 = NCCB 53006.
<b><i>Acetofilamentum rigidum</i></b>	Dietrich et al. 1989, sp. nov. (Type species of the genus).	strain MN = DSM 20769.
<b><i>Acetomicrobium faecale</i></b>	corrig. Winter et al. 1988, sp. nov.	strain DSM 20678.
<b><i>Acetomicrobium flavidum</i></b>	Soutschek et al. 1985, sp. nov. (Type species of the genus).	strain ATCC 43122 = DSM 20664 = LMG 6941.
<b><i>Acetothermus paucivorans</i></b>	Dietrich et al. 1988, sp. nov. (Type species of the genus).	strain TN = DSM 20768.
<b><i>Achromatium oxaliferum</i></b>	Schewiakoff 1893, species. (Type species of the genus).	----
<b><i>"Actinoplanes friuliensis"</i> **</b>	Aretz et al. 2001, sp. nov.	strain HAG 010964 = DSM 7358.
<b><i>Aegyptianella pullorum</i></b>	Carpano 1929, species. (Type species of the genus).	----
<b><i>Anaeroplasma intermedium</i></b>	Robinson and Freundt 1987, sp. nov.	strain 7LA = ATCC 43166.
<b><i>Anaerorhabdus furcosa</i></b>	corrig. (Veillon and Zuber 1898) Shah and Collins 1986, comb. nov. (Type species of the genus).	strain ATCC 25662 = VPI 3253.
<b><i>Anaplasma bovis</i></b>	(ex Donatien and Lestoquard 1936) Dumler et al. 2001, nom. rev., comb. nov.	----

**Table 4: 'Orphan' species. Species without any ribosomal SSU sequence in public repositories. (Updated)****LTP\_s100**

Taxon name	Author(s)	Type strain cited in its effective publication
<i>Anaplasma caudatum</i>	(ex Kreier and Ristic 1963) Ristic and Kreier 1984, nom. rev., comb. nov.	----
<i>Anaplasma centrale</i>	(ex Theiler 1911) Ristic and Kreier 1984, nom. rev., comb. nov.	----
<i>Anaplasma marginale</i>	Theiler 1910, species. (Type species of the genus).	----
<i>Anaplasma ovis</i>	Lestoquard 1924, species.	----
<i>Anaplasma platys</i>	Dumler et al. 2001, sp. nov.	----
<i>Ancalochloris perfilievii</i>	Gorlenko and Lebedeva 1971, species. (Type species of the genus).	----
<i>Ancalomicrobium adetum</i>	Staley 1968, species. (Type species of the genus).	strain ATCC 23632 = DSM 4722 = JCM 21375 = VKM B-1375.
<i>Aquabacter spiritensis</i>	Irgens et al. 1993, sp. nov. (Type species of the genus).	strain SPL-1 = ATCC 43981 = DSM 9035 = LMG 8611.
<i>Arcanobacterium phocae</i>	Pascual Ramos et al. 1997, sp. nov.	strain M1590/94/3 = CIP 105740 = DSM 10002 = LMG 18722.
<i>Azomonas insignis</i>	(Derx 1951) Jensen 1955, species.	strain UQM 1966.
<i>Azotobacter nigricans</i> subsp. <i>achromogenes</i>	Thompson and Skerman 1981, subsp. nov.	strain A-2 of Jensen = WR-41.
<i>Bacteroides polypragmatus</i>	Patel and Breuil 1982, sp. nov.	strain GP4 = NRC 2288.
<i>Bacteroides suis</i>	Benno et al. 1983, sp. nov.	strain P 38024 = ATCC 35419 = DSM 20612 = CCUG 15420 = JCM 6292.
<i>Bacteroides xyloxyticus</i>	Scholten-Koerselman et al. 1988, sp. nov.	strain X5-1 = ATCC 48289 = DSM 3808.

**Table 4: 'Orphan' species. Species without any ribosomal SSU sequence in public repositories. (Updated)****LTP\_s100**

Taxon name	Author(s)	Type strain cited in its effective publication
<b><i>Bactoderma alba</i></b>	Tepper and Korshunova 1973, species. (Type species of the genus).	----
<b><i>Bactoderma rosea</i></b>	(Winogradsky and Winogradsky 1933) Tepper and Korshunova 1973, species.	strain BKMW 1344 = VKM B-1344.
<b><i>Bartonella peromysci</i></b>	(Ristic and Kreier 1984) Birtles et al. 1995, comb. nov.	----
<b><i>Bartonella talpae</i></b>	(Ristic and Kreier 1984) Birtles et al. 1995, comb. nov.	----
<b><i>Bartonella vinsonii</i> subsp. <i>arupensis</i></b>	Welch et al. 2000, subsp. nov.	strain OK 94-513 = ATCC 700727 = CCUG 50775 = CIP 106848.
<b><i>Beijerinckia fluminensis</i></b>	Döbereiner and Ruschel 1958, species.	strain CIP 106281 = DSM 2327 = NCAIM B.01797 = UQM 1685.
<b><i>Blastobacter henricii</i></b>	Zavarzin 1961, species. (Type species of the genus).	----
<b><i>Blattabacterium cuenoti</i></b>	(Mercier 1906) Hollande and Favre 1931, species. (Type species of the genus).	----
<b><i>Borrelia anserina</i></b>	(Sakharoff 1891) Bergey et al. 1925, species. (Type species of the genus).	----
<b><i>Borrelia baltazardii</i></b>	corrig. (ex Karimi et al. 1979) Karimi et al. 1983, sp. nov., nom. rev.	strain B"x".
<b><i>Borrelia brasiliensis</i></b>	Davis 1952, species.	----
<b><i>Borrelia caucasica</i></b>	(Kandelaki 1945) Davis 1957, species.	----
<b><i>Borrelia crocidurae</i></b>	(Leger 1917) Davis 1957, species.	----
<b><i>Borrelia dugesii</i></b>	(Mazzotti 1949) Davis 1957, species.	----

**Table 4: 'Orphan' species. Species without any ribosomal SSU sequence in public repositories. (Updated)****LTP\_s100**

Taxon name	Author(s)	Type strain cited in its effective publication
<b><i>Borrelia duttonii</i></b>	(Novy and Knapp 1906) Bergey et al. 1925, species.	----
<b><i>Borrelia graingeri</i></b>	(Heisch 1953) Davis 1957, species.	----
<b><i>Borrelia harveyi</i></b>	(Garnham 1947) Davis 1948, species.	----
<b><i>Borrelia hermsii</i></b>	(Davis 1942) Steinhaus 1946, species.	----
<b><i>Borrelia hispanica</i></b>	(de Buen 1926) Steinhaus 1946, species.	----
<b><i>Borrelia latyschewii</i></b>	(Sofiev 1941) Davis 1948, species.	----
<b><i>Borrelia mazzottii</i></b>	Davis 1956, species.	----
<b><i>Borrelia parkeri</i></b>	(Davis 1942) Steinhaus 1946, species.	----
<b><i>Borrelia persica</i></b>	(Dschunkowsky 1913) Steinhaus 1946, species.	----
<b><i>Borrelia recurrentis</i></b>	(Lebert 1874) Bergey et al. 1925, species.	----
<b><i>Borrelia theileri</i></b>	(Laveran 1903) Bergey et al. 1925, species.	----
<b><i>Borrelia tillae</i></b>	Zumpt and Organ 1961, species	----
<b><i>Borrelia turicatae</i></b>	Brumpt 1933) Steinhaus 1946, species.	----
<b><i>Borrelia venezuelensis</i></b>	(Brumpt 1921) Brumpt 1922, species.	----

**Table 4: 'Orphan' species. Species without any ribosomal SSU sequence in public repositories. (Updated)****LTP\_s100**

Taxon name	Author(s)	Type strain cited in its effective publication
<b><i>Brachybacterium conglomeratum</i></b>	(ex Migula 1900) Takeuchi et al. 1995, nom. rev., comb. nov.	strain AJ 1015 = Komagata 5-2 = CCM 2589 = CCUG 50160 = CCUG 50354 = CIP 104400 = DSM 10241 = IFO (now NBRC) 15472 = JCM 11608 = VKM Ac-1975.
<b><i>Buchnera aphidicola</i></b>	Munson et al. 1991, sp. nov. (Type species of the genus).	----
<b><i>Burkholderia anthina</i></b>	Vandamme et al. 2002, sp. nov.	strain W92B = LMG 20980 = CCUG 46047.
<b><i>Burkholderia dolosa</i></b>	Vermis et al. 2004, sp. nov.	strain CCUG 47727 = LMG 18943.
<b><i>Butyrivibrio crossotus</i></b>	Moore et al. 1976, species.	strain ATCC 29175 = DSM 2876 = VPI T9-40A.
<b><i>Caedibacter paraconjugatus</i></b>	Quackenbush 1982, sp. nov.	strain 570 = ATCC 30638.
<b><i>Caedibacter pseudomutans</i></b>	Quackenbush 1982, sp. nov.	strain 51 ml = ATCC 30633.
<b><i>Caedibacter varicaedens</i></b>	Quackenbush 1982, sp. nov.	strain 7 = ATCC 30637.
<b><i>Carbophilus carboxidus</i></b>	(ex Nozhevnikova and Zavarzin 1974) Meyer et al. 1994, nom. rev., comb. nov. (Type species of the genus).	strain Z-1171 = ATCC 51424 = CIP 105722 = DSM 1086.
<b><i>Carnobacterium alterfunditum</i></b>	Franzmann et al. 1993, sp. nov.	strain pf4 = ACAM 313 = ATCC 49837 = CCUG 34643 = CIP 105796 = DSM 5972 = IFO (now NBRC) 15548 = JCM 12498 = LMG 13520.
<b><i>Catenuloplanes castaneus</i></b>	Tamura et al. 1995, sp. nov.	strain RA344 = ATCC 700016 = IFO (now NBRC) 15584 = JCM 9537 = VKM Ac-1973.
<b><i>Catenuloplanes nepalensis</i></b>	Tamura et al. 1995, sp. nov.	strain RA343 = ATCC 700017 = IFO (now NBRC) 15583 = JCM 9536 = VKM Ac-1996.
<b><i>Cedecea lapagei</i></b>	Grimont et al. 1981, sp. nov.	strain 004 = ATCC 33432 = CDC 0485-76 = CCUG 12371 = CIP 80.35 = DSM 4587 = JCM 1684 = LMG 7863.

**Table 4: 'Orphan' species. Species without any ribosomal SSU sequence in public repositories. (Updated)****LTP\_s100**

Taxon name	Author(s)	Type strain cited in its effective publication
<i>Cellvibrio mixtus</i> subsp. <i>dextranolyticus</i>	Blackall et al. 1986, subsp. nov.	strain UQM 1666.
<i>Chloronema giganteum</i>	Dubinina and Gorlenko 1975, species. (Type species of the genus).	----
<i>Chondromyces apiculatus</i>	Thaxter 1897, species.	strain TC 4481.
<i>Chondromyces catenulatus</i>	Thaxter 1904, species.	strain TC 4517.
<i>Chondromyces crocatus</i>	Berkeley and Curtis 1874, species. (Type species of the genus).	strain TC 601.
<i>Chondromyces lanuginosus</i>	Kofler 1913, species.	strain TC 4494.
<i>Chondromyces pediculatus</i>	Thaxter 1904, species.	strain TC 4524.
<i>Chromatium weissei</i>	Perty 1852, species.	strain DSM 171.
<i>Citrobacter amalonaticus</i>	(Young et al. 1971) Brenner and Farmer 1982, comb. nov.	strain ATCC 25405 = CCUG 4860 = CIP 82.89 = DSM 4593 = JCM 1661 = LMG 7873 = NCTC 10805.
" <i>Citrobacter diversus</i> " *	(Burkey 1928) Werkman and Gillen 1932, species.	strain ATCC 27156 = JCM 1659 = LMG 5741.
<i>Citrobacter koseri</i>	Frederiksen 1970, species.	strain ATCC 27028 = CCUG 4859 = CCUG 14559 = CIP 105014 = CIP 82.87 = DSM 4595 = JCM 1658 = LMG 5519 = NCTC 10786.
<i>Clevelandina reticulitermitidis</i>	Bermudes et al. 1988, sp. nov. (Type species of the genus).	----
<i>Clostridium arcticum</i>	(ex Jordan and McNicol 1979) Cato et al. 1988, sp. nov., nom. rev.	strain Jordan and McNicol n° III.
<i>Clostridium cellulofermentans</i>	He et al. 1991, sp. nov.	strain AS 1.1775; available from CCCC (accession number not given).

**Table 4: 'Orphan' species. Species without any ribosomal SSU sequence in public repositories. (Updated)****LTP\_s100**

Taxon name	Author(s)	Type strain cited in its effective publication
<i>Clostridium ghonii</i>	corrig. Prévot 1938, species.	strain ATCC 25757 = BCRC (formerly CCRC) 14548 = CCUG 9282 = DSM 15049 = JCM 1400 = NCIMB 10636.
<i>Clostridium limosum</i>	André 1948, species.	strain ATCC 25620 = BCRC (formerly CCRC) 14513 = CCUG 24037 = DSM 1400 = JCM 1427 = NCIMB 10638 = VPI 2700.
<i>Clostridium mayombei</i>	Kane et al. 1992, sp. nov.	strain SFC-5 = ATCC 51428 = DSM 6539.
" <i>Clostridium piliforme</i> " *	(ex Tyzzer 1917) Duncan et al. 1993, nom. rev., comb. nov.	----
<i>Clostridium termitidis</i>	Hethener et al. 1992, sp. nov.	strain CT1112 = ATCC 51846 = DSM 5398.
<i>Clostridium thermopapyrolyticum</i>	Méndez et al. 1991, sp. nov.	strain SABAMMRCCC UBA 305.
<i>Colwellia hadaliensis</i>	Deming et al. 1988, sp. nov.	strain BNL-1 (reported to be an obligate barophilic organism).
<i>Corynebacterium beticola</i>	Abdou 1969, species.	strain LMG 7187 = NCPPB 2256 = NCPPB 3128.
<i>Corynebacterium ilicis</i>	Mandel et al. 1961, species.	strain ICMP 2608 = ICPB CI144
<i>Coxiella burnetii</i>	(Derrick 1939) Philip 1948, species. (Type species of the genus).	strain ATCC VR-615.
<i>Crenothrix polyspora</i>	Cohn 1870, species. (Type species of the genus).	----
<i>Cristispira pectinis</i>	Gross 1910, species. (Type species of the genus).	----
<i>Curtobacterium plantarum</i>	Dunleavy 1989, sp. nov.	strain CL63 = ATCC 49174 = DSM 7069 = LMG 16222.
<i>Cystobacter ferrugineus</i>	(Krzemieniewska and Krzemieniewski 1927) McCurdy 1970, species.	strain Windsor M-203.

**Table 4: 'Orphan' species. Species without any ribosomal SSU sequence in public repositories. (Updated)****LTP\_s100**

Taxon name	Author(s)	Type strain cited in its effective publication
<i>Cystobacter minus</i>	(Krzemieniewska and Krzemieniewski 1926) McCurdy 1970, species.	strain Windsor M-307.
<i>Cytophaga xylanolytica</i>	Haack and Breznak 1993, sp. nov.	strain XM3 = ATCC 51429 = DSM 6779.
<i>Desulfotomaculum antarcticum</i>	(ex Iizuka et al. 1969) Campbell and Singleton 1988, sp. nov., nom. rev.	strain IAM 64.
<i>Desulfovibrio desulfuricans</i> subsp. <i>aestuarii</i>	Postgate and Campbell 1966, subspecies.	strain ATCC 29578 = NCIB (now NCIMB) 9335.
<i>Desulfovibrio furfuralis</i>	Folkerts et al. 1989, sp. nov.	strain F1.
<i>Desulfovibrio giganteus</i>	Esnault et al. 1988, sp. nov.	strain 8601 = DSM 4123.
<i>Desulfovibrio simplex</i>	Zellner et al. 1990, sp. nov.	strain XVI = DSM 4141.
<i>Desulfurococcus mucosus</i>	Zillig and Stetter 1983, sp. nov. (Type species of the genus).	strain ATCC 35584 = DSM 2162 = JCM 9187.
<i>Dichotomicrobium thermohalophilum</i>	Hirsch and Hoffman 1989, sp. nov. (Type species of the genus).	strain ATCC 49408 = DSM 5002 = IFAM 954.
<i>Diplocalyx calotermitidis</i>	(ex Gharagozlou 1968) Bermudes et al. 1988, sp. nov., nom. rev. (Type species of the genus).	----
<i>Ehrlichia canis</i>	(Donatien and Lestoquard 1935) Moshkovski 1945, species. (Type species of the genus).	----
<i>Ensifer medicae</i>	(Rome et al. 1996) Young 2003, comb. nov.	strain 11-3 21a = A 321 = HAMB1 2306 = ICMP 13798 = NBRC 100384 = USDA 1037.
<i>Eperythrozoon parvum</i>	Splitter 1950, species.	----
<i>Erwinia aphidicola</i>	Harada et al. 1998, sp. nov.	strain X 001 = CIP 106296 = IAM 14479 = JCM 21238.

**Table 4: 'Orphan' species. Species without any ribosomal SSU sequence in public repositories. (Updated)****LTP\_s100**

Taxon name	Author(s)	Type strain cited in its effective publication
<i>Escherichia blattae</i>	Burgess et al. 1973, species.	strain ATCC 29907 = CDC 9005-74 = CIP 103175 = CIP 104942 = DSM 4481 = HAMB1 1692 = JCM 1650 = LMG 3030 = NCTC 12127.
<i>Escherichia hermannii</i>	Brenner et al. 1983, sp. nov.	strain ATCC 33650 = CCUG 15714 = CDC 980-72 = CIP 103176 = CIP 104946 = DSM 4560 = HAMB1 1693 = JCM 1473 = LMG 7867 = NCTC 12129.
<i>Eubacterium coprostanoligenes</i>	Freier et al. 1994, sp. nov.	strain HL = ATCC 51222.
<i>Eubacterium fissicatena</i>	Taylor 1972, species.	strain ATCC 33661 = DSM 3598 = JCM 9983 = NCIB (now NCIMB) 10446.
<i>Eubacterium hadrum</i>	Moore et al. 1976, species.	strain ATCC 29173 = DSM 3319 = JCM 9980 = VPI B2-52.
<i>Eubacterium oxidoreducens</i>	corrig. Krumholz and Bryant 1986, sp. nov.	strain G41 = ATCC 43585 = DSM 3217.
<i>Eubacterium plexicaudatum</i>	Wilkins et al. 1974, species.	strain VPI 7582.
<i>Eubacterium saburreum</i>	(Prévot 1966) Holdeman and Moore 1970, species.	strain ATCC 33271 = CCUG 28089 = CIP 105341 = DSM 3986 = JCM 11021 = VPI 11763.
<i>Eubacterium yurii</i> subsp. <i>yurii</i>	Margaret and Krywolap 1986, subsp. nov.	strain SM14 = ATCC 43714.
<i>Ewingella americana</i>	Grimont et al. 1984, sp. nov. (Type species of the genus).	strain ATCC 33852 = CCUG 14506 = CDC 1468-78 = CIP 81.94 = DSM 4580 = JCM 5911 = LMG 7869 = NCTC 12157.
<i>Fervidobacterium pennivorans</i>	corrig. Friedrich and Antranikian 1999, sp. nov.	strain Ven5 = DSM 9078.
<i>Flammeovirga arenaria</i>	(ex Lewin 1969) Takahashi et al. 2006, nom. rev., comb. nov.	strain CIP 109101 = NBRC 15982.
<i>Flavobacterium acidificum</i>	Steinhaus 1941, species.	strain ATCC 8366 = LMG 8364 = NCIB (now NCIMB) 9891.

**Table 4: 'Orphan' species. Species without any ribosomal SSU sequence in public repositories. (Updated)****LTP\_s100**

Taxon name	Author(s)	Type strain cited in its effective publication
<i>Flavobacterium acidurans</i>	Millar 1973, species.	strain ATCC 27383 = CCUG 33441 = LMG 8388.
<i>Flavobacterium devorans</i>	(Zimmermann 1890) Bergey et al. 1923, species.	strain ATCC 10829 = DSM 30198 = LMG 4017.
<i>Flavobacterium oceanosedimentum</i>	Carty and Litchfield 1978, species.	strain ATCC 31317.
<i>Flavobacterium thermophilum</i>	Loginova and Egorova 1982, sp. nov.	strain BKM 1325 = CCM 3496 = CCUG 22402 = NCTC 11526 = VKM 1325.
<i>Francisella tularensis</i> subsp. <i>holarctica</i>	(ex Olsufjev et al. 1959) Olsufjev and Meshcheryakova 1983, subsp. nov., nom. rev.	strain GIEM 503.
<i>Francisella tularensis</i> subsp. <i>mediasiatica</i>	(ex Aikimbaev 1966) Olsufjev and Meshcheryakova 1983, subsp. nov., nom. rev.	strain GIEM 543.
<i>Frankia alni</i>	(Woronin 1866) Von Tubeuf 1895, species. (Type species of the genus).	----
<i>Fusobacterium naviforme</i>	(Jungano 1909) Moore and Holdeman 1970, species.	strain ATCC 25832 = CCUG 50052 = NCTC 13121.
<i>Fusobacterium necrophorum</i> subsp. <i>funduliforme</i>	(ex Hallé 1898) Shinjo et al. 1991, nom. rev., comb. nov.	strain Fn524 = ATCC 51357 = CCUG 42162 = CIP 104859 = JCM 3724.
<i>Gallionella ferruginea</i>	Ehrenberg 1838, species. (Type species of the genus).	----
<i>Gemmiger formicilis</i>	Gossling and Moore 1975, species. (Type species of the genus).	strain ATCC 27749.
<i>Gemmobacter aquatilis</i>	Rothe et al. 1988, sp. nov. (Type species of the genus).	strain ATCC 49971 = DSM 3857 = IFAM 1031.
<i>Haemophilus piscium</i>	Snieszko et al. 1950, species.	strain ATCC 10801 = CCUG 15943 = CIP 106116 = JCM 7872.
<i>Halobacillus halophilus</i>	(Claus et al. 1984) Spring et al. 1996, comb. nov. (Type species of the genus).	strain 3 = ATCC 35676 = DSM 2266 = JCM 20832 = LMG 17431.

**Table 4: 'Orphan' species. Species without any ribosomal SSU sequence in public repositories. (Updated)****LTP\_s100**

Taxon name	Author(s)	Type strain cited in its effective publication
<i>Halomethanococcus doii</i>	Yu and Kawamura 1988, sp. nov. (Type species of the genus).	strain 1Y-1 = ATCC 43619.
<i>Hollandina pterotermitidis</i>	(ex To et al. 1978) Bermudes et al. 1988, sp. nov., nom. rev. (Type species of the genus).	----
<i>Holospora caryophila</i>	(ex Preer et al. 1974) Preer and Preer 1982, nom. rev., comb. nov.	----
<i>Holospora elegans</i>	(ex Hafkine 1890) Gromov and Ossipov 1981, sp. nov., nom. rev.	----
" <i>Holospora obtusa</i> " *	(ex Hafkine 1890) Gromov and Ossipov 1981, sp. nov., nom. rev.	----
" <i>Holospora undulata</i> " *	(ex Hafkine 1890) Gromov and Ossipov 1981, sp. nov., nom. rev. (Type species of the genus <i>Holospora</i> (ex Hafkine 1890) Gromov and Ossipov 1981).	----
<i>Hyphomicrobium aestuarii</i>	Hirsch 1899, sp. nov.	strain ATCC 27483 = IFAM NQ-521Gr = NCIMB 11052.
<i>Hyphomicrobium coagulans</i>	(ex Takada 1975) Hirsch 1989, sp. nov., nom. rev.	strain Takada 10-2.
<i>Hyphomicrobium vulgare</i>	Stutzer and Hartleb 1899, species. (Type species of the genus).	strain ATCC 33404 = JCM 6889 = NCIB 9698.
<i>Ilyobacter delafieldii</i>	Janssen and Harfoot 1991, sp. nov.	strain 10cr1 = ATCC 49679 = DSM 5704 = LMG 16218.
<i>Jahnella thaxteri</i>	corrig. (ex Jahn 1924) Reichenbach 2007, nom. rev., comb. nov. (Type species of the genus).	strain PI t4 = CIP 109123 = DSM 14626.
<i>Klebsiella granulomatis</i>	(Aragão and Vianna 1913) Carter et al. 1999, comb. nov.	----
" <i>Koserella trabulsii</i> " *	Hickman-Brenner et al. 1985, sp. nov. (Type species of the genus).	strain ATCC 35313 = CCUG 18772 = CDC 3349-72 = LMG 7872 = NCTC 12131 = PCM 2476. =
<i>Lactobacillus rogosae</i>	Holdeman and Moore 1974 (Approved Lists 1980)	strain ATCC 27753 = VPI C37-38

**Table 4: 'Orphan' species. Species without any ribosomal SSU sequence in public repositories. (Updated)****LTP\_s100**

Taxon name	Author(s)	Type strain cited in its effective publication
<i>Lamprobacter modestohalophilus</i>	Gorlenko et al. 1988	strain INMI RO-1
<i>Lautropia mirabilis</i>	Gerner-Smidt et al. 1995	strain AB2188 = ATCC 51599 = CCUG 34794 = CIP 106317 = DSM 11362 = NCTC 12852
<i>Leclercia adecarboxylata</i>	(Leclerc 1962) Tamura et al. 1987, comb. nov. (Type species of the genus).	strain ATCC 23216 = CIP 82.92 = DSM 5077 = HAMBI 1696 = JCM 1667 = LMG 2803 = NCTC 13032.
<i>Legionella santicrucis</i>	Brenner et al. 1985, sp. nov.	strain SC-63-C7 = ATCC 35301 = CCUG 29673 = CIP 103849 = JCM 7557 = NCTC 11989.
<i>Leifsonia xyli</i> subsp. <i>xyli</i>	(Davis et al. 1984) Evtushenko et al. 2000, comb. nov.	strain L1A = ATCC 33974 = ICMP 7127 = LMG 7352 = NCPPB 3152 = PDDCC 7127.
<i>Leminorella richardii</i>	Hickman-Brenner et al. 1985, sp. nov.	strain ATCC 33998 = CDC 0978-82 = CIP 103360 = DSM 14849 = JCM 5905 = LMG 7911 = NCTC 12151.
<i>Leptospirillum thermoferrooxidans</i>	Hippe 2000, sp. nov.	strain L-88, maintained in the collection of the Institute of Microbiology (INMI), RAS, Moscow, Russia.
<i>Leptothrix cholodnii</i>	Mulder and van Veen 1963, species.	strain LVMW 99.
<i>Leptothrix lopholea</i>	Dorff 1934, species.	strain LVMW 124.
<i>Leptothrix ochracea</i>	(Roth 1797) Kützing 1843, species. (Type species of the genus).	----
<i>Lyticum flagellatum</i>	(ex Preer et al. 1974) Preer and Preer 1982, sp. nov., nom. rev. (Type species of the genus).	strain 299 = ATCC 30700 (the accession numbers refer to protozoan strains carrying the endosymbionts).
<i>Lyticum sinuosum</i>	(ex Preer et al. 1974) Preer and Preer 1982, sp. nov., nom. rev.	strain 114 = ATCC 30696 (the accession numbers refer to protozoan strains carrying the endosymbionts).
<i>Macromonas mobilis</i>	(Lauterborn 1915) Utermöhl and Koppe 1924, species. (Type species of the genus).	----
<i>Melittangium alboraceum</i>	(Peterson 1959) McCurdy 1971, species.	strain UMH Slides Peterson 72.

**Table 4: 'Orphan' species. Species without any ribosomal SSU sequence in public repositories. (Updated)****LTP\_s100**

Taxon name	Author(s)	Type strain cited in its effective publication
<b><i>Melittangium boletus</i></b>	Jahn 1924, species. (Type species of the genus).	----
<b><i>Meniscus glaucopis</i></b>	Irgens 1977, species. (Type species of the genus).	strain ATCC 29398.
<b><i>Mesophilobacter marinus</i></b>	Nishimura et al. 1989, sp. nov. (Type species of the genus).	strain: strain 14S-4 = IAM 13185.
<b><i>Mesoplasma coleopterae</i></b>	Tully et al. 1994, sp. nov.	strain BARC 779 = ATCC 49583.
<b><i>Methanobacterium uliginosum</i></b>	König 1985, sp. nov.	strain P2St = ATCC 35997 = DSM 2956 = OCM 176.
<b><i>Methanohalophilus halophilus</i></b>	(Zhilina 1984) Wilharm et al. 1991, comb. nov.	strain INMI Z-7982 = DSM 3094 = OCM 160.
<b><i>Methanosaeta concilii</i></b>	(Patel 1985) Patel and Sprott 1990, comb. nov. (Type species of the genus).	strain GP6 = ATCC 35969 = DSM 3671 = JCM 10134 = NRC 2989 = OCM 69 (OGC 69).
<b>"<i>Methanosarcina methanica</i>" *</b>	(Smit 1930) Kluver and van Niel 1936, species. (Type species of the genus).	----
<b><i>Methanosphaera cuniculi</i></b>	Biavati et al. 1990, sp. nov.	strain 1R7 = DSM 4103 = OCM 183.
<b>"<i>Methanotherix soehngenii</i>" *</b>	Huser et al. 1983, sp. nov. (Type species of the genus).	strain Opfikon = DSM 2139.
<b><i>Methylococcus chroococcus</i></b>	Romanovskaya et al. 1981, sp. nov.	strain 9 of Whittenbury.
<b><i>Methylococcus mobilis</i></b>	Hazeu et al. 1980, sp. nov.	strain LMD 77.28.
<b><i>Methylovorus glucosotrophus</i></b>	Govorukhina and Trotsenko 1991, sp. nov. (Type species of the genus).	strain 6B1 = ATCC 49758 = DSM 6874 = NCIMB 13222 = UCM B-1745 = VKM B-1745.
<b><i>Micavibrio admirandus</i></b>	Lambina et al. 1989, sp. nov. (Type species of the genus).	strain ARL-14 = VKM B-1619.

**Table 4: 'Orphan' species. Species without any ribosomal SSU sequence in public repositories. (Updated)****LTP\_s100**

Taxon name	Author(s)	Type strain cited in its effective publication
<i>Micromonospora gallica</i>	(Erikson 1935) Waksman 1961, species.	strain NCTC 4582.
<i>Micropolyspora internatus</i>	Agre et al. 1974, species.	strain INMI 632 = JCM 3315.
<i>Microtetraspora tyrrhenii</i>	Tomita et al. 1992, sp. nov.	strain Q464-31 = ATCC 53931.
<i>Moellerella wisconsensis</i>	Hickman-Brenner et al. 1984, sp. nov. (Type species of the genus).	strain 2896-78 = ATCC 35017 = CIP 103034 = DSM 5076 = JCM 5895 = LMG 10145 = NCTC 12132.
<i>Moraxella atlantae</i>	Bøvre et al. 1976, species	strain 5118 = ATCC 29525 = CCUG 6415 = CIP 82.25 = DSM 6999 = IFO (now NBRC) 14588 = LMG 5133 = NCTC 11091.
<i>Moraxella nonliquefaciens</i>	(Scarlett 1916) Lwoff 1939, species	strain 4663/62 = ATCC 19975 = CCUG 348 = CIP 68.36 = DSM 6327 = JCM 20443 = NCTC 10464.
<i>Moraxella saccharolytica</i>	Flamm 1956, species.	strain ATCC 19245 = LMG 1039 = NCTC 10753.
<i>Morococcus cerebrosus</i>	Long et al. 1981, sp. nov. (Type species of the genus).	strain UQM 858 = ATCC 33486 = CIP 81.93 = NCTC 11393.
<i>Mycobacterium leprae</i>	(Hansen 1880) Lehmann and Neumann 1896, species.	----
<i>Mycobacterium lepraemurium</i>	Marchoux and Sorel 1912, species.	----
<i>"Mycoplasma coccoides" *</i>	(Schilling 1928) Neimark et al. 2005, comb. nov. (illegitimate new combination).	----
<i>Mycoplasma edwardii</i>	Tully et al. 1970, species.	strain ATCC 23462 = NCTC 10132.
<i>Mycoplasma gallisepticum</i>	Edward and Kanarek 1960, species.	strain ATCC 19610 = CIP 104967 = IFO (now NBRC) 14855 = NCTC 10115.
<i>Mycoplasma haemocanis</i>	(Kreier and Ristic 1984) Messick et al. 2002, nom. nov.	----

**Table 4: 'Orphan' species. Species without any ribosomal SSU sequence in public repositories. (Updated)****LTP\_s100**

Taxon name	Author(s)	Type strain cited in its effective publication
<i>Mycoplasma haemofelis</i>	(Kreier and Ristic 1984) Neimark et al. 2002, nom. nov.	----
<i>Mycoplasma haemomuris</i>	(Mayer 1921) Neimark et al. 2002, nom. nov.	----
<i>Mycoplasma ovis</i>	(Neitz et al. 1934) Neimark et al. 2004, comb. nov.	----
<i>Mycoplasma suis</i>	corrig. (Splitter 1950) Neimark et al. 2002, comb. nov.	----
<i>Mycoplasma verecundum</i>	Gourlay et al. 1974, species.	strain ATCC 27862 = NCTC 10145.
<i>Mycoplasma wenyonii</i>	(Adler and Ellenbogen 1934) Neimark et al. 2002, comb. nov.	----
<i>Myxococcus macrosporus</i>	(Krzemieniewska and Krzemieniewski 1926) Zahler and McCurdy 1974, species.	strain Windsor M271.
<i>Myxococcus stipitatus</i>	Thaxter 1897, species.	strain Windsor M78.
<i>Nannocystis pusilla</i>	Reichenbach 2007, sp. nov.	strain Na p29 = CIP 109121 = DSM 14622.
<i>Neisseria flava</i>	Bergey et al. 1923, species.	strain NRL 30,008.
<i>Neorickettsia helminthoeca</i>	Philip et al. 1953, species. (Type species of the genus).	----
<i>Nitrosococcus nitrosus</i>	(Migula 1900) Buchanan 1925, species. (Type species of the genus).	----
<i>Nitrospira briensis</i>	Winogradsky and Winogradsky 1933, species. (Type species of the genus).	----
<i>Nitrospina gracilis</i>	Watson and Waterbury 1971, species. (Type species of the genus).	----

**Table 4: 'Orphan' species. Species without any ribosomal SSU sequence in public repositories. (Updated)****LTP\_s100**

Taxon name	Author(s)	Type strain cited in its effective publication
<b><i>Nitrospira marina</i></b>	Watson et al. 1986, sp. nov. (Type species of the genus).	strain ATCC 43039.
<b><i>Nocardia coeliaca</i></b>	(Gray and Thornton 1928) Waksman and Henrici 1948, species.	strain ATCC 17041 = DSM 44595.
<b><i>Oligotropha carboxidovorans</i></b>	(ex Meyer and Schlegel 1978) Meyer et al. 1994, nom. rev., comb. nov. (Type species of the genus).	strain DM5 = ATCC 49405 = DSM 1227.
<b><i>Oscillochloris chrysea</i></b>	Gorlenko and Pivovarova 1989, sp. nov. (Type species of the genus).	----
<b><i>Oscillochloris trichoides</i></b>	(ex Szafer) Gorlenko and Korotkov 1989, nom. rev., comb. nov.	----
<b><i>Oscillospira guilliermondii</i></b>	corrige. Chatton and Pérard 1913, species. (Type species of the genus).	----
<b><i>Oxalobacter vibrioformis</i></b>	Dehning and Schink 1990, sp. nov.	strain WoOx3 = DSM 5502.
<b><i>Pasteurella lymphangitidis</i></b>	Sneath and Stevens 1990, sp. nov.	strain Jayaraman strain I = A82 = 71 = ATCC 49635 = CCUG 27188 = CIP 103823 = NCTC 10547.
<b><i>Pasteuria nishizawae</i></b>	Sayre et al. 1992, sp. nov.	----
<b><i>Pasteuria penetrans</i></b>	(ex Thorne 1940) Sayre and Starr 1986, nom. rev., comb. nov.	----
<b><i>Pasteuria thornei</i></b>	Starr and Sayre 1988, sp. nov.	----
<b><i>Pedomicrobium americanum</i></b>	Gebers and Beese 1988, sp. nov.	strain ATCC 43612 = IFAM G-1381.
<b><i>Pedomicrobium ferrugineum</i></b>	Aristovskaya 1961, species. (Type species of the genus).	strain ATCC 33119 = IFAM S-1290.
<b><i>Pedomicrobium manganicum</i></b>	Aristovskaya 1961, species.	strain ATCC 33121 = IFAM E-1129.

**Table 4: 'Orphan' species. Species without any ribosomal SSU sequence in public repositories. (Updated)****LTP\_s100**

Taxon name	Author(s)	Type strain cited in its effective publication
<b>"Pelczaria aurantia" *</b>	Poston 1994, sp. nov. (Type species of the genus).	strain ATCC 49321 = DSM 12801 = IFO (now NBRC) 15588.
<b><i>Pelobacter massiliensis</i></b>	Schnell et al. 1991, sp. nov.	strain HHQ7 = ATCC 49973 = DSM 6233.
<b><i>Pelodictyon phaeum</i></b>	Gorlenko 1972, species.	strain DSM 728.
<b><i>Pilimelia columellifera</i> subsp. <i>columellifera</i></b>	(ex Schäfer 1973) Vobis et al. 1986, subsp. nov., nom. rev.	strain MB-SK6 = ATCC 43728 = CBS 569.75 = DSM 43797 = IFO (now NBRC) 16052 = JCM 3367.
<b><i>Pilimelia columellifera</i> subsp. <i>pallida</i></b>	(ex Schäfer 1973) Vobis et al. 1986, subsp. nov., nom. rev.	strain MB-SK 8 = ATCC 43729 = DSM 43799.
<b><i>Pillotina calotermitidis</i></b>	(ex Hollande and Gharagozlou 1967) Bermudes et al. 1988, sp. nov., nom. rev. (Type species of the genus).	----
<b><i>Planctomyces bekefii</i></b>	Gimesi 1924, species. (Type species of the genus).	----
<b><i>Planctomyces guttaeformis</i></b>	(ex Hortobágyi 1965) Starr and Schmidt 1984, sp. nov., nom. rev.	----
<b><i>Planctomyces stranskae</i></b>	(ex Wawrik 1952) Starr and Schmidt 1984, sp. nov., nom. rev.	----
<b><i>Polyangium aureum</i></b>	(ex Krzemieniewska and Krzemieniewski 1930) Brockman 1989, sp. nov., nom. rev.	---- = description in Brockman 1989.
<b><i>Polyangium fumosum</i></b>	Krzemieniewska and Krzemieniewski 1930, species.	strain Windsor M257.
<b><i>Polyangium luteum</i></b>	(ex Krzemieniewska and Krzemieniewski 1927) Brockman 1989, sp. nov., nom. rev.	---- = description in Brockman 1989.
<b><i>Polyangium minor</i></b>	(Peterson 1959) McCurdy 1970, species.	strain UMH Peterson 41.
<b><i>Polyangium parasiticum</i></b>	(ex Geittler 1924) Brockman 1989, sp. nov., nom. rev.	---- = description in Brockman 1989.

**Table 4: 'Orphan' species. Species without any ribosomal SSU sequence in public repositories. (Updated)****LTP\_s100**

Taxon name	Author(s)	Type strain cited in its effective publication
<i>Polyangium rugiseptum</i>	(Peterson 1959) McCurdy 1970, species.	strain UMH Peterson 51.
<i>Polyangium solediatum</i>	(ex Thaxter 1904) Brockman 1989, sp. nov., nom. rev.	---- = description in Brockman 1989.
<i>Polyangium spumosum</i>	(ex Krzemieniewska and Krzemieniewski 1927) Brockman 1989, sp. nov., nom. rev.	---- = description in Brockman 1989.
<i>Polyangium vitellinum</i>	Link 1809, species. (Type species of the genus).	strain TC 4564.
<i>Polynucleobacter necessarius</i>	Heckmann and Schmidt 1987, sp. nov. (Type species of the genus).	---- = description (endosymbiont in stock 15 of <i>Euplotes aediculatus</i> , which is deposited at the ATCC (ATCC 30859)).
<i>Porphyromonas canoris</i>	Love et al. 1994, sp. nov.	strain CCUG 36550 = CIP 104881 = JCM 11138 = NCTC 12835 = VPB 4878.
<i>Prochloron didemni</i>	(ex Lewin 1975) Florenzano et al. 1986, sp. nov., nom. rev. (Type species of the genus).	----
<i>Prochlorothrix hollandica</i>	Burger-Wiersma et al. 1989, sp. nov. (Type species of the genus).	strain CCAP 1490/1.
<i>Prolinoborus fasciculus</i>	(Strength et al. 1976) Pot et al. 1992, comb. nov. (Type species of the genus).	strain ATCC 27740 = CIP 103579 = LMG 12892.
<i>Prosthecomicrobium enhydrium</i>	Staley 1968, species.	strain ATCC 23634 = JCM 21106 = VKM B-1376.
<i>Prosthecomicrobium hirschii</i>	Staley 1984, sp. nov.	strain 16 = ATCC 27832.
<i>Prosthecomicrobium litoralum</i>	Bauld et al. 1983, sp. nov.	strain 524-16 = ATCC 35022.
<i>Pseudocaedibacter conjugatus</i>	(ex Preer et al. 1974) Quackenbush 1982, nom. rev., comb. nov. (Type species of the genus).	strain 540 = ATCC 30796.
<i>Pseudocaedibacter falsus</i>	(ex Preer et al. 1974) Quackenbush 1982, nom. rev., comb. nov.	strain 1010 = ATCC 30640.

**Table 4: 'Orphan' species. Species without any ribosomal SSU sequence in public repositories. (Updated)****LTP\_s100**

Taxon name	Author(s)	Type strain cited in its effective publication
<i>Pseudocaeidibacter minutus</i>	(ex Preer et al. 1974) Quackenbush 1982, nom. rev., comb. nov.	strain 214 = ATCC 30699.
<i>Pseudomonas avellanae</i>	Janse et al. 1997, sp. nov.	strain F11 = CIP 105176 = DSM 11809 = JCM 11937 = NCPPB 3487.
<i>Pseudomonas fuscovaginae</i>	(ex Tanii et al. 1976) Miyajima et al. 1983, sp. nov., nom. rev.	strain 6801 = CCUG 32780 = CFBP 2065 = CIP 106695 = DSM 7231 = ICMP 5940 = LMG 2158 = NCPPB 3085 = PDDCC 5940.
<i>Pseudomonas gelidicola</i>	Kadota 1951, species.	strain CIP 106748 = IAM 1127 = JCM 20065.
<i>Pseudomonas meliae</i>	Ogimi 1981, sp. nov.	strain No. 2 = ATCC 33050 = CFBP 3225 = ICMP 6289 = LMG 2220 = NCPPB 3033.
<i>Pseudonocardia spinosa</i>	Schäfer 1971, species.	strain ATCC 25924 = IFO (now NBRC) 16002 = JCM 3136.
<i>Pyrococcus woesei</i>	Zillig 1988, sp. nov.	strain ATCC 49860 = DSM 3773 = JCM 8421.
<i>Pyrodictium brockii</i>	Stetter et al. 1984, sp. nov.	strain S 1 = DSM 2708 = JCM 9392.
<i>Quinella ovalis</i>	Krumholz et al. 1993, sp. nov. (Type species of the genus).	----
<i>Rickettsia africae</i>	Kelly et al. 1996, sp. nov.	strain Z9-Hu (deposited in the Collection of the World Health Organization Collaborative Center for Rickettsial Reference, Marseille, France).
<i>"Rickettsia felis" **</i>	Bouyer et al. 2001, sp. nov.	strain Ctenocephalides felis-LSU
<i>Rickettsia helvetica</i>	Beati et al. 1993, sp. nov.	strain C3 (Reference Center for Rickettsioses, Marseille, France) = ATCC VR-1375.
<i>Rickettsia japonica</i>	Uchida et al. 1992, sp. nov.	strain YH = ATCC VR-1363.
<i>Rickettsia slovaca</i>	Sekeyová et al. 1998, sp. nov.	strain B

**Table 4: 'Orphan' species. Species without any ribosomal SSU sequence in public repositories. (Updated)****LTP\_s100**

Taxon name	Author(s)	Type strain cited in its effective publication
<i>Rickettsiella chironomi</i>	(ex Weiser 1963) Weiss et al. 1984, sp. nov., nom. rev.	----
<i>Rickettsiella grylli</i>	(ex Vago and Martoja 1963) Weiss et al. 1984, sp. nov., nom. rev.	----
<i>Rickettsiella popilliae</i>	(Dutky and Gooden 1952) Philip 1956, species. (Type species of the genus).	----
<i>Rickettsiella stethorae</i>	Hall and Badgley 1957, species.	----
<i>Rugamonas rubra</i>	Austin and Moss 1987, sp. nov. (Type species of the genus).	strain MOM 28/2/79 = ATCC 43154 = CCM 3730.
<i>Saccharobacter fermentatus</i>	Yaping et al. 1990, sp. nov. (Type species of the genus).	strain WVB8512.
<i>Salmonella enterica</i> subsp. <i>enterica</i>	(ex Kauffmann and Edwards 1952) Le Minor and Popoff 1987, subsp. nov.	strain LT2 (serovar Typhimurium) = ATCC 43971 = CIP 60.62 = NCIMB 11450 = NCTC 12416.
<i>Selenomonas artemidis</i>	Moore et al. 1987, sp. nov.	strain ATCC 43528 = JCM 8543 = VPI D22B-14.
<i>Seliberia stellata</i>	Aristovskaya and Parinkina 1963, species. (Type species of the genus).	strain INMI N-9 = JCM 21594 = VKM B-1340.
<i>Serpens flexibilis</i>	Hespell 1977, species. (Type species of the genus).	strain ATCC 29606.
<i>Shigella boydii</i>	Ewing 1949, species.	strain ATCC 8700 = CCUG 49022 = CIP 82.50 = DSM 7532 = NCTC 12985.
<i>Shigella sonnei</i>	(Levine 1920) Weldin 1927, species.	strain ATCC 29930 = CIP 82.49 = DSM 5570 = NCTC 12984.
<i>Sphingobacterium antarcticum</i>	corrig. Shivaji et al. 1992, sp. nov.	strain 4BY = ATCC 51969 = MTCC 675.
<i>Spirochaeta aurantia</i> subsp. <i>stricta</i>	Canale-Parola 1984, subsp. nov.	strain J4T.

**Table 4: 'Orphan' species. Species without any ribosomal SSU sequence in public repositories. (Updated)****LTP\_s100**

Taxon name	Author(s)	Type strain cited in its effective publication
<i>Spirochaeta caldaria</i>	Pohlschroeder et al. 1995, sp. nov.	strain H1 = ATCC 51460 = DSM 7334.
<i>Spirochaeta plicatilis</i>	Ehrenberg 1835, species. (Type species of the genus).	----
<i>Spirochaeta thermophila</i>	Aksenova et al. 1992, sp. nov.	strain Z-1203 = ATCC 700085 = DSM 6578.
<i>Spiroplasma atrichopogonis</i>	Koerber et al. 2005, sp. nov.	strain GNAT3597 = ATCC BAA-520 = NBRC 100390.
<i>Spiroplasma cantharicola</i>	Whitcomb et al. 1993, sp. nov.	strain CC-1 = ATCC 43207.
<i>Spiroplasma kunkelii</i>	Whitcomb et al. 1986, sp. nov.	strain E275 = ATCC 29320.
<i>Spiroplasma lineolae</i>	French et al. 1997, sp. nov.	strain TALS-2 = ATCC 51749.
<i>Spiroplasma platyhelix</i>	Williamson et al. 1997, sp. nov.	strain PALS-1 = ATCC 51748.
<i>Spiroplasma tabanidicola</i>	Whitcomb et al. 1997, sp. nov.	strain TAUS-1 = ATCC 51747.
<i>Sporolactobacillus lactosus</i>	Yanagida et al. 1997, sp. nov.	strain X1-1 = JCM 9690.
<i>Sporomusa paucivorans</i>	Hermann et al. 1987, sp. nov.	strain DSM 3697.
<i>Stibiobacter senarmontii</i>	Lyalikova 1974, species. (Type species of the genus).	strain VKM MV-1130.
<i>Streptomyces cellulolyticus</i>	Li 1997, sp. nov.	strain LX = AS. 41332 (deposited in the China General Microbiological Culture Collection Center).
<i>Streptomyces coeruleoflavus</i>	Preobrazhenskaya and Maximova 1986, sp. nov.	strain INA 2206.

**Table 4: 'Orphan' species. Species without any ribosomal SSU sequence in public repositories. (Updated)****LTP\_s100**

Taxon name	Author(s)	Type strain cited in its effective publication
<i>Streptomyces olivomycini</i>	(Gause and Sveshnikova 1986) Witt and Stackebrandt 1991, comb. nov.	strain INA 16749.
<i>Streptomyces speleomycini</i>	Preobrazhenskaya and Szabó 1986, sp. nov.	strain B-23.
<i>Streptomyces thermoautotrophicus</i>	Gadkari et al. 1991, sp. nov.	strain UBT1 = DSM 41605.
<i>Streptosporangium amethystogenes</i> subsp. <i>fukuiense</i>	Iinuma et al. 1996, subsp. nov.	strain AL-23456 = CIP 105397 = IFO (now NBRC) 15365 = JCM 10083.
" <i>Streptoverticillium verticillium</i> subsp. <i>tsukushiense</i> " *	(ex Arai 1976) Locci and Schofield 1989, subsp. nov., nom. rev.	strain ATCC 21633 = JCM 10109.
<i>Sulfurococcus mirabilis</i>	Golovacheva et al. 1995, sp. nov. (Type species of the genus).	strain INMI AT-59.
<i>Sulfurococcus yellowstonensis</i>	corrige. Karavaiko et al. 1995, sp. nov.	strain Str6kar
<i>Sutterella wadsworthensis</i>	Wexler et al. 1996, sp. nov. (Type species of the genus).	strain WAL 9799 = ATCC 51579 = CCUG 42229 = CIP 104799 = DSM 14016.
<i>Symbiotes lectularius</i>	(Arkwright et al. 1921) Philip 1956, species. (Type species of the genus).	----
<i>Syntrophomonas wolfei</i> subsp. <i>wolfei</i>	McInerney et al. 1982, subsp. nov.	strain Göttingen G311 = DSM 2245A (the Göttingen strain grown in coculture with <i>Desulfovibrio</i> sp. strain G-11 with sulfate in the medium) and DSM 2245B (the same strain grown in coculture with the type strain of <i>Methanospirillum hungatei</i> , strain DSM 864).
<i>Tectibacter vulgaris</i>	(ex Preer et al. 1974) Preer and Preer 1982, sp. nov., nom. rev. (Type species of the genus).	strain 225 = ATCC 30697 (The accession numbers refer to protozoan strains carrying the endosymbionts).
<i>Thermohydrogenium kirishiense</i>	Zacharova et al. 1996, sp. nov. (Type species of the genus).	strain ZE-7 (strain deposited in the collection of the Department of Microbiology, Moscow State University, Moscow, Russia) = DSM 11055.
<i>Thermonema lapsum</i>	Hudson et al. 1989, sp. nov. (Type species of the genus).	strain 23/9 = ATCC 43542 = DSM 5718.

**Table 4: 'Orphan' species. Species without any ribosomal SSU sequence in public repositories. (Updated)****LTP\_s100**

Taxon name	Author(s)	Type strain cited in its effective publication
<b>"<i>Thermoproteus uzoniensis</i>" **</b>	Bonch-Osmolovskaya et al. 2001, sp. nov.	strain Z-605 = DSM 5263.
<b><i>Thermothrix azorensis</i></b>	Odintsova et al. 1996, sp. nov.	strain TM = ATCC 51754.
<b><i>Thermus profundus</i></b>	(sic) Kobayashi et al. 1995, sp. nov.	strain DT 5432.
<b><i>Thiobacterium bovistum</i></b>	corrig. (ex Molisch 1912) La Riviere and Kuenen 1989, sp. nov., nom. rev. (Type species of the genus).	----
<b><i>Thiomargarita namibiensis</i></b>	Schulz et al. 1999, sp. nov. (Type species of the genus).	----
<b><i>Thiopedia rosea</i></b>	Winogradsky 1888, species. (Type species of the genus).	----
<b><i>Thioploca araucae</i></b>	Maier and Gallardo 1984, sp. nov.	----
<b><i>Thioploca chileae</i></b>	Maier and Gallardo 1984, sp. nov.	----
<b><i>Thioploca ingrlica</i></b>	(ex Visloukh 1911) Maier 1984, sp. nov., nom. rev.	----
<b><i>Thioploca schmidlei</i></b>	Lauterborn 1907, species. (Type species of the genus).	----
<b><i>Thiospira winogradskyi</i></b>	(Omelianski 1905) Visloukh 1914, species. (Type species of the genus).	----
<b><i>Thiospirillum jenense</i></b>	(Ehrenberg 1838) Migula 1900, species. (Type species of the genus).	strain DSM 216.
<b><i>Thiothrix defluvii</i></b>	Howarth et al. 1999, sp. nov.	strain Ben57.
<b><i>Thiothrix nivea</i></b>	(Rabenhorst 1865) Winogradsky 1888, species. (Type species of the genus).	----

**Table 4: 'Orphan' species. Species without any ribosomal SSU sequence in public repositories. (Updated)****LTP\_s100**

Taxon name	Author(s)	Type strain cited in its effective publication
<i>Thiovulum majus</i>	Hinze 1913, species. (Type species of the genus).	----
<i>Toxothrix trichogenes</i>	(Cholodny 1924) Beger 1953, species. (Type species of the genus).	----
<i>Treponema minutum</i>	Dobell 1912, species.	strain CIPP 5162.
<i>Treponema pallidum</i>	(Schaudinn and Hoffmann 1905) Schaudinn 1905, species. (Type species of the genus).	----
<i>Treponema paraluisancuniculi</i>	corrig. (Jacobsthal 1920) Smibert 1974, species.	----
<i>Treponema pertenue</i>	(Castellani 1905) Castellani and Chalmers 1910, species.	----
<i>Vampirovibrio chlorellavorus</i>	(ex Gromov and Mamkayeva 1972) Gromov and Mamkayeva 1980, nom. rev., comb. nov. (Type species of the genus).	strain ATCC 29753.
<i>Vitreoscilla beggiatoides</i>	Pringsheim 1949, species. (Type species of the genus).	----
<i>Vitreoscilla filiformis</i>	(ex Pringsheim 1951) Strohl et al. 1986, sp. nov., nom. rev.	strain L1401-2 = ATCC 43190.
<i>Wigglesworthia glossinidia</i>	Aksoy 1995, sp. nov. (Type species of the genus).	----
<i>Wolbachia melophagi</i>	(Nöller 1917) Philip 1956, species.	----
<i>Wolbachia pipientis</i>	Hertig 1936, species. (Type species of the genus).	----
<i>Xanthomonas euvesicatoria</i>	Jones et al. 2006, sp. nov.	strain ATCC 11633 = ICMP 98 = ICMP 109 = NCPPB 2968.
<i>Xanthomonas gardneri</i>	(ex Sutic 1957) Jones et al. 2006, nom. rev., comb. nov.	strain ATCC 19865 = ICMP 16689 = NCPPB 881.

**Table 4: 'Orphan' species. Species without any ribosomal SSU sequence in public repositories. (Updated)**

**LTP\_s100**

Taxon name	Author(s)	Type strain cited in its effective publication
<b><i>Xanthomonas perforans</i></b>	Jones et al. 2006, sp. nov.	strain XV938 = ATCC BAA-983 = ICMP 16690 = NCPPB 4321.
<b><i>Xanthomonas phaseoli</i></b>	(ex Smith 1897) Gabriel et al. 1989, sp. nov., nom. rev.	strain G27 = ATCC 49119.
<b><i>Yersinia enterocolitica</i> subsp. <i>paleartica</i></b>	Neubauer et al. 2000, subsp. nov.	strain Y11 = CIP 106945 = DSM 13030.
<b><i>Yokenella regensburgei</i></b>	Kosako et al. 1985, sp. nov. (Type species of the genus).	strain ATCC 49455 = BCRC (formerly CCRC) 12225 = CIP 105435 = JCM 2403 = NCTC 11966 = NIH 725-83.
<b><i>Zavarzinia compransoris</i></b>	(ex Nozhevnikova and Zavarzin 1974) Meyer et al. 1994, nom. rev., comb. nov. (Type species of the genus).	strain Z-1155 = ATCC 51430 = CCUG 15334 = DSM 1231 = LMG 5821 = LMG 8357.
<b><i>Zymomonas mobilis</i> subsp. <i>francensis</i></b>	Coton et al. 2006, subsp. nov.	strain AN0101 = CIP 108684 = LMG 22974.

---- Species without type strain available in culture collections.

\* Do not meet the criteria required by the *Bacteriological Code* (1990 revision), or they are incorrect, or they are rejected.

\*\* Do not meet the criteria required by the *Bacteriological Code* (1990 revision), or they are incorrect, or they are rejected, but they are cited in the Request for an Opinion by Euzéby and Tindall (*Int. J. Syst. Evol. Microbiol.*, 2004, 54, 293-301).