SCHÖN, I. , T. KAMIYA, T. VAN DEN BERGHE, L. VAN DEN BROECKE & K. MARTENS 2019. Novel *Cardinium* strains from non-marine ostracod (Crustacea) hosts from natural populations. Molecular Phylogenetics and Evolution 130 (2019) 406–415. (IF 2017 = 4.412). (DOI: 10.1016/j.ympev.2018.09.008).

Supplementary material

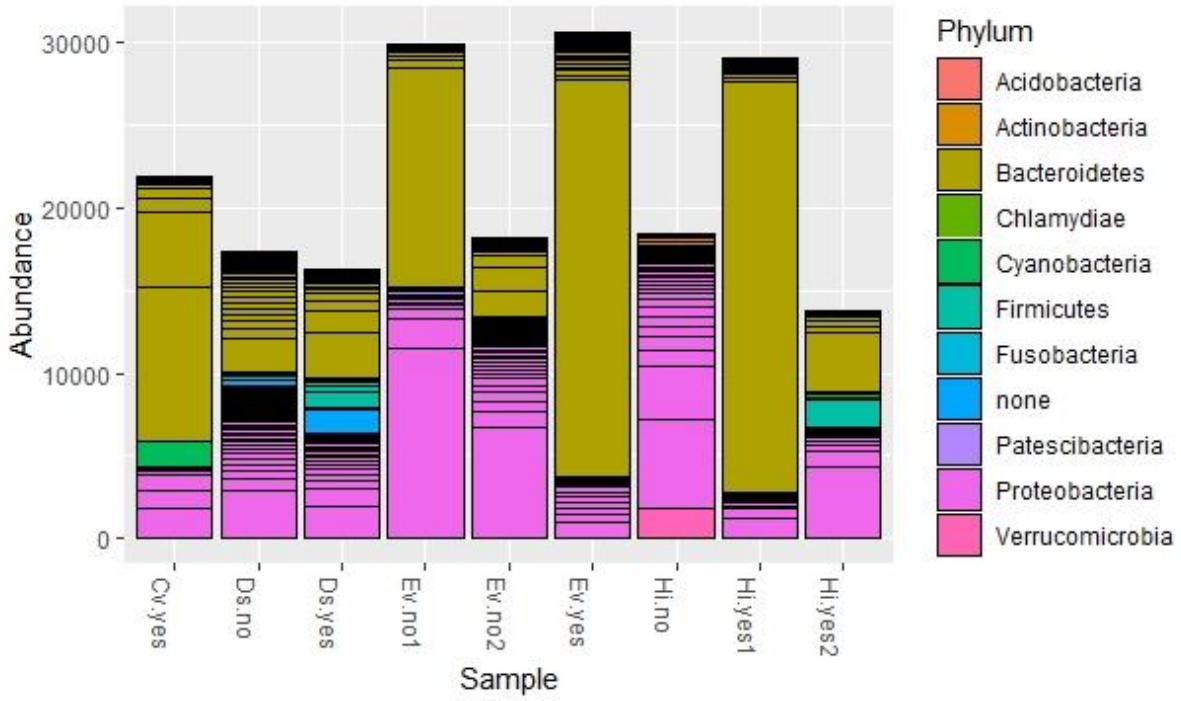


Figure S1A: Cumulative bar charts of non-marine ostracod microbiomes. Ds= *Darwinula stevensoni*; Cv= *Cypridopsis vidua*; Ev = *Eucypris virens;* Hi= *Heterocypris incongruens*. See Table S1A for more details on the investigated specimens and Table S4A on details of all classified ASVs. yes = *Cardinium* present according to classic PCR screening. no= *Cardinium* absent according to classic PCR screening. Based on high-throughput 16S amplicon sequencing, analysed with DADA2 (Callahan et al., 2016) and plotted with phyloseq (McMurdie & Holmes, 2013) and ggplot (Wickham, 2016).

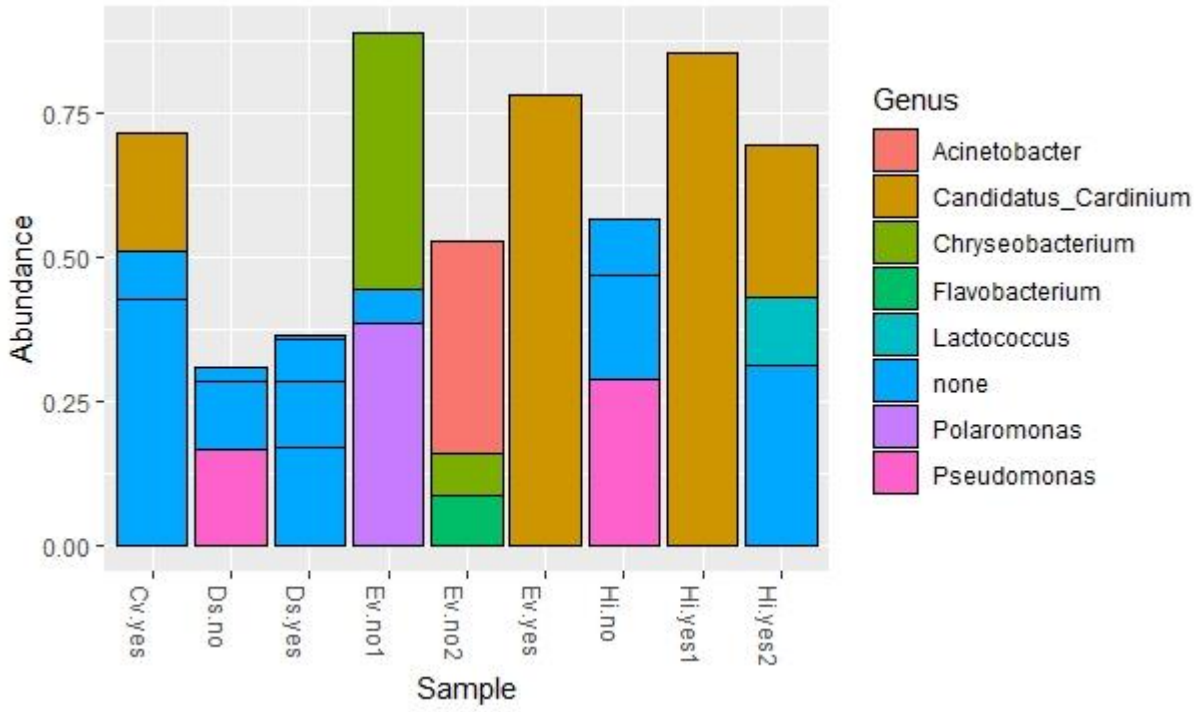
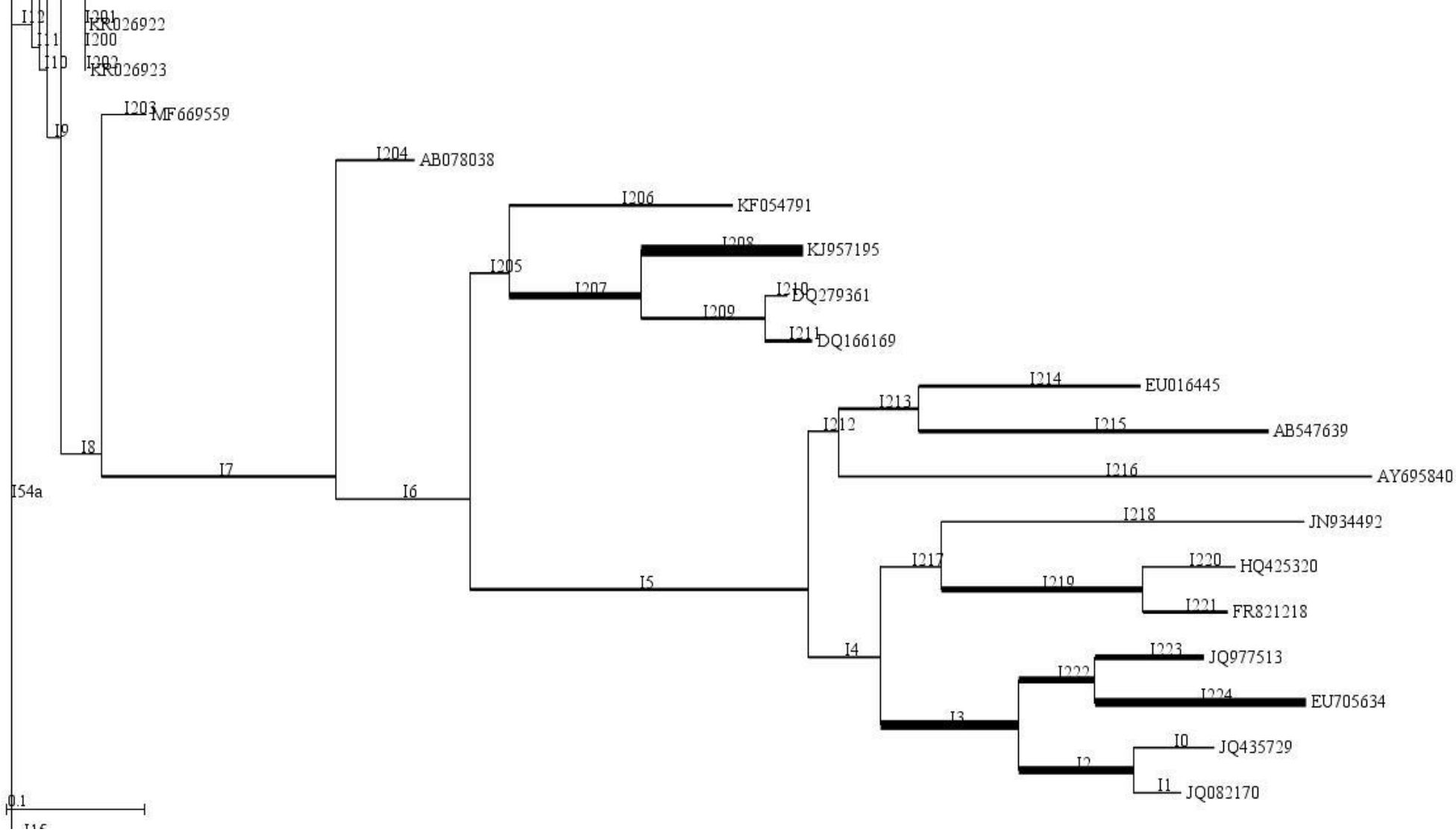


Figure S1B: Top 20 bacterial ASVs in investigated non-marine ostracods. Ds= *Darwinula stevensoni*; Cv= *Cypridopsis vidua*; Ev = *Eucypris virens;* Hi= *Heterocypris incongruens*. ASV= 16S Amplicon sequence variant. See Table S1A for more details on the investigated specimens and Table S4A on details of all classified ASVs. yes = *Cardinium* present according to classic PCR screening. no= *Cardinium* absent according to classic PCR screening. Based on high-throughput 16S amplicon sequencing, analysed with DADA2 (Callahan et al., 2016) and plotted with phyloseq (McMurdie & Holmes, 2013) and ggplot (Wickham, 2016).


I12
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I11
I200
I10
I202
KR026923
I203
MF669559
I9
I204
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I206
KF054791
I208
KJ957195
I205
I207
I210
DQ279361
I209
I211
DQ166169
I214
EU016445
I213
I212
I215
AB547639
I8
I7
I216
AY695840
I54a
I6
I218
JN934492
I217
I220
HQ425320
I219
I5
I221
FR821218
I4
I223
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I224
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I0
JQ435729
I2
I1
JQ082170
0.1

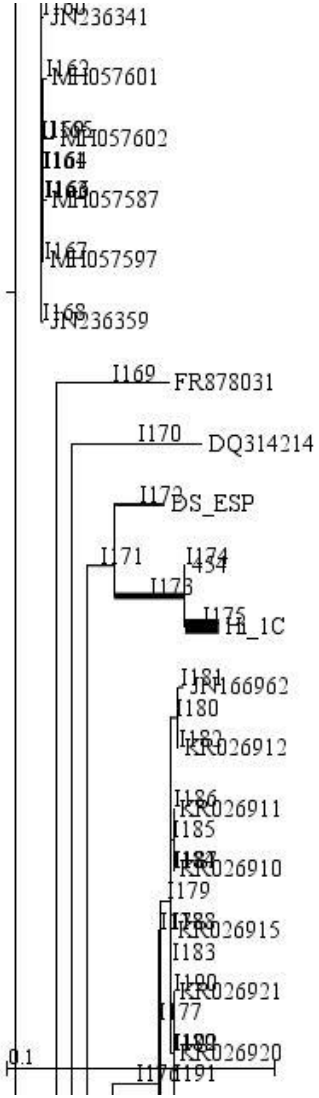

Figure S2A: Details of the RAxML tree constructed with 16S sequence from non-Cardinium (top) and *Cardinium* (bottom) bacteria with mapped high throughput 16S sequences. RAxML =Randomized Axelerated Maximum Likelihood (Stamatakis, 2006). Branch width is proportional to the number of mapped sequenced with the Evolutionary Placement Algorithm (EPA; Berger et al., 2011). For more details on the results, see Table S4A. The identity of reference sequences of the tree is provided in Table S1A & B.

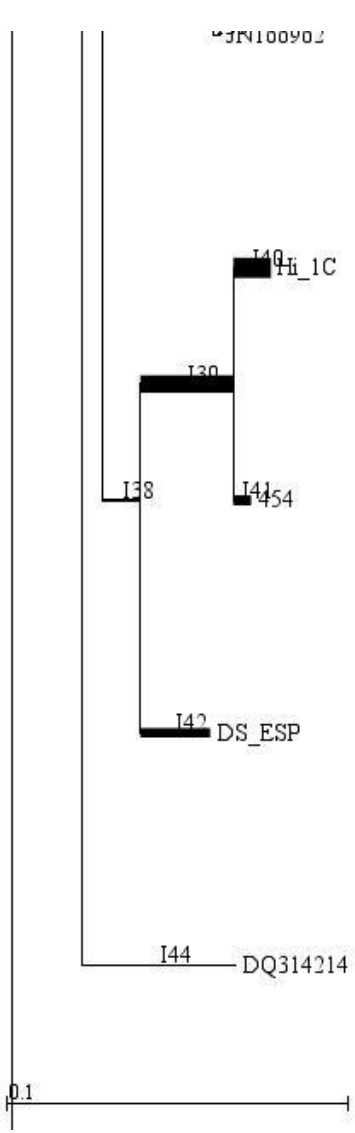

Figure S2B: Details of the RAxML tree constructed with 16S sequences of *Cardinium* with mapped shorter 5‘ and 3’ 16S sequences of non-marine ostracod hosts. Branch width is proportional to the number of mapped sequenced with EPA. For more details on the results, refer to Table S3B. For sequence identities, refer to Table S1A.

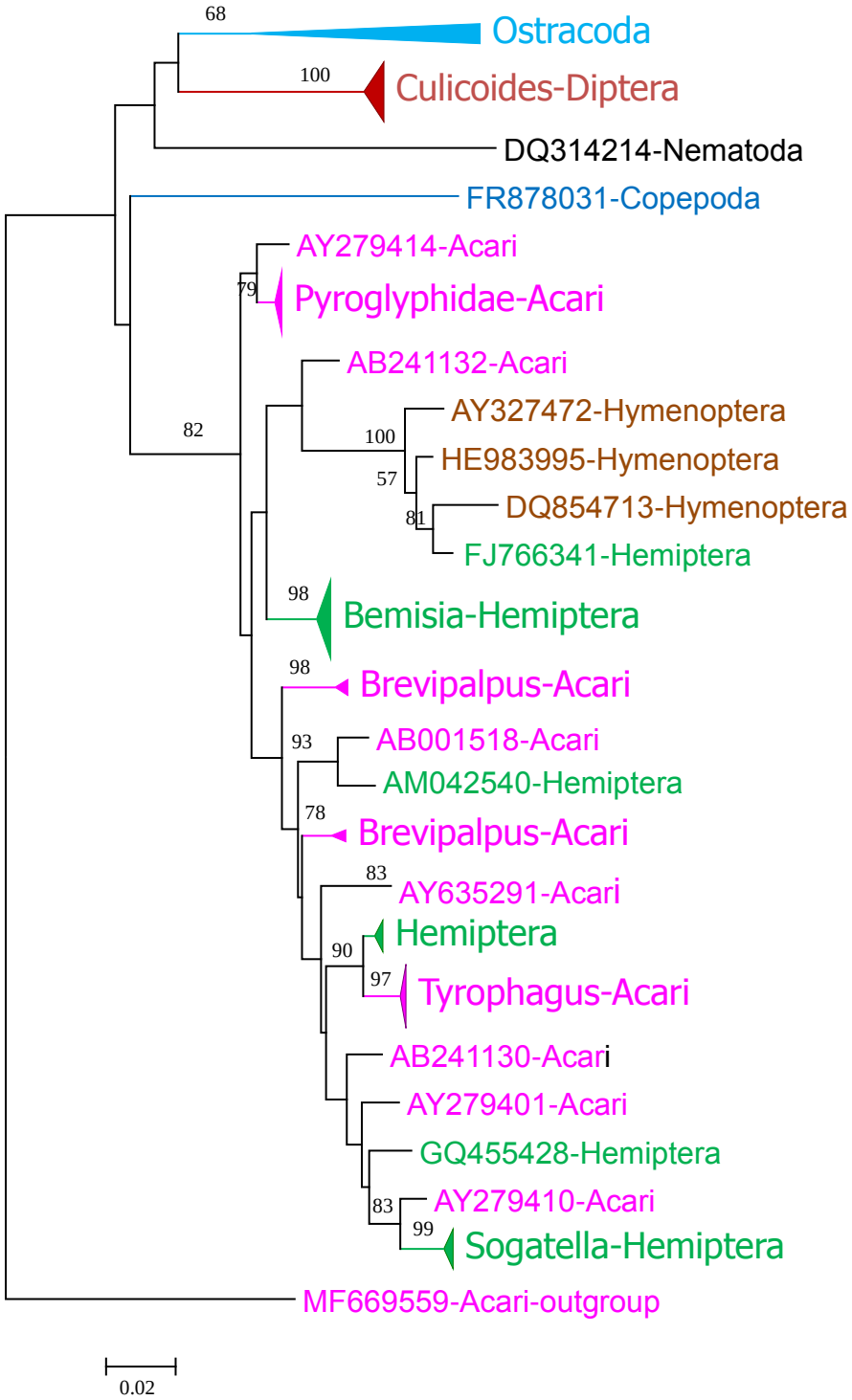

Figure S3: Maximum Likelihood (ML) tree constructed from 16S rRNA sequences of *Cardinium* (see Table S1A & 1B for more details on 16S sequence data) with phyml (Guindon & Gascuel, 2003). Numbers above branches are bootstrap of 1000 replicates in %. Only bootstraps above 50% are shown. **FigureS3A**: ML tree constructed from 1276bp of the 16S rRNA region of *Cardinium* from various hosts, with the TVM+G model and a gamma parameter of 1.67.

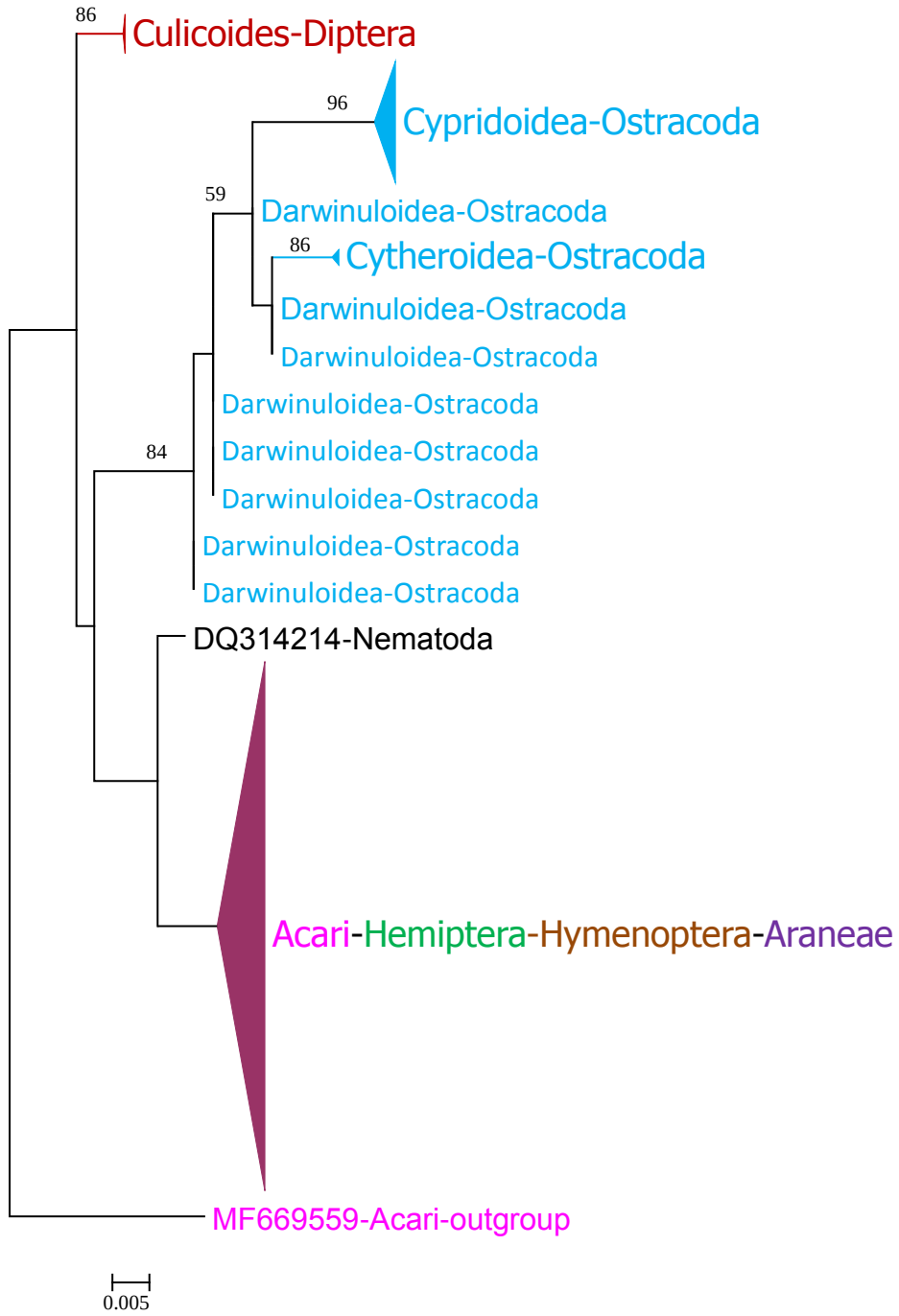

Figure S3: Maximum Likelihood (ML) tree constructed from 16S rRNA sequences of *Cardinium* (see Table S1A & 1B for more details on 16S sequence data) with phyml (Guindon & Gascuel, 2003). Numbers above branches are bootstrap of 1000 replicates in %. Only bootstraps above 50% are shown.

Figure S3B: ML tree constructed from partial 16S rRNA sequences of *Cardinium* of the 3' end (403bp) from various hosts with the K80 model, kappa=9.10 and ti/tv=4.55.

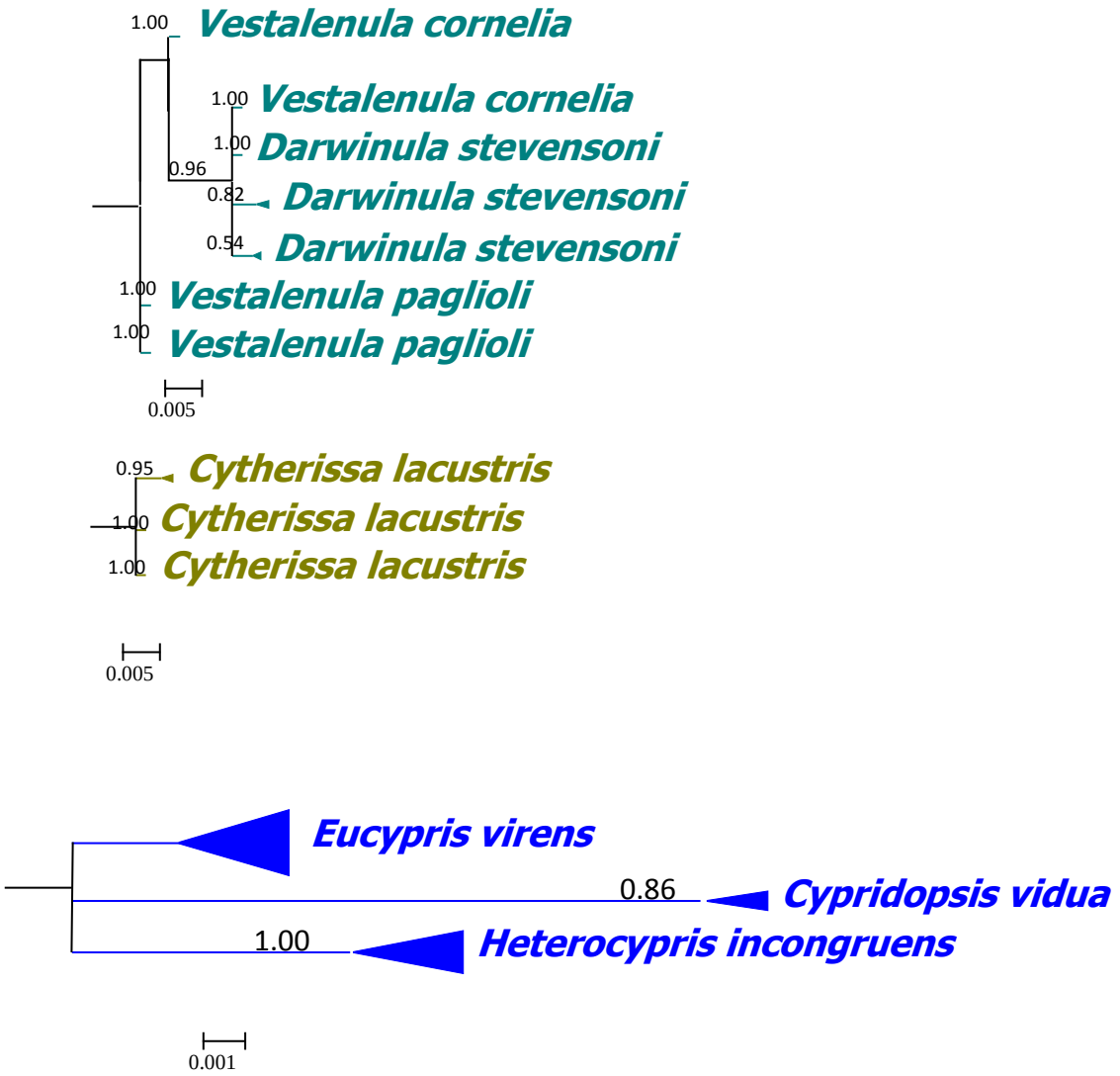

Figure S4: Subtree of *Cardinium* from different non-marine ostracod species.

Details of the collapsed clades of Figure 1B are provided here.

Table S1: Details of the screened non-marine ostracods and of additional 16S rRNA sequences of *Cardinium* from GenBank that were used for the phylogenetic reconstructions and Bayes Factor tests.

A. Information on screened ostracods.

For each ostracod, the morphospecies, DNA code (ID), geographic origin, infection status, cryptic species identity, latitude and Genbank accession number of the COI sequence is provided if the latter was used for phylogenetic constructions of the hosts. Coordinates are merely indicative for the aquatic habitat and do not include the different sampling points within each habitat. "1" in the column "Cardinium" indicates infection. If no information is provided in this column, the specimen in question was not screened for *Cardinium* but only used to obtain COI DNA sequence data for constructing host phylogenies. For ostracod specimens testing positive with *Cardinium*, also the part of the 16S rRNA that was sequenced and, where applicable, the Genbank accession number is provided. A complete 16S alignment including all 16S sequcens of *Cardinium* from ostracods is available from the first author by request. Ostracod specimens that have been screened for four different symbionts (*Wolbachia*, *Rickettsia*, *Cardinium* & *Spiroplasma*) are indicated in bold. Ostracods that were also screened with high-throughput metagenomics sequencing techniques are underlined. # = number. Genetic species numbers are according to Bode et al. (2010), Schön et al. (2012), Schön et al. in prep. and Cours et al. in prep. Sequences of the 5' end of 16S rRNA of *Cardinium* were used for initial phylogenetic reconstructions and for EPA mapping.

Morpho-species	DNA ID	Population	Habitat	Cardinium	Latitude	Longitude	Genetic species #	GenBank # 16S Cardinium	16S region Cardinium	bp 16S data	GenBank# host COI
Eucypris virens	**121**	Drongen, Belgium (DR2)	meadow temporary pool	0	51.04936	3.6652778	16				GQ914299
Eucypris virens	**119**	Drongen, Belgium DR2)	meadow temporary pool	0	51.04936	3.6652778	16				
Eucypris virens	221	Berchem, Belgium (BRC)	temporary pool	1	50.79472	3.5175	16	KC167899	3' V6-V9	403	
Eucypris virens	529	Berchem, Belgium (BRC)	temporary pool	1	50.79472	3.5175	16	KC167902	3' V6-V9	403	
Eucypris virens	**FR_FIO 137**	Fitou, France (FIO)	temporary pool	1	42.92417	2.99083	31	KC167888	3' V6-V9	403	GQ914305
Eucypris virens	**230**	Fitou, France (FIT)	temporary pool	0	42.88333	2.96667	1				
Eucypris virens	**FR_DU R143**	Durfort, France (DUR)	temporary pool	1	43.99083	3.98667	36	KC167896 MH908927	3' V6-V9 5' V1 & V2	403 376	GQ914311
Eucypris virens	198	Urbino, Corsica,	temporary pool	1	42.06094	9.44797	31		3' V6-V9	403	GQ914325

		France (COU)									
Eucypris virens	**IT_PUP 207**	Punta Grossa, Puglia, Italy (PUP)	temporary pool	1	40.29106	17.79542	26	KC167889 MH908928	3' V6-V9 5’ V1-V2	403 376	GQ914333
Eucypris virens	**IT_SIM 89**	Macarese, Sicily, Italy (SIM)	temporary pool	0	38.1014	12.66080	8				GQ914288
Eucypris virens	**499**	Piana di Gesturi, Sardinia, Italy (SA5)	temporary pool	0	39.73692	8.99775	1				
Eucypris virens	IT_PUS 122_M	Lecce, Puglia, Italy (PUS)	temporary pool	0	39.9489	18.29920	10				GQ914300
Eucypris virens	IT_PUS 123_M	Lecce, Puglia, Italy (PUS)	temporary pool	0	39.9489	18.29920	10				GQ914301
Eucypris virens	IT_PUS 124_M	Lecce, Puglia, Italy (PUS)	temporary pool	0	39.9489	18.29920	10				GQ914302
Eucypris virens	237	Lecce, Puglia, Italy (PUS)	temporary pool	0	39.9489	18.29920	10				
Eucypris virens	238	Lecce, Puglia, Italy (PUS)	temporary pool	0	39.9489	18.29920	10				
Eucypris virens	IT_SIO4 71_M	S. Fratello, Sicily, Italy (SIO)	temporary pool	0	37.92497	14.67524	33				GQ914491
Eucypris virens	**IT_SIP1 63**	Sicily, Italy	temporary pool	0	37.92497	13.36417	na				KC167997
Eucypris virens	HR_OM I361	Split, Croatia (OMI)	temporary pool	1	43.45083	16.69583	31		3' V6-V9	403	GQ914434
Eucypris virens	HR_OM I362	Split, Croatia (OMI)	temporary pool	1	43.45083	16.69583	31		3' V6-V9	403	GQ914435
Eucypris virens	HR_OM I363	Split, Croatia (OMI)	temporary pool	1	43.45083	16.69583	31		3' V6-V9	403	GQ914436
Eucypris virens	HR_KR K364	Krk, Croatia (KRK)	temporary pool	1	45.03056	14.59444	31		3' V6-V9	403	GQ914437
Eucypris virens	HR_KR K365	Krk, Croatia (KRK)	temporary pool	1	45.03056	14.59444	31		3' V6-V9	403	GQ914438
Eucypris virens	**ES_VA1**	El Saler,	temporary pool	0	39.32083	-0.30833	31				KC168003

	353	Albufera, Spain (VA1)									
Eucypris virens	**ES_VA486**	El Saler, Albufera, Spain (VA4)	temporary pool	1	39.32083	-0.31090	31	KC167894	3' V6-V9	403	GQ914285
Eucypris virens	**157**	El Saler, Albufera, Spain (VA4)	temporary pool	0	39.34328	-0.31090	31				
Eucypris virens	ES_ME3151	Favaritx, Menorca, Spain (ME3)	temporary pool	1	39.99306	4.25306	31		3' V6-V9	403	GQ914315
Eucypris virens	**150**	**Carniola/Ciutadella, Menorca, Spain (ME1)**	temporary pool	0	40.04667	3.90081	16				
Eucypris virens	**ES_MF4436_M**	**Villarreal de San Carlos, Extremadura, Spain (MF4)**	temporary pool	0	39.91167	-6.06167	13				GQ914468
Eucypris virens	**MT_MOS200**	Mosta, Malta (MOS)	temporary pool	0	35.91289	14.42506	31				GQ914327
Eucypris virens	202	Santa Margherita, Malta (MAR)	temporary pool	0	35.91678	14.43208	31				
Eucypris virens	203	Santa Margherita, Malta (MAR)	temporary pool	0	35.91678	14.43208	31				
Eucypris virens	204	Santa Margherita, Malta (MAR)	temporary pool	0	35.91678	14.43208	31				
Eucypris virens	201	Ghiadira S-safra, Malta (GHI)	temporary pool	0	35.95136	14.44364	31				
Eucypris virens	**GR_COE217**	Melisa, Corfu, Greece (COE)	temporary pool	1	39.475	19.91000	31	KC167890	3' V6-V9	403	GQ914338
Eucypris virens	GR_COE218	Melisa, Corfu, Greece (COE)	temporary pool	1	39.475	19.91000	31		3' V6-V9	403	GQ914339

Eucypris virens	**219**	Melisa, Corfu, Greece (COE)	temporary pool	1	39.475	19.91000	31	KC167891	3' V6-V9	403	
Eucypris virens	**131**	Skripera, Corfu, Greece (COA)	temporary pool	0	39.6975	19.78500	34				
Eucypris virens	GR_COA496_M	Skripera, Corfu, Greece (COA)	temporary pool	0	39.6975	19.78500	34				GQ914592
Eucypris virens	497	Skripera, Corfu, Greece (COA)	temporary pool	0	39.6975	19.78500	34				
Eucypris virens	GR_COA681_M	Skripera, Corfu, Greece (COA)	temporary pool		39.6975	19.78500	34				GQ914618
Eucypris virens	GR_COB658_M	Skripera, Corfu, Greece (COB)	temporary pool		39.6975	19.78556	34				GQ914615
Eucypris virens	GR_COB668_M	Skripera, Corfu, Greece (COB)	temporary pool		39.6975	19.78556	34				
Eucypris virens	132	Skripera, Corfu, Greece (COB)	temporary pool	0	39.69778	19.78556	42				
Eucypris virens	493	Skripera, Corfu, Greece (COB)	temporary pool	0	39.69778	19.78556	34				
Eucypris virens	494	Skripera, Corfu, Greece (COB)	temporary pool	0	39.69778	19.78556	34				
Eucypris virens	495	Skripera, Corfu, Greece (COB)	temporary pool	0	39.69778	19.78556	34				
Eucypris virens	488	Kefalovryso, Corfu, Greece (COD)	temporary pool	0	39.6256	19.79860	34				
Eucypris virens	**489**	Kefalovryso, Corfu, Greece (COD)	temporary pool	0	39.6256	19.79860	34				

Eucypris virens	**212**	Kefalovryso, Corfu, Greece (COD)	temporary pool	0	39.6256	19.79860	42				
Eucypris virens	GR_COD490_M	Kefalovryso, Corfu, Greece (COD)	temporary pool	0	39.6256	19.79860	34				GQ914590
Eucypris virens	491	Kefalovryso, Corfu, Greece (COD)	temporary pool	0	39.6256	19.79860	34				
Eucypris virens	GR_COD526_M	Kefalovryso, Corfu, Greece (COD)	temporary pool		39.6256	19.79860	34				GQ914594
Eucypris virens	492	Kefalovryso, Corfu, Greece (COD)	temporary pool	0	39.6256	19.79860	34				
Eucypris virens	**215**	Kefalovryso, Corfu, Greece (COD)	temporary pool	0	39.6256	19.79860	42				
Eucypris virens	**225**	Gdańsk, Poland (JAB)	temporary pool	1	54.33139	18.56417	37	KC167892 MH908926	3' V6-V9 5' V1 & V2	403 376	
Eucypris virens	223	Gdańsk, Poland (JAB)	temporary pool	1	54.33139	18.56417	37	KC167900	3' V6-V9	403	
Eucypris virens	224	Gdańsk, Poland (JAB)	temporary pool	0	54.33139	18.56417	37				
Eucypris virens	226	Chojnowo, Poland (CHO)	temporary pool	1	52.65583	21.22806	37				
Eucypris virens	227	Chojnowo, Poland (CHO)	temporary pool	0	52.65583	21.22806	37				
Eucypris virens	246	Starkowa Huta, Poland (STA)	temporary pool	0	54.22722	18.17722	37				
Eucypris virens	247	Starkowa Huta, Poland (STA)	temporary pool	0	54.22722	18.17722	37				
Eucypris virens	248	Starkowa Huta, Poland (STA)	temporary pool	0	54.22722	18.17722	37				

Eucypris virens	249	Trzepowo, Poland (TRZ)	temporary pool	1	54.18	18.29278	37				
Eucypris virens	250	Trzepowo, Poland (TRZ)	temporary pool	1	54.18	18.29278	37				
Eucypris virens	253	Tohela, Estonia (TOH)	temporary pool	1	58.40167	24.00667	37				
Eucypris virens	271	Vara, Estonia (VAR)	temporary pool	0	58.52694	26.95000	38				
Eucypris virens	272	Vara, Estonia (VAR)	temporary pool	0	58.52694	26.95000	38				
Eucypris virens	273	Vara, Estonia (VAR)	temporary pool	0	58.52694	26.95000	38				
Eucypris virens	252	Puikule, Latvia, (PUI)	temporary pool	1	57.65639	24.89389	37				
Eucypris virens	256	Galgauska, Latvia (GAL)	temporary pool	0	57.16667	26.59944	37				
Eucypris virens	257	Gulbene, Lativa (GUL)	temporary pool	0	57.19056	26.89500	38				
Eucypris virens	258	Gulbene, Lativa (GUL)	temporary pool	0	57.19056	26.89500	38				
Eucypris virens	259	Gulbene, Lativa (GUL)	temporary pool	0	57.19056	26.89500	38				
Eucypris virens	260	Gulbene, Lativa (GUL)	temporary pool	0	57.19056	26.89500	38				
Eucypris virens	**TN_TUN384**	Ariana, Tunesia (TUN)	temporary pool	1	37.005	10.23100	8	KC167893	3' V6-V9	403	KC168005
Eucypris virens	**TN_TUN386**	Ariana, Tunesia (TUN)	temporary pool	1	37.005	10.23100	8	KC167897	3' V6-V9	403	KC168006
Eucypris virens	**392**	El Hisiane, Tunesia (HIS)	temporary pool	0	36.995	10.15083	8				
Eucypris virens	**TN_HIS395_FM**	El Hisiane, Tunesia (HIS)	temporary pool	0	36.995	10.15083	8				GQ914443
Eucypris virens	**TN_OUL_376**	Ouled Amer, Tunesia (OUL)	temporary pool	0	36.01306	10.31833	30				KC168004
Eucypris virens	377	Ouled Amer, Tunesia (OUL)	temporary pool	0	36.01306	10.31833	30				

Eucypris virens	378	Ouled Amer, Tunesia (OUL)	temporary pool	0	36.01306	10.31833	30				
Eucypris virens	379	Ouled Amer, Tunesia (OUL)	temporary pool	0	36.01306	10.31833	30				
Eucypris virens	383	Ouled Amer, Tunesia (OUL)	temporary pool	0	36.01306	10.31833	30				
Eucypris virens	TN_RAO391_FM	Raoued, Tunesia (RAO)	temporary pool	1	36.95639	10.22083	8		3' V6-V9	403	GQ914440
Eucypris virens	**MA_MB3145_FM**	Youssoufia, Morocco (MB3)	temporary pool	1	32.2875	-8.33222	7				GQ914313
Eucypris virens	429	Chemaia, Morocco (ML1)	temporary pool	0	31.97944	-8.37639	9				
Eucypris virens	MA_ML1426_M	Chemaia, Morocco (ML1)	temporary pool		31.97944	-8.37639	9				GQ914463
Eucypris virens	MA_ML1430_M	Chemaia, Morocco (ML1)	temporary pool		31.97944	-8.37639	9				GQ914465
Eucypris virens	**146**	Chemaia, Morocco (ML1)	temporary pool	0	31.97944	-8.37639	9				
Eucypris virens	431	Chemaia, Morocco (ML1)	temporary pool	0	31.97944	-8.37639	9				
Eucypris virens	432	Chemaia, Morocco (ML1)	temporary pool	0	31.97944	-8.37639	9				
Eucypris virens	433	Chemaia, Morocco (ML1)	temporary pool	0	31.97944	-8.37639	9				
Eucypris virens	**MA_ML1434_M**	Chemaia, Morocco (ML1)	temporary pool	0	31.97944	-8.37639	9				GQ914466
Eucypris virens	278	Chemaia, Morocco	temporary pool	0	31.94111	-8.39889	7				

		(ML2)									
Eucypris virens	MA_ML2276_FM	Chemaia, Morocco (ML2)	temporary pool		31.94111	-8.39889	7				GQ914389
Eucypris virens	MA_MCH515_M	Chemaia, Morocco (MCH)	temporary pool	0	31.81167	-8.54528	7				GQ914508
Eucypris virens	**MA_ML2275**	Chemaia, Morocco (ML2)	temporary pool	0	31.94111	-8.39889	7				KC168002
Eucypris virens	MA_MB1476_M	Bouchane, Morocco (MB1)	temporary pool	0	32.285	-8.32278	7				GQ914496
Eucypris virens	MA_MB1478_M	Bouchane, Morocco (MB1)	temporary pool	0	32.285	-8.32278	5				GQ914498
Eucypris virens	MA_MRI479_M	Berrechid, Morocco (MRI)	temporary pool	0	33.16444	-7.39194	27				GQ914499
Eucypris virens	MA_MRI480_M	Berrechid, Morocco (MRI)	temporary pool	0	33.16444	-7.39194	21				GQ914500
Eucypris virens	MA_MRI481_M	Berrechid, Morocco (MRI)	temporary pool	0	33.16444	-7.39194	21				GQ914501
Eucypris virens	MA_MRI482_M	Berrechid, Morocco (MRI)	temporary pool	0	33.16444	-7.39194	27				GQ914502
Eucypris virens	MA_MRI483_M	Berrechid, Morocco (MRI)	temporary pool	0	33.16444	-7.39194	27				GQ914503
Eucypris virens	MA_MB2484_M	Bouchane, Morocco (MB2)	temporary pool	0	32.28833	-8.33444	5				GQ914504
Eucypris virens	MA_MB2485_M	Bouchane, Morocco (MB2)	temporary pool	0	32.28833	-8.33444	7				GQ914505

Eucypris virens	**MA_MB2486_M**	Bouchane, Morocco (MB2)	temporary pool	0	32.28833	-8.33444	7				GQ914506
Eucypris virens	**UK_NEW188**	Newfield Hall pond, Yorkshire, UK (NEW)	temporary pool	0	54.015	-2.13444	31				GQ914322
Eucypris virens	**UK_NEW189**	Newfield Hall pond, Yorkshire, UK (NEW)	temporary pool	0	54.015	-2.13444	31				GQ914323
Eucypris virens	**UK_NEW190**	Newfield Hall pond, Yorkshire, UK (NEW)	temporary pool	0	54.015	-2.13444	31				GQ914324
Eucypris virens	**UK_NEW191**	Newfield Hall pond, Yorkshire, UK (NEW)	temporary pool	0	54.015	-2.13444	31				KC167999
Eucypris virens	501	Newfield Hall pond, Yorkshire, UK (NEW)	temporary pool	0	54.015	-2.13444	31				
Eucypris virens	502	Newfield Hall pond, Yorkshire, UK (NEW)	temporary pool	0	54.015	-2.13444	31				
Eucypris virens	503	Newfield Hall pond, Yorkshire, UK (NEW)	temporary pool	0	54.015	-2.13444	31				
Eucypris virens	507	Newfield Hall pond, Yorkshire, UK (NEW)	temporary pool	1	54.015	-2.13444	31				
Eucypris virens	508	Newfield Hall pond, Yorkshire, UK	temporary pool	1	54.015	-2.13444	31	KC167901	3' V6-V9	403	

		(NEW)									
Eucypris virens	**UK_UPD186**	Upper Denton, Cumbria, UK (UPD)	temporary pool	0	54.89472	-2.59333	28				GQ914320
Eucypris virens	UK_UPD187	Upper Denton, Cumbria, UK (UPD)	temporary pool	0	54.89472	-2.59333	28				GQ914321
Eucypris virens	185	Upper Denton, Cumbria, UK (UPD)	temporary pool	0	54.89472	-2.59333	28				
Eucypris virens	**PT_COR232_FM**	Monte dos corvos, Portugal (COR)	temporary pool	0	37.43222	-7.95528	15				GQ914350
Eucypris virens	PT_COR234_M	Monte dos corvos, Portugal (COR)	temporary pool	0	37.43222	-7.95528	15				GQ914352
Eucypris virens	PT_COR235_M	Monte dos corvos, Portugal (COR)	temporary pool	0	37.43222	-7.95528	15				GQ914353
Eucypris virens	PT_COR236_M	Monte dos corvos, Portugal (COR)	temporary pool	0	37.43222	-7.95528	15				GQ914354
Eucypris virens	**BG_KOB442**	Kobleshkovo, Bulgaria (KOB)	temporary pool	0	42.60917	27.53500	31				GQ914472
Eucypris virens	BG_RAD450	Radanovo, Bulgaria (RAD)	temporary pool	1	43.37722	25.64278	16	MH908925	5', 3', V1 &V2, V6-V9	391, 403	GQ914478
Eucypris virens	**RO_TAM438**	Tamburesti, Romania (TAM)	temporary pool	0	44.04778	23.93167	28				GQ914470

Eucypris virens	RO_LES 451	Leş, Romania (LES)	temporary pool	1	46.96056	21.82944	16		3' V6-V9	403	GQ914479
Eucypris virens	**454**	Hrkovce, Slovakia (HRK)	temporary pool	1	48.09528	18.89250	37	KC167898, MH908935	5'-3' V1-V6	1276	
Eucypris virens	**SK_HRK455**	Hrkovce, Slovakia (HRK)	temporary pool		48.09528	18.89250	37				GQ914482
Eucypris virens	TR_KAB 349	Kavak, Turkey (KAB)	temporary pool	1	41.00139	35.82028	16		3' V6-V9	403	GQ914428
Eucypris virens	TR_KAB 351	Kavak, Turkey (KAB)	temporary pool	1	41.00139	35.82028	16		3' V6-V9	403	GQ914430
Eucypris virens	TR_LAD 341	Ladik, Turkey (LAD)	temporary pool	0	40.91028	35.93194	31				GQ914424
Eucypris virens	TR_LAD 342	Ladik, Turkey (LAD)	temporary pool	0	40.91028	35.93194	31				
Eucypris virens	TR_YUK 324	Yukiari, Turkey (YUK)	temporary pool	1	41.22667	36.63750	31		3' V6-V9	403	GQ914419
Eucypris virens	262	Alcaria Ruiva, Portugal (ALC)	temporary pool	1	37.7414	-7.78890	15		3' V6-V9	403	
Eucypris pigra	**466**	Ladik, Turkey (LAC)	temporary pool	1	35.91111	40.94694	na		3' V6-V9	403	GQ914730
Heterocypris incongruens	**HIA**	Wuppertal, Germany	flower pot	1	51.24	7.106275	7	KC167903	3' V6-V9	403	
Heterocypris incongruens	**HIB**	Wuppertal, Germany	flower pot	1	51.24	7.106275	7	KC167904	3' V6-V9	403	
Heterocypris incongruens	**HIC**	Wuppertal, Germany	flower pot	1	51.24	7.106275	7	KC167905, MH908934	5'-3' V1-V6	1276	KC168020
Heterocypris incongruens	**HID**	Wuppertal, Germany	flower pot	1	51.24	7.106275	7	KC167906	3' V6-V9	403	KC168016
Heterocypris incongruens	**HIE**	Wuppertal, Germany	flower pot	1	51.24	7.106275	7	KC167907	3' V6-V9	403	XXXXXXXXXX
Heterocypris incongruens	**HIF**	Wuppertal, Germany	flower pot	1	51.24	7.106275	7	KC167908	3' V6-V9	403	
Heterocypris incongruens	**IS1**	Drongen, Belgium	flower pot	1	51.04936	3.6055139	na				
Heterocypris incongruens	**IS2**	Drongen, Belgium	flower pot	1	51.04936	3.6055139	1				KC168015

Heterocypris incongruens	**IS3**	Drongen, Belgium	flower pot	1	51.04936	3.6055139	1				KC168016
Heterocypris incongruens	**IS4**	Drongen, Belgium	flower pot	1	51.04936	3.6055139	4				KC168014
Heterocypris incongruens	**IS5**	Drongen, Belgium	flower pot	1	51.04936	3.6055139	na				
Heterocypris incongruens	**IS6**	Drongen, Belgium	flower pot	1	51.04936	3.6055139	na				
Heterocypris incongruens	Hi1A	Monte dos corvos, Portugal	temporary pool (not the same as E. virens)	1	37.43222	-7.954444	5				
Heterocypris incongruens	Hi1B	Monte dos corvos, Portugal	temporary pool (not the same as E. virens)	1	37.43222	-7.954444	5				
Heterocypris incongruens	HI1C	Monte dos corvos, Portugal	temporary pool (not the same as E. virens)	1	37.43222	-7.954444	5				KC168038
Heterocypris incongruens	Hi1E	Monte dos corvos, Portugal	temporary pool (not the same as E. virens)	1	37.43222	-7.954444	5				
Heterocypris incongruens	Hi1F	Monte dos corvos, Portugal	temporary pool (not the same as E. virens)	1	37.43222	-7.954444	5				KC168039
Heterocypris incongruens	Hi1G	Monte dos corvos, Portugal	temporary pool (not the same as E. virens)	1	37.43222	-7.954444	5				KC168035
Heterocypris incongruens	Hi1H	Monte dos corvos, Portugal	temporary pool (not the same as E. virens)	1	37.43222	-7.954444	5				KC168036
Heterocypris incongruens	Hi1I	Monte dos corvos, Portugal	temporary pool (not the same as E. virens)	1	37.43222	-7.954444	5				KC168037
Heterocypris incongruens	Hi1D	Monte dos corvos, Portugal	temporary pool (not the same as E. virens)	1	37.43222	-7.954444	5				
Heterocypris incongruens	HI2A	Naunhof, Germany	temporary pool at highway exit	1	51.291	12.626283	7				KC168023

Heterocypris incongruens	HI2B	Naunhof, Germany	temporary pool at highway exit	1	51.291	12.626283	7				KC168031
Heterocypris incongruens	HI2C	Naunhof, Germany	temporary pool at highway exit	1	51.291	12.626283	7				KC168024
Heterocypris incongruens	HI2D	Naunhof, Germany	temporary pool at highway exit	1	51.291	12.626283	7				KC168026
Heterocypris incongruens	**HI3A**	S. Manços, Portugal	pond	1	38.44361	-7.733611	6	MH908929	5' V1 & V2	376	KC168042
Heterocypris incongruens	**HI3B**	S. Manços, Portugal	pond	1	38.44361	-7.733611	6				KC168041
Heterocypris incongruens	**HI3C**	S. Manços, Portugal	pond	1	38.44361	-7.733611	6				
Heterocypris incongruens	**HI3D**	S. Manços, Portugal	pond	1	38.44361	-7.733611	6				KC168040
Heterocypris incongruens	**HI4A**	Perovlades, Corfu, Greece	temporary pool	1	39.7925	19.704167	7				KC168030
Heterocypris incongruens	**HI4B**	Perovlades, Corfu, Greece	temporary pool	1	39.7925	19.704167	3				KC168012
Heterocypris incongruens	**HI4C**	Perovlades, Corfu, Greece	temporary pool	1	39.7925	19.704167	3				
Heterocypris incongruens	**HI4D**	Perovlades, Corfu, Greece	temporary pool	1	39.7925	19.704167	3				KC168013
Heterocypris incongruens	**HI5A**	Veneto, Vicenza, Italy	permanent pool	1	45.963	11.605833	7				KC168033
Heterocypris incongruens	**HI5B**	Veneto, Vicenza, Italy	permanent pool	1	45.963	11.605833	7	MH908931	5' V1 & V2	376	KC168032
Heterocypris incongruens	**HI5C**	Veneto, Vicenza, Italy	permanent pool	1	45.963	11.605833	7				KC168018
Heterocypris incongruens	**HI6A**	Veneto, Vicenza, Italy	permanent pool	1	45.963	11.605833	2	XXXXXXXXXX	5', 3', V1 &V2, V6-V9	376, 403	KC168009
Heterocypris incongruens	**Hi6H**	Veneto, Vicenza, Italy	permanent pool	1	45.963	11.605833	2				KC168009
Heterocypris incongruens	CALA	Melicuccà, Calabria, Italy	temporary pool	1	38.28536	9.8466667	7				
Heterocypris	CALB	Melicuccà,	temporary pool	1	38.28536	9.8466667	7				KC168021

incongruens		Calabria, Italy									
Heterocypris incongruens	CALC	Melicuccà, Calabria, Italy	temporary pool	1	38.28536	9.8466667	7	MH908930	5' V1 & V2	376	KC168022
Heterocypris incongruens	CALD	Melicuccà, Calabria, Italy	temporary pool	1	38.28536	9.8466667	7				
Heterocypris incongruens	CALE	Melicuccà, Calabria, Italy	temporary pool	1	38.28536	9.8466667	7				KC168025
Heterocypris incongruens	CALF	Melicuccà, Calabria, Italy	temporary pool	1	38.28536	9.8466667	7				
Heterocypris incongruens	HI7A	Yukiari,Turkey	temporary pool	1	41.22667	36.6375	7				
Heterocypris incongruens	HI7B	Yukiari,Turkey	temporary pool	1	41.22667	36.6375	7				KC168029
Heterocypris incongruens	HI7C	Yukiari,Turkey	temporary pool	1	41.22667	36.6375	7				KC168027
Heterocypris incongruens	HI7D	Yukiari,Turkey	temporary pool	1	41.22667	36.6375	7				KC168028
Heterocypris incongruens	TPA	Trapani, Sicily, Italy	temporary pool	1	37.62688	12.635	7				KC168034
Heterocypris incongruens	TPB	Trapani, Sicily, Italy	temporary pool	1	37.62688	12.635					
Heterocypris incongruens	TPC	Trapani, Sicily, Italy	temporary pool	1	37.62688	12.635	2				KC168011
Heterocypris incongruens	TPD	Trapani, Sicily, Italy	temporary pool	1	37.62688	12.635					
Heterocypris incongruens	TPE	Trapani, Sicily, Italy	temporary pool	1	37.62688	12.635	2				KC168010
Heterocypris incongruens	Hi	Orkney Islands, Scotland	temporary pool	1	58.9809	-2.977261					
Heterocypris incongruens	Hi	Orkney Islands, Scotland	temporary pool	1	58.9809	-2.977261					
Heterocypris incongruens	TP_6	Trapani, Sicily, Italy	temporary pool	1	37.62688	12.635					
Heterocypris salina	153	Limni Keri, Greece	permanent pool	1	37.68669	12.635					

Heterocypris nov. spec.1	H139III	Pozza Sanguedolce, Lampedusa, Italy	hatched from sediment	1	35.5086	12.547222					MH916762
Heterocypris nov. spec.1	166	Taccio Vecchio 3, Lampedusa, Italy	hatched from sediment	0	35.5086	12.547222					
Heterocypris nov. spec.1	167	Taccio Vecchio 2, Lampedusa, Italy	hatched from sediment	0	35.5086	12.547222					
Heterocypris nov. spec.1	168	Taccio Vecchio 2, Lampedusa, Italy	hatched from sediment	0	35.5086	12.547222					
Heterocypris nov. spec.1	169	Taccio Vecchio 2, Lampedusa, Italy	hatched from sediment	1	35.5086	12.547222					
Heterocypris nov. spec.1	H170II	Taccio Vecchio 2, Lampedusa, Italy	hatched from sediment	0	35.5086	12.547222					MH916763
Heterocypris nov. spec.1	171	Taccio Vecchio 2, Lampedusa, Italy	hatched from sediment	0	35.5086	12.547222					
Heterocypris nov. spec.2	F2	Fogia 1, Apulia, Italy	temporary pool	1	42.11	15.480556					KC168045
Heterocypris nov. spec.2	F6	Fogia 1, Apulia, Italy	temporary pool	0	42.11	15.480556					KC168043
Heterocypris nov. spec.2	M3	Fogia 1, Apulia, Italy	temporary pool	0	42.11	15.480556					KC168044
Heterocypris nov. spec.2	AP_1	Fogia 2, Apulia, Italy	artificial pond	0	42.11	15.480556					
Heterocypris nov. spec.2	AP_2	Fogia 2, Apulia, Italy	artificial pond	1	42.11	15.480556					

Heterocypris nov. spec.2	AP_3	Fogia 2, Apulia, Italy	artificial pond	0	42.11	15.480556					
Heterocypris nov. spec.2	AP_4	Fogia 2, Apulia, Italy	artificial pond	0	42.11	15.480556					
Heterocypris nov. spec.2	AP_5	Fogia 2, Apulia, Italy	artificial pond	0	42.11	15.480556					
Heterocypris nov. spec.2	AP_6	Fogia 2, Apulia, Italy	artificial pond	0	42.11	15.480556					
Heterocypris nov. spec.2	AP_7	Fogia 2, Apulia, Italy	artificial pond	0	42.11	15.480556					
Heterocypris nov. spec.2	AP_8	Fogia 2, Apulia, Italy	artificial pond	0	42.11	15.480556					
Heterocypris nov. spec.2	AP_9	Fogia 2, Apulia, Italy	artificial pond	0	42.11	15.480556					
Heterocypris nov. spec.2	AP_10	Fogia 2, Apulia, Italy	artificial pond	0	42.11	15.480556					
Heterocypris nov. spec.2	AP_11	Fogia 2, Apulia, Italy	artificial pond	0	42.11	15.480556					
Heterocypris nov. spec.2	AP_12	Fogia 2, Apulia, Italy	artificial pond	0	42.11	15.480556					
Heterocypris nov. spec.2	AP_1M	Fogia 2, Apulia, Italy	artificial pond	0	42.11	15.480556					
Heterocypris nov. spec.2	AP_2M	Fogia 2, Apulia, Italy	artificial pond	0	42.11	15.480556					
Heterocypris nov. spec.2	AP_3M	Fogia 2, Apulia, Italy	artificial pond	0	42.11	15.480556					
Heterocypris nov. spec.2	AP_4M	Fogia 2, Apulia, Italy	artificial pond	0	42.11	15.480556					
Heterocypris nov. spec.2	AP_5M	Fogia 2, Apulia, Italy	artificial pond	0	42.11	15.480556					
Heterocypris nov. spec.2	AP_6M	Fogia 2, Apulia, Italy	artificial pond	0	42.11	15.480556					
Heterocypris nov. spec.2	AP_7M	Fogia 2, Apulia, Italy	artificial pond	0	42.11	15.480556					
Heterocypris nov. spec.2	AP_8M	Fogia 2, Apulia, Italy	artificial pond	0	42.11	15.480556					
Heterocypris nov. spec.2	AP_9M	Fogia 2, Apulia, Italy	artificial pond	0	42.11	15.480556					

Heterocypris nov. spec.2	AP_10 M	Fogia 2, Apulia, Italy	artificial pond	0	42.11	15.480556					
Heterocypris nov. spec.2	AP_11 M	Fogia 2, Apulia, Italy	artificial pond	0	42.11	15.480556					
Herpetocypris chevreuxi	Hc1	Drongen, Belgium	flower pot	1	51.04936	3.6055139					
Herpetocypris chevreuxi	Hc2	Drongen, Belgium	flower pot	1	51.04936	3.6055139					
Herpetocypris chevreuxi	Hc3	Drongen, Belgium	flower pot	1	51.04936	3.6055139					
Herpetocypris chevreuxi	Hc4	Drongen, Belgium	flower pot	1	51.04936	3.6055139					
Tonnacypris lutaria	T.l 1	Drongen, Belgium	flower pot	0	51.04936	3.6055139					
Tonnacypris lutaria	T.l 2	Drongen, Belgium	temporary pool in ditch	0	51.04936	3.6652778					
Tonnacypris lutaria	T.l 3	Drongen, Belgium	temporary pool in ditch	0	51.04936	3.6652778					
Tonnacypris lutaria	T.l 4	Drongen, Belgium	temporary pool in ditch	0	51.04936	3.6652778					
Tonnacypris lutaria	T.l 5	Drongen, Belgium	temporary pool in ditch	0	51.04936	3.6652778					
Tonnacypris lutaria	T.l 6	Drongen, Belgium	temporary pool in ditch	0	51.04936	3.6652778					
Tonnacypris lutaria	T.l 7	Drongen, Belgium	temporary pool in ditch	0	51.04936	3.6652778					
Tonnacypris lutaria	T.l 8	Drongen, Belgium	temporary pool in ditch	0	51.04936	3.6652778					
Tonnacypris lutaria	T.l 9	Drongen, Belgium	temporary pool in ditch	0	51.04936	3.6652778					
Tonnacypris lutaria	T.l 10	Drongen, Belgium	temporary pool in ditch	0	51.04936	3.6652778					
Cypridopsis vidua	MC183	Melsen Munte, Belgium	farm pond	1	50.96	3.7190647	2		3' V6-V9	403	
Cypridopsis vidua	MC090	Attenbeke, Belgium	garden pond	1	50.78417	3.9158333	1		3' V6-V9	403	MH916761

Cypridopsis vidua	MC110	Bornem, Belgium	forest pond	1	51.11444	4.3248111	1		3' V6-V9	403	
Cypridopsis vidua	MC113	Mechelen, Belgium	park pond	1	51.01889	4.4622278	1		3' V6-V9	403	MH916760
Cypridopsis vidua	MC003	Kortenberg Nossegem, Belgium	industrial pond	0	50.87667	4.5045361	1				MH916759
Cypridopsis vidua	MC025	Tienen, Belgium	garden pool	1	50.81639	4.9064167	1		3' V6-V9	403	MH916758
Cypridopsis vidua	MC203	Kerkom, Belgium	duck pond	0	50.84278	4.8608611	1				MH916757
Cypridopsis vidua	MC208	Houwart, Belgium	garden pond	0	50.93056	4.8585639	1				MH916756
Cypridopsis vidua	MC211	Rotselaar, Belgium	garden pond	0	50.95806	4.7355972	2				
Darwinula stevensoni	**2A**	Ossiachersee, Austria	lake	0	46.6687	13.980833	5				
Darwinula stevensoni	**2B**	Ossiachersee, Austria	lake	0	46.6687	13.980833	5				
Darwinula stevensoni	**2C**	Ossiachersee, Austria	lake	0	46.6687	13.980833	5				
Darwinula stevensoni	Ds174	Ossiachersee, Austria	lake		46.6687	13.980833	5				AF031299
Darwinula stevensoni	**3A**	Keutschacher see, Austria	lake	0	46.5861	14.153333	5				
Darwinula stevensoni	**3B**	Keutschacher see, Austria	lake	0	46.5861	14.153333	5				
Darwinula stevensoni	**3C**	Keutschacher see, Austria	lake	0	46.5861	14.153333	5				
Darwinula stevensoni	**4A**	Mondsee, Austria	lake	0	47.8556	14.153333	5				
Darwinula stevensoni	Ds155	Mondsee, Austria	lake		47.8556	14.153333	5				AF031297
Darwinula stevensoni	**5A**	Faaker See, Austria	lake	0	46.5792	13.918611	5				
Darwinula stevensoni	**5B**	Faaker See, Austria	lake	0	46.5792	13.918611	5				

Darwinula stevensoni	**5E**	Faaker See, Austria	lake	0	46.5792	13.918611	5				
Darwinula stevensoni	Ds153	Faaker See, Austria	lake		46.5792	13.918611	5				AF031296
Darwinula stevensoni	**1A**	Wörthersee, Austria	lake	0	46.6246	14.140278	5				
Darwinula stevensoni	**1B**	Wörthersee, Austria	lake	0	46.6246	14.140278	5				
Darwinula stevensoni	**1C**	Wörthersee, Austria	lake	0	46.6246	14.140278	5				
Darwinula stevensoni	Ds80	Wörthersee, Austria	lake		46.6246	14.140278	5				AF031295
Darwinula stevensoni	Ds189	Lake Sibaya, South Africa	lake		-27.3097	32.573333	3				AF031286
Darwinula stevensoni	**6A**	Lake Malawi, Malawi	lake	0	11.6701	034.968308391''E	3				
Darwinula stevensoni	**6B**	Lake Malawi, Malawi	lake	0	11.6701	034.968308391''E	3				
Darwinula stevensoni	**Ds_A7**	Semerwater, UK	lake	0	54.2802	2.1244444	5				
Darwinula stevensoni	Ds59	Semerwater, UK	lake		54.2802	2.1244444	5				AF031292
Darwinula stevensoni	**11**	Hollandersgatkreek, Belgium	saline lake	0	51.26889	3.5352778	5				
Darwinula stevensoni	**2**	Hollandersgatkreek, Belgium	saline lake	0	51.26889	3.5352778	5				KC168007
Darwinula stevensoni	**3**	Hollandersgatkreek, Belgium	saline lake	0	51.26889	3.5352778	5				
Darwinula stevensoni	**4**	Hollandersgatkreek, Belgium	saline lake	0	51.26889	3.5352778	5				
Darwinula stevensoni	**5**	Hollandersgatkreek, Belgium	saline lake	0	51.26889	3.5352778	5				

Darwinula stevensoni	Ds162	Hollandersgatkreek, Belgium	saline lake		51.26889	3.5352778	5				AF031290
Darwinula stevensoni	6	Hollandersgatkreek, Belgium	saline lake	1	51.26889	3.5352778	5				
Darwinula stevensoni	PIK48	Gregory Gorge, West Australia	spring	0	-21.5497	116.97083	na				
Darwinula stevensoni	Ds_US1	Herrick Fen, Ohio, USA	fen	0	41.21389	-81.37111	1				JX069266
Darwinula stevensoni	DS_US2	Herrick Fen, Ohio, USA	fen	0	41.21389	-81.37111	1				
Darwinula stevensoni	Ds_US5	Herrick Fen, Ohio, USA	fen	0	41.21389	-81.37111	1				JX069265
Darwinula stevensoni	Ds_BRAZ	Boracéia Biological Station, São Paulo, Brazil	leaf litter	0	-23.6381	-45.84028	2				JX069267
Darwinula stevensoni	Ds_ESP2	La Albufera, Valencia, Spain	lake	1	39.34806	-0.324167	4	MH908933	5'-3' V1-V6	1276	
Darwinula stevensoni	Ds_ESP3	La Albufera, Valencia, Spain	lake	1	39.34806	-0.324167	4	KC167886 MH908932	3' V6-V9 5' V1 & V2	403 376	AF031290
Darwinula stevensoni	DS30	Ulal Fosc, Spain	spring	1	39.0156	-0.090083	4				
Darwinula stevensoni	DS31	Ulal Fosc, Spain	spring	1	39.0156	-0.090083	4				
Darwinula stevensoni	DS32	Ulal Fosc, Spain	spring	1	39.0156	-0.090083	4				
Darwinula stevensoni	DS33	Ulal Fosc, Spain	spring	1	39.0156	-0.090083	4				
Darwinula stevensoni	DS34	Ulal Fosc, Spain	spring	1	39.0156	-0.090083	4				
Darwinula stevensoni	DS36	Ulal Fosc, Spain	spring	1	39.0156	-0.090083	4	MH910345	3' V6-V9	403	

Darwinula stevensoni	T5	Zaventem, Belgium	pond	1	50.8855	4.4933	5	MH910345	3' V6-V9	403	MH916755
Penthesilenula aotearoa	Pa1	Boracéia Biological Station, São Paulo, Brazil	leaf litter	0	-23.6381	-45.84028	3				JX069233
Penthesilenula brasiliensis	Pbs2_08	Campus of the University of São Paulo, Brazil	leaf litter	0	-23.5642	-46.73	4				JX069247
Penthesilenula brasiliensis	PbL06	Boracéia Biological Station, São Paulo, Brazil	leaf litter	0	-23.6381	-45.84028	3				
Penthesilenula brasiliensis	PbL06_II	Boracéia Biological Station, São Paulo, Brazil	leaf litter	0	-23.6381	-45.84028	3				
Penthesilenula brasiliensis	PbL2	Boracéia Biological Station, São Paulo, Brazil	leaf litter	0	-23.6381	-45.84028	3				
Penthesilenula brasiliensis	PbL4	Boracéia Biological Station, São Paulo, Brazil	leaf litter	0	-23.6381	-45.84028	3				JX069242
Penthesilenula brasiliensis	Pb_AUS41	Circular Pool Springs, Karijini, Western Australia	spring	0	-22.4767	118.56027787”E	2				JX069238
Penthesilenula brasiliensis	PbIRL	Lough Lickeen, Ireland	lake	0	52.96278	-9.229444	1				AJ319738
Penthesilenula brasiliensis	Pb236	Clue de la Fou, France	spring	0	42.7175	2.4988889	1				
Microdarwinula spec.	mGabA	Bolapessa, Gabon	leaf litter	0	-0.8037	12.054333					

Microdarwinula spec.	mGabC	Bolapessa, Gabon	leaf litter	0	-0.8037	12.054333					
Microdarwinula zimmeri	Micro	Clue de la Fou, France	spring		42.7175	2.4988889					AF031284
Vestalenula paglioli	BRAZ17_09	Salto Bandeirantes, Santa Fé, Brazil	spring	1	22.982	-51.82744		KC167883	3' V6-V9	403	
Vestalenula paglioli	BRAZ18_09	Salto Bandeirantes, Santa Fé, Brazil	spring	1	22.982	-51.82744		KC167884	3' V6-V9	403	KR184035
Vestalenula cylindrica	Vcyl 8	Lake Biwa, Biwa museum, Japan	lake	0	35.076	135.9335					
Vestalenula cylindrica	Vcyl 3	Lake Biwa, Biwa museum, Japan	lake	0	35.076	135.9335					
Vestalenula molopoensis	Vmol	Molopo Oog, South Africa	lake	0	-25.7778	25.341794					
Vestalenula cornelia	Vcor2	Yudomari, South Yakushima, Japan	spring	1	30.23	130.48069		KC167885	3' V6-V9	403	AJ534411
Vestalenula cornelia	Vcor1	Yudomari, South Yakushima, Japan	spring	1	30.23	130.48069		KC167887	3' V6-V9	403	KR184023
Vestalenula nov. spec.	Pb_US1	Herrick Fen, Ohio, USA	fen	0	41.21389	-81.37111				403	KR184024
Alicenula serricaudata	Ainv	Salto Bandeirantes, Santa Fé, Brazil	spring	0	-22.982	-51.82744					AJ534409
Cypria opthalmica	**Cyp A**	Hollandersgatkreek,	saline lake	0	51.26889	3.5352778					

		Belgium									
Cypria opthalmica	**Cyp B**	Hollandersgatkreek, Belgium	saline lake	0	51.26889	3.5352778					
Cypria opthalmica	**Cyp 3C**	Hollandersgatkreek, Belgium	saline lake	0	51.26889	3.5352778					
Cypria opthalmica	**Cyp D**	Hollandersgatkreek, Belgium	saline lake	0	51.26889	3.5352778					
Cypria opthalmica	**Cyp E**	Hollandersgatkreek, Belgium	saline lake	0	51.26889	3.5352778					
Cypria opthalmica	**Cyp F**	Hollandersgatkreek, Belgium	saline lake	0	51.26889	3.5352778					
Cyprideis torosa	**Ct A**	Hollandersgatkreek, Belgium	saline lake	0	51.26889	3.5352778					
Cyprideis torosa	**Ct B**	Hollandersgatkreek, Belgium	saline lake	0	51.26889	3.5352778					
Cyprideis torosa	**Ct C**	Hollandersgatkreek, Belgium	saline lake	0	51.26889	3.5352778					
Cyprideis torosa	**Ct D**	Hollandersgatkreek, Belgium	saline lake	0	51.26889	3.5352778					
Cyprideis torosa	**Ct E**	Hollandersgatkreek, Belgium	saline lake	0	51.26889	3.5352778					
Cyprideis torosa	CT6	Hollandersgatkreek, Belgium	saline lake	0	51.26889	3.5352778					
Cyprideis torosa	CT7	Hollandersgatkreek, Belgium	saline lake	0	51.26889	3.5352778					

Romecytheridea ampla	Amp 21	Lake Tanganyika, Katoto, Zambia	lake	0	-8.8108	31.028889					
Romecytheridea ampla	Amp 22	Lake Tanganyika, Katoto, Zambia	lake	0	-8.8108	31.028889					
Romecytheridea ampla	Amp 23	Lake Tanganyika, Katoto, Zambia	lake	0	-8.8108	31.028889					
Romecytheridea ampla	Amp 24	Lake Tanganyika, Katoto, Zambia	lake	0	-8.8108	31.028889					
Romecytheridea ampla	Amp 25	Lake Tanganyika, Katoto, Zambia	lake	0	-8.8108	31.028889					
Romecytheridea ampla	Amp 26	Lake Tanganyika, Katoto, Zambia	lake	0	-8.8108	31.028889					
Romecytheridea ampla	Amp 27	Lake Tanganyika, Katoto, Zambia	lake	0	-8.8108	31.028889					
Romecytheridea ampla	Amp 28	Lake Tanganyika, Katoto, Zambia	lake	0	-8.8108	31.028889					
Romecytheridea ampla	Amp 29	Lake Tanganyika, Katoto, Zambia	lake	0	-8.8108	31.028889					
Romecytheridea ampla	Amp 30	Lake Tanganyika,	lake	0	-8.8108	31.028889					

		Katoto, Zambia									
Cytherissa lacustris	**CL 4 II**	Semerwater, UK	lake	1	54.2802	2.1244444			3' V6-V9	403	
Cytherissa lacustris	**CL5 I**	Semerwater, UK	lake	1	54.2802	2.1244444			3' V6-V9	403	
Cytherissa lacustris	**CL3 I**	Semerwater, UK	lake	1	54.2802	2.1244444			3' V6-V9	403	
Cytherissa lacustris	**CL1 II**	Semerwater, UK	lake	1	54.2802	2.1244444			3' V6-V9	403	

Table S1B. Origin and identity of 16S *Cardinium* and non-*Cardinium* sequences used for phylogenetic reconstructions, comparisons of genetic diversity, and EPA mapping.. #= number. If no reference is provided, the sequence was directly submitted to GenBank. "short" indicates that this sequence was included in the alignment of 403 basepairs, "long" in the alignments comprising 1276, 1638 and 1777 basepairs, respectively.

***Cardinium* sequences**						
GenBank #	**Host genus**	**Host family - order**	**Host class**	**short**	**long**	**Reference**
AB001518	Ixodes	Ixodida	Acari-Arachnida	x	x	Kurtti et al. 1996
AB116514	Brevipalpus	Trombidiformes	Acari-Arachnida		x	
AB116515	Brevipalpus	Trombidiformes	Acari-Arachnida	x	x	
AB241129	Eotetranychus	Acarina	Acari-Arachnida		x	
AB241130	Oligonychus	Trombidiformis	Acari-Arachnida		x	
AB241131	Amphitetranychus	Acarina	Acari-Arachnida		x	
AB241132	Tetranychus	Acarina	Acari-Arachnida		x	
AB241135	Tetranychus	Acarina	Acari-Arachnida		x	
AB506773	Harmalia	Delphacidae-Hemiptera	Insecta		x	Nakamaru et al. 2009
AB506774	Sogatella	Fulogoromorpha-Hemiptera	Insecta	x	x	Nakamura et al. 2009
AB506775	Euides	Fulogoromorpha-Hemiptera	Insecta	x	x	Nakamura et al. 2009
AB506776-AB506778	Culicoides	Diptera	Insecta		x	Nakamura et al. 2009
AB506779	Culicoides	Diptera	Insecta	x	x	Nakamura et al. 2009
AF350221	Brevipalpus	Trombidiformes	Acari-Arachnida		x	
AM042540	Scaphoideus	Auchorryncha-Hemiptera	Insecta	x	x	Marzorati et al. 2006
AY279401	Brevipalpus	Trombidiformes	Acari-Arachnida	x	x	Weeks et al. 2003
AY279410	Petrobia	Trombidiformes	Acari-Arachnida	x	x	Weeks et al. 2003
AY279412	Brevipalpus	Trombidiformes	Acari-Arachnida		x	Weeks et al. 2003
AY279413	Metaseiulus	Phytoseiidae	Acari-Arachnida		x	Weeks et al. 2003
AY279414	Opiella	Oribatei	Acari-Arachnida		x	
AY279415	Dicantropis	Delphacidae-Hemiptera	Insecta		x	Weeks et al. 2003
AY327472	Plagiomerus	Encyrtidae-Hymenoptera	Insecta	x	x	Zchori-Fein & Perlman 2004
AY635291	Metaseiulus	Phytoseiidae	Acari-Arachnida		x	Jeyaprakash & Hoy 2004
AY753169-AY753170	Metaseiulus	Phytoseiidae	Acari-Arachnida		x	Jeyaprakash & Hoy 2004

DQ314214	Heterodera	Tylenchida	Nematoda	x		Noel & Atibalentja 2006
DQ369961-DQ369965	Tetranychus	Acarina	Acari-Arachnida		x	Liu et al. 2006
DQ449047	Tetranychus	Acarina	Acari-Arachnida		x	Liu et al. 2006
DQ854713	Encarsia	Chalcidoidea -Hymenoptera	Insecta	x	x	
EU333926	Cyclosa	Araneae	Arachnida	x		Duron et al. 2008
EU333927	Alopecosa	Araneae	Arachnida	x		Duron et al. 2008
EU333928	Evarcha	Araneae	Arachnida	x		Duron et al. 2008
EU333929	Pachygnatha	Araneae	Arachnida	x		Duron et al. 2008
EU333930	Holocnemus	Araneae	Arachnida	x		Duron et al. 2008
EU333931	Linyphia	Araneae	Arachnida	x		Duron et al. 2008
FJ766335	Bemisia	Aleyrodidae-Hemiptera	Insecta	x		Gueguen et al. 2010
FJ766337-FJ766340	Bemisia	Aleyrodidae-Hemiptera	Insecta	x		Gueguen et al. 2010
FJ766341	Bemisia	Aleyrodidae-Hemiptera	Insecta	x	x	Gueguen et al. 2010
GQ206320	Sogatella	Fulogoromorpha-Hemiptera	Insecta	x	x	
GQ455411	Abgrallaspis	Diaspididae-Hemiptera	Insecta	x		
GQ455412	Unaspis	Diaspididae-Hemiptera	Insecta	x		
GQ455413	Howardia	Diaspididae-Hemiptera	Insecta	x		
GQ455414	Leucaspis	Diaspididae-Hemiptera	Insecta	x		
GQ455415	Hemiberlesia	Diaspididae-Hemiptera	Insecta	x		
GQ455416	Pseudoparlatoria	Diaspididae-Hemiptera	Insecta	x		
GQ455417	Melanaspis	Diaspididae-Hemiptera	Insecta	x		
GQ455418	Prodigiaspis	Diaspididae-Hemiptera	Insecta	x		
GQ455419	Aonidomytilus	Diaspididae-Hemiptera	Insecta	x		
GQ455420	Protargionia	Diaspididae-Hemiptera	Insecta	x		
GQ455421	Lepidosaphes	Sternorryncha-Hemiptera	Insecta	x		
GQ455422	Oceanaspidiotus	Coccoidea-Hemiptera	Insecta	x		
GQ455423-GQ455424	Palinaspis	Diaspididae-Hemiptera	Insecta	x		
GQ455426	Chionaspis	Diaspididae-Hemiptera	Insecta	x		
GQ455427	Aspidiotus	Diaspididae-Hemiptera	Insecta	x		
GQ455428	Poliaspis	Diaspididae-Hemiptera	Insecta	x	x	
GQ455429	Pallulaspis	Diaspididae-Hemiptera	Insecta	x		
GQ455430-GQ455438	Aspidiotus	Diaspididae-Hemiptera	Insecta	x		

GU451191	Sogatella	Delphacidae-Hemiptera	Insecta		x	
GU451193	Sogatella	Delphacidae-Hemiptera	Insecta		x	
GU451207	Sogatella	Delphacidae-Hemiptera	Insecta		x	
GU731426	Tetranychus	Acarina	Acari-Arachnida		x	
HE983995	Encarsia	Chalcidoidea-Hymenoptera	Insecta	x	x	Penz et al. 2012
JN166961	Culicoides	Diptera	Insecta		x	Morag et al. 2012
JN166962	Culicoides	Diptera	Insecta	x	x	Morag et al. 2012
JN204479	Bemisia	Aleyrodidae-Hemiptera	Insecta	x		Singh et al. 2012
JN204479-JN204482	Bemisia	Aleyrodidae-Hemiptera	Insecta		x	Sing et al. 2012
JN236327	Dermatophagoides	Aracina	Acari-Arachnida		x	
JN236332	Dermatophagoides	Aracina	Acari-Arachnida		x	
JN236335-JN236336	Dermatophagoides	Aracina	Acari-Arachnida		x	
JN236341	Dermatophagoides	Aracina	Acari-Arachnida		x	
JN236354	Dermatophagoides	Aracina	Acari-Arachnida		x	
JN236355	Dermatophagoides	Aracina	Acari-Arachnida	x	x	
JN236357	Dermatophagoides	Aracina	Acari-Arachnida		x	
JN236359	Dermatophagoides	Aracina	Acari-Arachnida		x	
JQ406682-JQ406683	Dermatophagoides	Aracina	Acari-Arachnida	x		Kopecky et al. 2013
JQ406686	Dermatophagoides	Aracina	Acari-Arachnida	x		Kopecky et al. 2013
JQ406690	Dermatophagoides	Aracina	Acari-Arachnida	x		Kopecky et al. 2013
JQ406719	Glycyphagus	Sarcoptiformes	Acari-Arachnida	x		Kopecky et al. 2013
JQ406727	Tyrophagus	Sarcoptiformes	Acari-Arachnida	x		Kopecky et al. 2013
JQ406730	Tyrophagus	Sarcoptiformes	Acari-Arachnida	x		Kopecky et al. 2013
JQ406732	Tyrophagus	Sarcoptiformes	Acari-Arachnida	x		Kopecky et al. 2013
JQ406734	Tyrophagus	Sarcoptiformes	Acari-Arachnida	x		Kopecky et al. 2013
JQ406741	Acarus	Sarcoptiformes	Acari-Arachnida	x		Kopecky et al. 2013
JQ406755	Tyroborus	Sarcoptiformes	Acari-Arachnida	x		Kopecky et al. 2013
JQ406810-JQ406812	Tyrophagus	Sarcoptiformes	Acari-Arachnida	x		Kopecky et al. 2013

JQ406814	Tyrophagus	Sarcoptiformes	Acari-Arachnida	x		Kopecky et al. 2013
JQ406816	Tyrophagus	Sarcoptiformes	Acari-Arachnida	x		Kopecky et al. 2013
JQ406830	Acarus	Sarcoptiformes	Acari-Arachnida	x		Kopecky et al. 2013
JQ406831	Acarus	Sarcoptiformes	Acari-Arachnida	x		Kopecky et al. 2013
JQ406834	Lepidoglyphus	Sarcoptiformes	Acari-Arachnida	x		Kopecky et al. 2013
JQ406838	Lepidoglyphus	Sarcoptiformes	Acari-Arachnida	x		Kopecky et al. 2013
JQ406841	Lepidoglyphus	Sarcoptiformes	Acari-Arachnida	x		Kopecky et al. 2013
JX001272	Tyrophagus	Sarcoptiformes	Acari-Arachnida		x	
JX064607	Tyrophagus	Sarcoptiformes	Acari-Arachnida		x	
JX064623-JX064624	Tyrophagus	Sarcoptiformes	Acari-Arachnida		x	
JX064626	Tyrophagus	Sarcoptiformes	Acari-Arachnida		x	
KC677578	Phalangium	Opiliones	Arachnida	x		Duron 2013
KC677579	Dermanyssus	Mestostigmata	Acari-Arachnida	x		Duron 2013
KC677580	Tetranychus	Acarina	Acari-Arachnida	x		Duron 2013
KC677581	Acari sp.	Acarina	Acari-Arachnida	x		Duron 2013
KC677582	Encarsia	Chalcidoidea-Hymenoptera	Insecta	x		Duron 2013
KC677583	Scaphoideus	Auchorryncha-Hemiptera	Insecta	x		Duron 2013
KC677584	Bemisia	Aleyrodidae-Hemiptera	Insecta	x		Duron 2013
KC677585	Aspidiotus	Diaspididae-Hemiptera	Insecta	x		Duron 2013
KF111022-KF111026	Cheyletus	Trombidiformes	Acari-Arachnida	x		
KF111028-KF111030	Cheyletus	Trombidiformes	Acari-Arachnida	x		
KF111033	Cheyletus	Trombidiformes	Acari-Arachnida	x		
KF111035-KF111038	Cheyletus	Trombidiformes	Acari-Arachnida	x		
KF111059	Cheyletus	Trombidiformes	Acari-Arachnida	x		
KF111065	Cheyletus	Trombidiformes	Acari-Arachnida	x		
KF111069	Cheyletus	Trombidiformes	Acari-Arachnida	x		
KF111078-KF111080	Cheyletus	Trombidiformes	Acari-Arachnida	x		
KF111086	Cheyletus	Trombidiformes	Acari-Arachnida	x		
KF111090	Cheyletus	Trombidiformes	Acari-Arachnida	x		
KF111092 - KF111093	Cheyletus	Trombidiformes	Acari-Arachnida	x		

KF111109	Cheyletus	Trombidiformes	Acari-Arachnida	x		
KF111118	Cheyletus	Trombidiformes	Acari-Arachnida	x		
KF111140	Cheyletus	Trombidiformes	Acari-Arachnida	x		
KM464155	Tyrophagus	Sarcoptiformes	Acari-Arachnida		x	Kopecky et al. 2014
KM464157	Tyrophagus	Sarcoptiformes	Acari-Arachnida		x	Kopecky et al. 2014
KM464160	Tyrophagus	Sarcoptiformes	Acari-Arachnida		x	Kopecky et al. 2014
KM464167	Tyrophagus	Sarcoptiformes	Acari-Arachnida		x	Kopecky et al. 2014
KM464187-KM464188	Tyrophagus	Sarcoptiformes	Acari-Arachnida		x	Kopecky et al. 2014
KM464203	Tyrophagus	Sarcoptiformes	Acari-Arachnida		x	Kopecky et al. 2014
KM464281	Tyrophagus	Sarcoptiformes	Acari-Arachnida		x	Kopecky et al. 2014
KR026907	Culicoides	Diptera	Insecta		x	Mee et al. 2015
KR026910-KR026912	Culicoides	Diptera	Insecta		x	Mee et al. 2015
KR026915	Culicoides	Diptera	Insecta		x	Mee et al. 2015
KR026920-KR026923	Culicoides	Diptera	Insecta		x	Mee et al. 2015
KX022130	Tyrophagus	Sarcoptiformes	Acari-Arachnida		x	
KX022134	Tyrophagus	Sarcoptiformes	Acari-Arachnida		x	
KY660634-KY660637	Ornithodoros	Ixodida	Acari-Arachnida	x		
KY660638	Ixodes	Ixodida	Acari-Arachnida	x		
LC159289	Bemisia	Aleyrodidae-Hemiptera	Insecta		x	
LN829672-LN829682	Bemisia	Aleyrodidae-Hemiptera	Insecta		x	
LN829684-LN829685	Bemisia	Aleyrodidae-Hemiptera	Insecta		x	
LN829688-LN829689	Bemisia	Aleyrodidae-Hemiptera	Insecta		x	
MF188893-MF188900	Culicoides	Diptera	Insecta	x		Pages et al. 2017
MF669559	Achipteria	Sarcoptiformes	Acari-Arachnida		x	

MH057586-MH057593	Dermatophagoides	Aracina	Acari-Arachnida	x		
MH057587	Dermatophagoides	Aracina	Acari-Arachnida		x	
MH057596	Dermatophagoides	Aracina	Acari-Arachnida	x		
MH057597	Dermatophagoides	Aracina	Acari-Arachnida		x	
MH057598-MH057604	Dermatophagoides	Aracina	Acari-Arachnida	x		
MH057601-MH057602	Dermatophagoides	Aracina	Acari-Arachnida		x	
MH057605	Dermatophagoides	Aracina	Acari-Arachnida		x	
MH057610	Dermatophagoides	Aracina	Acari-Arachnida	x		
MH057611	Dermatophagoides	Aracina	Acari-Arachnida		x	
MH057612	Dermatophagoides	Aracina	Acari-Arachnida	x		
MH057614	Dermatophagoides	Aracina	Acari-Arachnida	x	x	
MH057615	Dermatophagoides	Aracina	Acari-Arachnida	x		

Non-*Cardinium* sequences			
GenBank #	**Bacterial identity**	**long**	**Reference**
AB078038	Flammeovirgaceae; Flexithrix	X	Nakagawa et al. 2002.
AB547639	Firmicutes; Tissierellia	X	Sakamoto & Ohkuma 2010
AY695840	Opitutus, Opitutaceae	X	
DQ16669	Chryseobacterium, Flavobacteriaceae	X	
EU016445	Cellulomonadaceae, Micrococcales	X	
EU705634	Acinetobacter, Pseudomonodales	X	
FR821218	Pseudorhodobacter, Rhodobacteraceae	X	
HQ425320	Paracoccus,Rhodobacteraceae	X	
JN934492	Bacteriovoracaceae; Bacteriovorax	X	
JQ435729	Pseudoxanthomonas, Xanthomonadaceae	X	
JQ977513	Pseudomonas, Pseudomonadaceae	X	
KF054791	Sphingobacterium, Sphingobacteriaceae;	X	
KJ957195	Flavobacterium, Flavobacteriaceae	X	Park et al. 2015

Table S2: Overview on PCR primers used to amplify 16S of Cardinium from non-marine ostracod hosts.

The full length of 16S was assembled from sequences of three different PCR products from non-marine ostracods with the three different primer combinations detailed below. Rev comp= reverse complementary.

Aim	**Primer forward**	**Primer reverse**	**Part of 16S**	**Sequence length in basepairs**
Presence of *Cardinium*?	CLO-f1 (5'-GGA ACC TTA CCT GGG CTA GAA TGT ATT) (Gotoh et al., 2007)	CLO-r1 (5'-GCC ACT GTC TTC AAG CTC TAC CAA C) (Gotoh et al., 2007)	V1-V2	376
Phylogeny	16S_Bact_fD1 (Weisburg et al., 1991)	16S_Bact_926r (Weisburg et al., 1991)	V6-V9	403
	rev comp of CLO-r1 (5'- G TTG GTA GAG CTT GAA GAC AGT GGC)	rev comp of 16S_Bact_fD1 (5'-CTG AGC CAG GAT CAA ACT CTG TTG TCG ACG AAT TCG G)	V2-V6	500

Table S3: Results of DADA2 analyses with different parameters for filtering and trimming.

mEE=maximum expected error; trim64_64= left hand trimming of 64 bp, including primers, barcodes and Illumina adaptors; maxmismatch=maximum number of mismatches allowed in the overlap region when merging read pairs. truncq=truncation quality score; trim160_100=trimming 160 bp of forward and 100 bp of reverse reads, respectively; minlength= minimum sequence length kept after trimming and merging read pairs; bimeras= removed *de novo* chimeras; average reads are calculated per sample; OTUs=number of ASVs used to classify bacteria.

parameters	total reads used	paired reads	average reads	bimeras	OTUs	comments	reads in	reads out
mEE5, trim64_64,maxmismatch3,truncq3, minlength75	436680	39452	28069.67	1068	463	none filtered		
mEE2, trim64_64,maxmismatch3, truncQ3, trim160_100, minlength75	436680	0	0	0	0	all filtered		
mEE5, trim64_64,maxmismatch3,truncq3, minlength75	436680	39452	28069.67	1068	463	none filtered		
mEE5, trim64_64,maxmismatch3,truncq2, minlength75	436680	39452	28069.67	1068	463	none filtered		
mEE5, trim64_64,maxmismatch1,truncq4, minlength75	436680	30285	24092.62	902	545	Hi.yes2 omitted		
mEE3, trim64_64,maxmismatch3,truncq2, minlength75	190042	18469	13288.56	647	354	Ds.no Ds.yes Hi.yes1 Hi.yes2 Hi.no Cv.yes Ev.no1 Ev.no2 Ev.yes	52550 49428 442389 34908 47951 46189 47554 57682 56129	22147 20155 21382 14961 17444 21456 20835 27081 24581
mee4, trim64_64,maxmismatch3,truncq2, minlength75	328777	30092	21749.78	870	417	Ds.no Ds.yes Hi.yes1 Hi.yes2 Hi.no Cv.yes Ev.no1 Ev.no2 Ev.yes	52550 49428 44289 34908 47951 46189 47554 57682 56129	38940 36413 34902 26180 34113 35417 35919 44691 42202

Table S4A: Results of DADA2 analyses and EPA mapping with RAxML.

The RAxML reference tree was based on an alignment of 1777 basepairs of 16S from various bacteria, including *Cardinium* from different hosts. More details on the identity of ostracod DNA numbers is provided in Table S1A, on the 16S reference sequences in Table S1B. Branch numbers refer to the RAxML reference tree, of which the relevant section is shown in Figure S2A. Green indicates that ASVs are placed on external or internal branches of *Cardinium* from non-marine ostracods. Orange indicates placing on *Cardinium* from a non-ostracod host, blue placing of non-*Cardinium* ASVs on branches of non-*Cardinium* ASVs. EDPL= Expected Distance between Placement Locations (Matsen et al., 2010). Estimated values for EDPL and RAxML weight can range between 0 and 1. Here, only the highest RAxML weights and corresponding EDPL values are shown. The complete EPA results are available from the first author on request.

	Ds.no	Ds.yes	Hi.yes1	Hi.yes2	Hi.no	Cv.yes	Ev.no1	Ev.yes	Ev.no2	Kingdom	Phylum	Class	Order	Family	Genus	Species	EDPL in EPA	RAxML weight in EPA	mapped to branch	internal_external	DNA#	ID
seq1	0	0	24967	3620	0	0	0	0	0	Bacteria	Bacteroidetes	Bacteroidia	Cytophagales	Amoebophilaceae	Candidatus_Cardinium		0.97	0.97	175	external	Hi_1C	H. incongruens, Ostracoda
seq2	0	0	0	0	0	0	0	24018	0	Bacteria	Bacteroidetes	Bacteroidia	Cytophagales	Amoebophilaceae	Candidatus_Cardinium		0.33	1	173	external	Ds_ESP	D. stevensoni, Ostracoda
seq3	0	0	0	0	0	0	13371	48	1389	Bacteria	Bacteroidetes	Bacteroidia	Flavobacteriales	Weeksellaceae	Chryseobacterium		0.04	0.98	209	internal	DQ16669	Chryseobacterium, Flavobacteriaceae
seq4	0	0	0	0	0	0	11564	0	0	Bacteria	Proteobacteria	Gammaproteobacteria	Betaproteobacteriales	Burkholderiaceae	Polaromonas		0.26	1	222	internal	EU705634	Acinetobacter, Pseudomonadales
seq5	0	0	0	0	0	9354	0	0	0	Bacteria	Bacteroidetes	Bacteroidia	Flavobacteriales				0.11	0.98	208	external	KJ957195	Flavobacterium, Flavobacteriaceae
seq6	0	0	0	0	0	0	0	0	6668	Bacteria	Proteobacteria	Gammaproteobacteria	Pseudomonadales	Moraxellaceae	Acinetobacter		1	1	224	external	EU705634	Acinetobacter, Pseudomonadales
seq7	0	0	0	0	5340	0	0	0	0	Bacteria	Proteobacteria	Gammaproteobacteria	Pseudomonadales	Pseudomonadaceae	Pseudomonas		1	1	223	external	JQ977513	Pseudomonas, Pseudomonadaceae
seq8	0	0	0	0	4490	0	0	0	0	Bacteria	Bacteroidetes	Bacteroidia	Cytophagales	Amoebophilaceae	Candidatus_Cardinium		0.01	0.95	200	internal		Diptera
seq9	0	0	0	4300	0	0	0	0	0	Bacteria	Proteobacteria	Gammaproteobacteria					0.96	0.96	3	internal	JQ435729	Pseudoxanthomonas, Xanthomonadaceae
seq10	0	0	0	0	3277	0	0	0	0	Bacteria	Proteobacteria	Alphaproteobacteria	Rhizobiales	Rhizobiaceae			0.98	0.98	219	internal	HQ425320	Paracoccus,Rhodobacteraceae
seq11	2912	0	0	0	0	0	0	0	0	Bacteria	Proteobacteria	Gammaproteobacteria	Pseudomonadales	Pseudomonadaceae	Pseudomonas	fulva	1	1	223	external	JQ977513	Pseudomonas, Pseudomonadaceae
seq12	0	2781	0	0	0	0	0	0	0	Bacteria	Bacteroidetes	Bacteroidia	Cytophagales	Amoebophilaceae			1	1	172	external	Ds_ESP	D. stevensoni, Ostracoda
seq13	2043	128	0	0	0	0	0	0	0	Bacteria	Bacteroidetes	Bacteroidia					0.05	0.96	209	internal	DQ16669	Chryseobacterium, Flavobacteriaceae
seq14	0	1889	0	0	0	0	0	0	0	Bacteria	Proteobacteria	Gammaproteobacteria	Betaproteobacteriales	Burkholderiaceae			0.27	0.98	2	internal	JQ435729	Pseudoxanthomonas, Xanthomonadaceae
seq15	0	0	0	0	0	1861	0	0	0	Bacteria	Proteobacteria	Gammaproteobacteria	Betaproteobacteriales	Burkholderiaceae			0.29	1	222	internal	EU705634	Acinetobacter, Pseudomonadales
seq16	0	0	0	0	1794	0	0	0	0	Bacteria	Verrucomicrobia	Verrucomicrobiae	Opitutales	Puniceicoccaceae			1	1	216	external	AY695840	Opitutus, Opitutaceae
seq17	0	0	0	0	0	0	1781	0	0	Bacteria	Proteobacteria	Alphaproteobacteria	Rhodobacterales	Rhodobacteraceae			0.14	1	220	external	HQ425320	Paracoccus,Rhodobacteraceae
seq18	0	0	0	1651	0	0	0	0	0	Bacteria	Firmicutes	Bacilli	Lactobacillales	Streptococcaceae	Lactococcus		0.21	0.99	214	external	EU016445	Cellulomonadaceae, Micrococcales
seq19	0	0	0	0	0	0	0	0	1562	Bacteria	Bacteroidetes	Bacteroidia	Flavobacteriales	Flavobacteriaceae	Flavobacterium		1	1	208	external	KJ957195	Flavobacterium, Flavobacteriaceae
seq20	405	1147	0	0	0	0	0	0	0	Bacteria	Proteobacteria	Gammaproteobacteria	Betaproteobacteriales	Burkholderiaceae			0.12	1	3	internal	JQ435729	Pseudoxanthomonas, Xanthomonadaceae
seq21	0	0	0	0	0	1533	0	0	0	Bacteria	Cyanobacteria	Oxyphotobacteria	Chloroplast				0.02	0.96	222	internal	EU705634	Acinetobacter, Pseudomonadales
seq22	0	1452	0	0	0	0	0	0	0								0.01	0.96	212	internal	EU016445	Cellulomonadaceae, Micrococcales
seq23	0	1304	0	0	0	0	0	0	0	Bacteria	Bacteroidetes	Bacteroidia	Chitinophagales	Saprospiraceae			0.05	1	204	external	AB078038	Flammeovirgaceae; Flexithrix
seq24	0	0	1235	0	0	0	0	0	0	Bacteria	Proteobacteria	Gammaproteobacteria	Betaproteobacteriales	Burkholderiaceae			0.28	1	222	internal	EU705634	Acinetobacter, Pseudomonadales
seq25	169	961	0	0	0	0	0	0	0	Bacteria	Firmicutes	Bacilli	Bacillales	Staphylococcaceae	Staphylococcus		0.13	0.97	214	external	EU016445	Cellulomonadaceae, Micrococcales
seq26	0	0	0	1040	0	0	0	0	0	Bacteria	Proteobacteria	Alphaproteobacteria	Rhodobacterales	Rhodobacteraceae			1	1	221	external	FR821218	Pseudorhodobacter, Rhodobacteraceae
seq27	0	0	0	0	0	1008	0	0	0	Bacteria	Proteobacteria	Gammaproteobacteria	Betaproteobacteriales	Burkholderiaceae			0.26	1	222	internal	EU705634	Acinetobacter, Pseudomonadales
seq28	0	0	0	0	0	0	0	996	0	Bacteria	Proteobacteria	Gammaproteobacteria	Betaproteobacteriales	Burkholderiaceae	Polaromonas		0.26	1	222	internal	EU705634	Acinetobacter, Pseudomonadales
seq29	0	0	0	0	0	0	0	0	976	Bacteria	Proteobacteria	Gammaproteobacteria	Betaproteobacteriales	Burkholderiaceae	Hydrogenophaga		0.25	1	222	internal	EU705634	Acinetobacter, Pseudomonadales
seq30	0	0	0	0	958	0	0	0	0	Bacteria	Proteobacteria	Alphaproteobacteria	Rhodobacterales	Rhodobacteraceae			0.11	1	220	external	HQ425320	Paracoccus,Rhodobacteraceae
seq31	0	0	0	0	0	948	0	0	0	Bacteria	Proteobacteria	Gammaproteobacteria	Betaproteobacteriales	Burkholderiaceae			0.28	1	222	internal	EU705634	Acinetobacter, Pseudomonadales
seq32	0	0	0	0	0	886	0	0	0	Bacteria	Bacteroidetes	Bacteroidia					0.07	0.95	221	internal	JQ435729	Pseudoxanthomonas, Xanthomonadaceae
seq33	0	0	0	0	820	0	0	0	0	Bacteria	Proteobacteria	Alphaproteobacteria	Caulobacterales	Caulobacteraceae	Brevundimonas		1	1	219	internal	HQ425320	Paracoccus,Rhodobacteraceae
seq34	0	0	0	0	0	0	0	0	786	Bacteria	Bacteroidetes	Bacteroidia	Flavobacteriales	Flavobacteriaceae	Flavobacterium		1	1	208	external	KJ957195	Flavobacterium, Flavobacteriaceae
seq35	691	0	0	0	0	0	0	0	0	Bacteria	Proteobacteria	Gammaproteobacteria	Betaproteobacteriales	Burkholderiaceae			0.24	1	222	internal	EU705634	Acinetobacter, Pseudomonadales
seq36	0	0	0	0	0	0	0	0	662	Bacteria	Proteobacteria	Gammaproteobacteria	Betaproteobacteriales				0.24	1	222	internal	EU705634	Acinetobacter, Pseudomonadales
seq37	0	0	0	0	639	0	0	0	0	Bacteria	Proteobacteria	Alphaproteobacteria	Rhizobiales	Rhizobiaceae			0.99	0.99	219	internal	HQ425320	Paracoccus,Rhodobacteraceae
seq38	0	0	0	0	618	0	0	0	0	Bacteria	Proteobacteria	Alphaproteobacteria	Rhizobiales	Rhizobiaceae	Allorhizobium-Neorhizobium-Para		0.99	0.99	219	internal	HQ425320	Paracoccus,Rhodobacteraceae
seq39	601	0	0	0	0	0	0	0	0	Bacteria	Bacteroidetes	Bacteroidia	Flavobacteriales	Flavobacteriaceae	Flavobacterium		1	1	208	external	KJ957195	Flavobacterium, Flavobacteriaceae
seq40	0	600	0	0	0	0	0	0	0	Bacteria	Bacteroidetes	Bacteroidia	Flavobacteriales	Weeksellaceae	Cloacibacterium		0.08	1	208	external	KJ957195	Flavobacterium, Flavobacteriaceae
seq41	0	0	0	0	600	0	0	0	0	Bacteria	Bacteroidetes	Bacteroidia	Flavobacteriales	Weeksellaceae			0.06	0.98	208	external	KJ957195	Flavobacterium, Flavobacteriaceae
seq42	354	219	0	0	0	0	0	0	0	Bacteria	Bacteroidetes	Bacteroidia					0.09	1	209	internal	DQ16669	Chryseobacterium, Flavobacteriaceae
seq43	244	319	0	0	0	0	0	0	0	Bacteria	Firmicutes	Bacilli	Lactobacillales	Streptococcaceae	Streptococcus		0.01	0.96	4	internal	JN934492	Bacteriovoracaceae; Bacteriovorax
seq44	0	163	0	0	0	0	0	0	397	Bacteria	Proteobacteria	Gammaproteobacteria	Pseudomonadales	Moraxellaceae	Acinetobacter		1	1	224	external	EU705634	Acinetobacter, Pseudomonadales
seq45	0	0	0	0	0	0	0	0	559	Bacteria	Proteobacteria	Gammaproteobacteria	Betaproteobacteriales	Burkholderiaceae			0.28	1	222	internal	EU705634	Acinetobacter, Pseudomonadales
seq46	0	0	0	0	551	0	0	0	0	Bacteria	Proteobacteria	Alphaproteobacteria	Rhizobiales	Devosiaceae	Devosia		1	1	219	internal	HQ425320	Paracoccus,Rhodobacteraceae
seq47	0	0	521	0	0	0	0	0	0	Bacteria	Proteobacteria	Gammaproteobacteria	Pseudomonadales	Moraxellaceae			1	1	224	external	EU705634	Acinetobacter, Pseudomonadales
seq48	0	0	0	0	0	0	500	0	0	Bacteria	Proteobacteria	Gammaproteobacteria	Betaproteobacteriales	Burkholderiaceae	Polaromonas		0.27	1	222	internal	EU705634	Acinetobacter, Pseudomonadales
seq49	0	0	0	0	464	0	0	0	0	Bacteria	Proteobacteria	Alphaproteobacteria	Rhodobacterales	Rhodobacteraceae			1	1	220	external	HQ425320	Paracoccus,Rhodobacteraceae
seq50	454	0	0	0	0	0	0	0	0	Bacteria	Bacteroidetes	Bacteroidia	Flavobacteriales	Flavobacteriaceae	Flavobacterium		1	1	208	external	KJ957195	Flavobacterium, Flavobacteriaceae
seq51	452	0	0	0	0	0	0	0	0	Bacteria	Proteobacteria	Gammaproteobacteria	Betaproteobacteriales	Burkholderiaceae	Hydrogenophaga	taeniospii	0.25	1	222	internal	EU705634	Acinetobacter, Pseudomonadales
seq52	0	0	0	0	0	0	0	428	0	Bacteria	Proteobacteria	Gammaproteobacteria	Betaproteobacteriales	Burkholderiaceae	Janthinobacterium		0.16	1	222	internal	EU705634	Acinetobacter, Pseudomonadales
seq53	0	0	0	0	418	0	0	0	0	Bacteria	Proteobacteria	Alphaproteobacteria	Rhizobiales	Rhizobiaceae			0.99	0.99	219	internal	HQ425320	Paracoccus,Rhodobacteraceae
seq54	0	417	0	0	0	0	0	0	0	Bacteria	Proteobacteria	Gammaproteobacteria	Betaproteobacteriales	Burkholderiaceae			0.05	1	3	internal	JQ435729	Pseudoxanthomonas, Xanthomonadaceae

	Ds.no	Ds.yes	Hi.yes1	Hi.yes2	Hi.no	Cv.yes	Ev.no1	Ev.yes	Ev.no2	Kingdom	Phylum	Class	Order	Family	Genus	Species	EDPL in EPA	RAxML weight in EPA	mapped to branch	internal_external	DNA#	ID
seq55	0	0	0	0	0	0	0	0	409	Bacteria	Proteobacteria	Gammaproteobacteria	Betaproteobacteriales	Burkholderiaceae			0.25	1	222	internal	EU705634	Acinetobacter, Pseudomonodales
seq56	0	401	0	0	0	0	0	0	0	Bacteria	Bacteroidetes	Bacteroidia	Chitinophagales	Saprospiraceae			0.06	0.98	222	internal	KF054791	Sphingobacterium, Sphingobacteriaceae;
seq57	396	0	0	0	0	0	0	0	0	Bacteria	Bacteroidetes	Bacteroidia	Flavobacteriales	Flavobacteriaceae	Flavobacterium		1	1	208	external	KJ957195	Flavobacterium, Flavobacteriaceae
seq58	395	0	0	0	0	0	0	0	0	Bacteria	Bacteroidetes	Bacteroidia	Flavobacteriales	Flavobacteriaceae	Flavobacterium	buctense	1	1	208	external	KJ957195	Flavobacterium, Flavobacteriaceae
seq59	152	0	0	0	0	0	0	0	238	Bacteria	Proteobacteria	Alphaproteobacteria	Rhodobacterales	Rhodobacteraceae	Tabrizicola	aquatica	0.07	1	219	internal	HQ425320	Paracoccus,Rhodobacteraceae
seq60	0	0	0	0	0	0	0	389	0	Bacteria	Proteobacteria	Gammaproteobacteria	Betaproteobacteriales	Burkholderiaceae			0.25	1	222	internal	EU705634	Acinetobacter, Pseudomonodales
seq61	0	379	0	0	0	0	0	0	0	Bacteria	Proteobacteria	Alphaproteobacteria	Azospirillales	Azospirillaceae	Niveispirillum		0.02	0.97	216	external	AY695840	Opitutus, Opitutaceae
seq62	0	0	0	0	0	0	378	0	0	Bacteria	Bacteroidetes	Bacteroidia	Flavobacteriales	Weeksellaceae			0.11	1	210	external	DQ279361	Chryseobacterium, Flavobacteriaceae
seq63	0	0	0	0	0	0	0	373	0	Bacteria	Proteobacteria	Alphaproteobacteria	Caulobacterales	Caulobacteraceae	Brevundimonas		0.97	0.97	219	internal	HQ425320	Paracoccus,Rhodobacteraceae
seq64	0	0	0	0	0	0	0	368	0	Bacteria	Proteobacteria	Gammaproteobacteria	Pseudomonadales	Pseudomonadaceae	Pseudomonas		1	1	223	external	JQ977513	Pseudomonas, Pseudomonadaceae
seq65	0	0	0	365	0	0	0	0	0	Bacteria	Bacteroidetes	Bacteroidia	Flavobacteriales	Weeksellaceae			0.05	1	208	external	KJ957195	Flavobacterium, Flavobacteriaceae
seq66	363	0	0	0	0	0	0	0	0	Bacteria	Bacteroidetes	Bacteroidia	Flavobacteriales	Flavobacteriaceae	Flavobacterium	terrigena	1	1	208	external	KJ957195	Flavobacterium, Flavobacteriaceae
seq67	0	359	0	0	0	0	0	0	0	Bacteria	Proteobacteria	Gammaproteobacteria	Betaproteobacteriales	Burkholderiaceae			0.06	1	3	internal	JQ435729	Pseudoxanthomonas, Xanthomonadaceae
seq68	0	0	0	346	0	0	0	0	0	Bacteria	Bacteroidetes	Bacteroidia	Flavobacteriales				0.95	0.95	224	internal	KJ957195	Flavobacterium, Flavobacteriaceae
seq69	344	0	0	0	0	0	0	0	0	Bacteria							0.02	0.96	215	external	AB547639	Firmicutes; Tissierellia
seq70	337	0	0	0	0	0	0	0	0	Bacteria	Proteobacteria	Gammaproteobacteria	Betaproteobacteriales	Burkholderiaceae			0.26	0.99	222	internal	EU705634	Acinetobacter, Pseudomonodales
seq71	0	0	0	207	0	0	0	0	126	Bacteria	Proteobacteria	Gammaproteobacteria	Betaproteobacteriales	Burkholderiaceae	Ideonella	paludis	0.2	1	222	internal	EU705634	Acinetobacter, Pseudomonodales
seq72	0	0	0	0	0	0	0	326	0	Bacteria	Bacteroidetes	Bacteroidia	Flavobacteriales	Flavobacteriaceae	Flavobacterium		1	1	208	external	KJ957195	Flavobacterium, Flavobacteriaceae
seq73	315	0	0	0	0	0	0	0	0	Bacteria	Proteobacteria	Gammaproteobacteria	Betaproteobacteriales	Burkholderiaceae			0.25	1	222	internal	EU705634	Acinetobacter, Pseudomonodales
seq74	0	193	0	0	0	0	0	0	116	Bacteria	Proteobacteria	Gammaproteobacteria	Pseudomonadales	Moraxellaceae	Acinetobacter		1	1	224	external	EU705634	Acinetobacter, Pseudomonodales
seq75	299	0	0	0	0	0	0	0	0	Bacteria	Bacteroidetes	Bacteroidia	Flavobacteriales	Flavobacteriaceae	Flavobacterium		1	1	208	external	KJ957195	Flavobacterium, Flavobacteriaceae
seq76	0	0	0	0	0	0	0	288	0	Bacteria	Bacteroidetes	Bacteroidia	Cytophagales	Amoebophilaceae	Candidatus_Cardinium		0.33	1	173	internal		Ostracoda
seq77	0	0	0	0	0	0	0	0	281	Bacteria	Proteobacteria	Gammaproteobacteria	Pseudomonadales	Moraxellaceae	Acinetobacter		1	1	224	external	EU705634	Acinetobacter, Pseudomonodales
seq78	0	0	0	0	0	0	279	0	0	Bacteria	Bacteroidetes	Bacteroidia	Flavobacteriales	Weeksellaceae	Chryseobacterium		0.04	0.97	209	internal	DQ16669	Chryseobacterium, Flavobacteriaceae
seq79	187	91	0	0	0	0	0	0	0	Bacteria	Proteobacteria	Gammaproteobacteria	Betaproteobacteriales	Burkholderiaceae			0.27	1	222	internal	EU705634	Acinetobacter, Pseudomonodales
seq80	0	0	0	277	0	0	0	0	0	Bacteria	Proteobacteria	Gammaproteobacteria	Betaproteobacteriales	Burkholderiaceae			0.07	0.97	2	internal	JQ435729	Pseudoxanthomonas, Xanthomonadaceae
seq81	270	0	0	0	0	0	0	0	0	Bacteria	Bacteroidetes	Bacteroidia					0.05	0.98	208	external	KJ957195	Flavobacterium, Flavobacteriaceae
seq82	0	0	0	269	0	0	0	0	0	Bacteria	Cyanobacteria	Oxyphotobacteria	Chloroplast				0.05	0.96	213	internal	EU016445	Cellulomonadaceae, Micrococcales
seq83	0	0	0	0	0	269	0	0	0	Bacteria	Proteobacteria	Gammaproteobacteria	Betaproteobacteriales	Burkholderiaceae			0.3	1	222	internal	EU705634	Acinetobacter, Pseudomonodales
seq84	0	0	0	0	0	0	0	268	0	Bacteria	Proteobacteria	Gammaproteobacteria	Pseudomonadales	Pseudomonadaceae	Pseudomonas		1	1	223	external	JQ977513	Pseudomonas, Pseudomonadaceae
seq85	265	0	0	0	0	0	0	0	0	Bacteria	Proteobacteria	Gammaproteobacteria	Betaproteobacteriales	Burkholderiaceae			0.27	1	222	internal	EU705634	Acinetobacter, Pseudomonodales
seq86	0	0	0	0	261	0	0	0	0	Bacteria	Actinobacteria	Actinobacteria	Micrococcales				1	1	214	external	EU016445	Cellulomonadaceae, Micrococcales
seq87	0	260	0	0	0	0	0	0	0	Bacteria	Proteobacteria	Gammaproteobacteria	Betaproteobacteriales				0.05	0.98	2	internal	JQ435729	Pseudoxanthomonas, Xanthomonadaceae
seq88	0	0	0	0	0	0	0	0	253	Bacteria	Proteobacteria	Gammaproteobacteria	Pseudomonadales	Moraxellaceae	Acinetobacter		1	1	224	external	EU705634	Acinetobacter, Pseudomonodales
seq89	0	252	0	0	0	0	0	0	0	Bacteria	Bacteroidetes	Bacteroidia					0.19	0.99	208	external	KJ957195	Flavobacterium, Flavobacteriaceae
seq90	0	0	0	0	0	0	0	0	252	Bacteria	Bacteroidetes	Bacteroidia	Flavobacteriales	Weeksellaceae			0.97	0.97	224	internal	KJ957195	Flavobacterium, Flavobacteriaceae
seq91	0	0	0	0	0	0	251	0	0	Bacteria	Proteobacteria	Gammaproteobacteria	Betaproteobacteriales	Burkholderiaceae			0.27	0.99	222	internal	EU705634	Acinetobacter, Pseudomonodales
seq92	0	0	0	0	0	0	0	249	0	Bacteria	Proteobacteria	Alphaproteobacteria					0.26	0.99	219	internal	HQ425320	Paracoccus,Rhodobacteraceae
seq93	248	0	0	0	0	0	0	0	0	Bacteria	Proteobacteria	Gammaproteobacteria					0.99	0.99	223	external	JQ977513	Pseudomonas, Pseudomonadaceae
seq94	0	0	243	1	0	0	0	0	0	Bacteria	Bacteroidetes	Bacteroidia	Cytophagales	Amoebophilaceae	Candidatus_Cardinium		0.96	0.96	175	external	Hi_1C	H. incongruens, Ostracoda
seq95	0	0	0	0	243	0	0	0	0	Bacteria	Proteobacteria	Gammaproteobacteria	Betaproteobacteriales	Burkholderiaceae			0.09	0.98	222	internal	EU705634	Acinetobacter, Pseudomonodales
seq96	215	0	0	25	0	0	0	0	0	Bacteria	Bacteroidetes	Bacteroidia	Flavobacteriales	Flavobacteriaceae	Flavobacterium		1	1	208	external	KJ957195	Flavobacterium, Flavobacteriaceae
seq97	0	0	0	240	0	0	0	0	0	Bacteria	Proteobacteria	Gammaproteobacteria					0.96	0.96	3	internal	JQ435729	Pseudoxanthomonas, Xanthomonadaceae
seq98	0	234	0	0	0	0	0	0	0	Bacteria	Firmicutes	Bacilli	Bacillales				0.03	0.96	4	internal	JN934492	Bacteriovoracaceae; Bacteriovorax
seq99	0	0	0	0	229	0	0	0	0	Bacteria	Proteobacteria	Alphaproteobacteria	Rhodospirillales	Rhodospirillaceae	Caenispirillum		0.04	0.96	220	external	HQ425320	Paracoccus,Rhodobacteraceae
seq100	228	0	0	0	0	0	0	0	0	Bacteria	Bacteroidetes	Bacteroidia	Flavobacteriales	Flavobacteriaceae	Flavobacterium		1	1	208	external	KJ957195	Flavobacterium, Flavobacteriaceae
seq101	0	222	0	0	0	0	0	0	0	Bacteria	Proteobacteria	Gammaproteobacteria	Betaproteobacteriales	Burkholderiaceae			0.27	1	222	internal	EU705634	Acinetobacter, Pseudomonodales
seq102	0	0	0	0	216	0	0	0	0	Bacteria	Proteobacteria	Alphaproteobacteria	Rhizobiales	Rhizobiaceae			0.99	0.99	219	internal	HQ425320	Paracoccus,Rhodobacteraceae
seq103	214	0	0	0	0	0	0	0	0	Bacteria	Proteobacteria	Gammaproteobacteria	Pseudomonadales	Pseudomonadaceae	Pseudomonas		1	1	223	external	JQ977513	Pseudomonas, Pseudomonadaceae
seq104	0	0	210	0	0	0	0	0	0	Bacteria	Proteobacteria	Gammaproteobacteria	Betaproteobacteriales	Burkholderiaceae			0.28	1	222	internal	EU705634	Acinetobacter, Pseudomonodales
seq105	108	0	0	0	0	0	0	0	101	Bacteria	Proteobacteria	Gammaproteobacteria	Xanthomonadales	Xanthomonadaceae	Arenimonas		0.99	0.99	2	internal	JQ435729	Pseudoxanthomonas, Xanthomonadaceae
seq106	0	208	0	0	0	0	0	0	0	Bacteria	Proteobacteria	Gammaproteobacteria	Betaproteobacteriales	Burkholderiaceae			0.28	1	222	internal	EU705634	Acinetobacter, Pseudomonodales
seq107	0	0	0	0	0	0	0	205	0	Bacteria	Proteobacteria	Gammaproteobacteria	Pseudomonadales	Pseudomonadaceae	Pseudomonas		1	1	223	external	JQ977513	Pseudomonas, Pseudomonadaceae
seq108	0	0	0	0	0	0	0	205	0	Bacteria	Bacteroidetes	Bacteroidia	Flavobacteriales	Flavobacteriaceae	Flavobacterium	reichenba	1	1	208	external	KJ957195	Flavobacterium, Flavobacteriaceae
seq109	0	0	0	0	0	0	0	0	203	Bacteria	Proteobacteria	Alphaproteobacteria	Rhodobacterales	Rhodobacteraceae	Gemmobacter		0.03	0.98	220	external	HQ425320	Paracoccus,Rhodobacteraceae
seq110	0	0	0	0	0	0	0	0	203	Bacteria	Proteobacteria	Gammaproteobacteria					1	1	224	external	EU705634	Acinetobacter, Pseudomonodales
seq111	0	0	0	202	0	0	0	0	0	Bacteria	Bacteroidetes	Bacteroidia	Cytophagales	Amoebophilaceae			0.04	0.96	174	external	454	E. virens, Ostracods
seq112	0	0	0	0	0	0	198	0	0	Bacteria	Bacteroidetes	Bacteroidia	Flavobacteriales	Weeksellaceae	Chryseobacterium		0.26	1	210	external	DQ279361	Chryseobacterium, Flavobacteriaceae
seq113	0	0	0	0	0	0	0	0	197	Bacteria	Proteobacteria	Gammaproteobacteria	Pseudomonadales	Pseudomonadaceae	Pseudomonas	linyingens	0.97	0.97	223	external	JQ977513	Pseudomonas, Pseudomonadaceae
seq114	0	0	0	0	195	0	0	0	0	Bacteria	Proteobacteria	Deltaproteobacteria	Bdellovibrionales	Bdellovibrionaceae	Bdellovibrio		0.04	0.96	216	external	AY695840	Opitutus, Opitutaceae
seq115	0	0	0	0	0	0	0	0	195	Bacteria	Proteobacteria	Gammaproteobacteria	Pseudomonadales	Pseudomonadaceae			0.07	0.97	224	external	EU705634	Acinetobacter, Pseudomonodales
seq116	0	0	0	0	194	0	0	0	0	Bacteria	Proteobacteria	Alphaproteobacteria	Rhizobiales	Rhizobiaceae			0.97	0.97	219	internal	HQ425320	Paracoccus,Rhodobacteraceae
seq117	0	0	0	0	0	194	0	0	0	Bacteria	Bacteroidetes	Bacteroidia	Flavobacteriales				0.11	0.97	208	external	KJ957195	Flavobacterium, Flavobacteriaceae
seq118	0	0	0	0	0	0	0	193	0	Bacteria	Bacteroidetes	Bacteroidia	Flavobacteriales	Flavobacteriaceae	Flavobacterium		1	1	208	external	KJ957195	Flavobacterium, Flavobacteriaceae
seq119	190	0	0	0	0	0	0	0	0	Bacteria	Proteobacteria	Gammaproteobacteria	Betaproteobacteriales	Burkholderiaceae	Hydrogenophaga		0.26	0.99	222	internal	EU705634	Acinetobacter, Pseudomonodales
seq120	0	0	0	0	0	0	190	0	0	Bacteria	Proteobacteria	Gammaproteobacteria	Betaproteobacteriales	Burkholderiaceae	Polaromonas		0.14	0.97	2	internal	JQ435729	Pseudoxanthomonas, Xanthomonadaceae
seq121	0	0	0	0	0	0	188	0	0	Bacteria	Proteobacteria	Gammaproteobacteria	Betaproteobacteriales	Burkholderiaceae	Polaromonas		0.27	1	222	internal	EU705634	Acinetobacter, Pseudomonodales
seq122	0	0	0	0	0	0	0	0	186	Bacteria	Proteobacteria	Gammaproteobacteria	Pseudomonadales	Moraxellaceae	Acinetobacter		1	1	224	external	EU705634	Acinetobacter, Pseudomonodales
seq123	183	0	0	0	0	0	0	0	0	Bacteria	Proteobacteria	Alphaproteobacteria	Rhodobacterales	Rhodobacteraceae			0.97	0.97	221	external	FR821218	Pseudorhodobacter, Rhodobacteraceae
seq124	181	0	0	0	0	0	0	0	0	Bacteria	Bacteroidetes	Bacteroidia	Flavobacteriales	Flavobacteriaceae	Flavobacterium		1	1	208	external	KJ957195	Flavobacterium, Flavobacteriaceae
seq125	0	0	0	0	0	0	181	0	0	Bacteria	Bacteroidetes	Bacteroidia	Flavobacteriales	Weeksellaceae	Chryseobacterium		0.96	0.96	226	external	DQ16669	Chryseobacterium, Flavobacteriaceae
seq126	0	0	0	0	0	0	0	179	0	Bacteria	Bacteroidetes	Bacteroidia	Flavobacteriales	Flavobacteriaceae	Flavobacterium	succinica	1	1	208	external	KJ957195	Flavobacterium, Flavobacteriaceae
seq127	0	0	0	178	0	0	0	0	0	Bacteria	Proteobacteria	Gammaproteobacteria					0.25	1	222	internal	EU705634	Acinetobacter, Pseudomonodales
seq128	0	172	0	0	0	0	0	0	0	Bacteria	Proteobacteria	Alphaproteobacteria	Rhodobacterales	Rhodobacteraceae			0.04	0.97	220	external	HQ425320	Paracoccus,Rhodobacteraceae
seq129	44	0	0	0	0	0	0	0	127	Bacteria	Bacteroidetes	Bacteroidia	Flavobacteriales	Flavobacteriaceae	Flavobacterium		1	1	208	external	KJ957195	Flavobacterium, Flavobacteriaceae
seq130	0	0	0	0	170	0	0	0	0	Bacteria	Actinobacteria	Actinobacteria	Micrococcales	Cellulomonadaceae	Actinotalea		1	1	214	external	EU016445	Cellulomonadaceae, Micrococcales
seq131	0	0	0	0	0	0	0	0	170	Bacteria	Proteobacteria	Gammaproteobacteria	Betaproteobacteriales	Burkholderiaceae			0.24	1	222	internal	EU705634	Acinetobacter, Pseudomonodales
seq132	0	0	0	0	164	0	0	0	0	Bacteria	Proteobacteria	Alphaproteobacteria	Sphingomonadales	Sphingomonadaceae	Sphingopyxis		0.03	0.96	3	internal	JQ435729	Pseudoxanthomonas, Xanthomonadaceae
seq133	0	0	0	0	162	0	0	0	0	Bacteria	Proteobacteria	Gammaproteobacteria					0.07	0.96	222	internal	EU705634	Acinetobacter, Pseudomonodales
seq134	161	0	0	0	0	0	0	0	0	Bacteria	Proteobacteria	Gammaproteobacteria	Betaproteobacteriales	Burkholderiaceae			0.25	0.99	222	internal	EU705634	Acinetobacter, Pseudomonodales

	Ds.no	Ds.yes	Hi.yes1	Hi.yes2	Hi.no	Cv.yes	Ev.no1	Ev.yes	Ev.no2	Kingdom	Phylum	Class	Order	Family	Genus	Species	EDPL in EPA	RAxML weight in EPA	mapped to branch	internal	external	DNA#	ID
seq135	161	0	0	0	0	0	0	0	0	Bacteria	Proteobacteria	Gammaproteobacteria	Betaproteobacteriales	Burkholderiaceae			0.31	1	222	internal		EU705634	Acinetobacter, Pseudomonodales
seq136	159	0	0	0	0	0	0	0	0	Bacteria	Proteobacteria	Deltaproteobacteria	Bdellovibrionales	Bacteriovoracaceae	Halobacteriovorax		1	1	218	external		JN934492	Bacteriovoracaceae; Bacteriovorax
seq137	0	0	0	0	0	0	0	159	0	Bacteria	Bacteroidetes	Bacteroidia					0.33	0.98	173	internal			Ostracoda
seq138	0	0	0	0	0	0	0	159	0	Bacteria	Bacteroidetes	Bacteroidia					0.33	0.99	173	internal			Ostracoda
seq139	158	0	0	0	0	0	0	0	0	Bacteria	Bacteroidetes	Bacteroidia	Flavobacteriales	Flavobacteriaceae	Flavobacterium		1	1	208	external		KJ957195	Flavobacterium, Flavobacteriaceae
seq140	0	0	0	0	0	0	0	155	0	Bacteria	Bacteroidetes	Bacteroidia	Cytophagales	Amoebophilaceae	Candidatus_Cardinium		0.33	1	173	internal			Ostracoda
seq141	0	0	154	0	0	0	0	0	0	Bacteria	Proteobacteria	Gammaproteobacteria	Betaproteobacteriales	Burkholderiaceae			0.31	1	222	internal		EU705634	Acinetobacter, Pseudomonodales
seq142	0	0	151	0	0	0	0	0	0	Bacteria	Bacteroidetes	Bacteroidia					0.06	0.99	223	external		KF054791	Sphingobacteriaceae; Sphingobacterium
seq143	0	0	0	0	0	0	151	0	0	Bacteria	Cyanobacteria	Oxyphotobacteria	Chloroplast				0.02	0.96	212	internal		EU016445	Cellulomonadaceae, Micrococcales
seq144	0	0	0	0	0	0	0	0	150	Bacteria	Proteobacteria	Gammaproteobacteria	Betaproteobacteriales	Burkholderiaceae			0.21	1	222	internal		EU705634	Acinetobacter, Pseudomonodales
seq145	0	0	0	0	0	0	0	0	150	Bacteria	Proteobacteria	Gammaproteobacteria	Pseudomonadales	Moraxellaceae	Acinetobacter		1	1	224	external		EU705634	Acinetobacter, Pseudomonodales
seq146	0	149	0	0	0	0	0	0	0	Bacteria	Bacteroidetes	Bacteroidia	Chitinophagales	Chitinophagaceae			0.11	0.96	224	internal		KJ957195	Flavobacterium, Flavobacteriaceae
seq147	0	0	0	0	149	0	0	0	0	Bacteria	Proteobacteria	Alphaproteobacteria	Sphingomonadales	Sphingomonadaceae	Sphingorhabdus		0.03	0.97	213	internal		EU016445	Cellulomonadaceae, Micrococcales
seq148	0	0	0	0	0	0	149	0	0	Bacteria	Patescibacteria	Parcubacteria	Candidatus_Kaiserbacteria				0.03	0.97	3	internal		JQ435729	Pseudoxanthomonas, Xanthomonadaceae
seq149	148	0	0	0	0	0	0	0	0	Bacteria	Bacteroidetes	Bacteroidia	Flavobacteriales	Crocinitomicaceae	Fluviicola		0.96	0.96	224	internal		KJ957195	Flavobacterium, Flavobacteriaceae
seq150	0	148	0	0	0	0	0	0	0	Bacteria	Proteobacteria	Gammaproteobacteria	Betaproteobacteriales	Burkholderiaceae			0.32	1	3	internal		JQ435729	Pseudoxanthomonas, Xanthomonadaceae
seq151	0	0	147	0	0	0	0	0	0	Bacteria	Proteobacteria	Gammaproteobacteria	Betaproteobacteriales	Burkholderiaceae	Paucibacter		0.32	1	222	internal		EU705634	Acinetobacter, Pseudomonodales
seq152	0	0	146	0	0	0	0	0	0	Bacteria	Bacteroidetes	Bacteroidia	Cytophagales	Amoebophilaceae	Candidatus_Cardinium		0.96	0.96	175	external		Hi_1C	H. incongruens, Ostracoda
seq153	0	145	0	0	0	0	0	0	0	Bacteria	Proteobacteria	Gammaproteobacteria	Betaproteobacteriales				0.2	1	222	internal		EU705634	Acinetobacter, Pseudomonodales
seq154	144	0	0	0	0	0	0	0	0	Bacteria	Bacteroidetes	Bacteroidia	Flavobacteriales	Crocinitomicaceae	Fluviicola		0.97	0.97	224	internal		KJ957195	Flavobacterium, Flavobacteriaceae
seq155	0	0	0	0	143	0	0	0	0	Bacteria	Proteobacteria	Gammaproteobacteria	Betaproteobacteriales	Burkholderiaceae	Rhizobacter		0.31	1	222	internal		EU705634	Acinetobacter, Pseudomonodales
seq156	0	0	0	0	0	0	0	142	0	Bacteria	Bacteroidetes	Bacteroidia					0.17	1	210	external		DQ279361	Chryseobacterium, Flavobacteriaceae
seq157	139	0	0	0	0	0	0	0	0	Bacteria	Proteobacteria	Gammaproteobacteria	Alteromonadales	Alteromonadaceae	Rheinheimera	tilapiae	0.04	0.96	222	internal		EU705634	Acinetobacter, Pseudomonodales
seq158	138	0	0	0	0	0	0	0	0	Bacteria	Proteobacteria	Gammaproteobacteria	Alteromonadales				0.11	1	222	internal		EU705634	Acinetobacter, Pseudomonodales
seq159	138	0	0	0	0	0	0	0	0	Bacteria	Bacteroidetes	Bacteroidia	Flavobacteriales	Flavobacteriaceae	Flavobacterium		1	1	208	external		KJ957195	Flavobacterium, Flavobacteriaceae
seq160	0	138	0	0	0	0	0	0	0	Bacteria	Firmicutes	Bacilli	Bacillales	Staphylococcaceae	Staphylococcus	saccharol	0.14	0.97	214	external		EU016445	Cellulomonadaceae, Micrococcales
seq161	137	0	0	0	0	0	0	0	0	Bacteria	Proteobacteria	Gammaproteobacteria	Pseudomonadales	Moraxellaceae			0.21	1	222	internal		EU705634	Acinetobacter, Pseudomonodales
seq162	0	0	137	0	0	0	0	0	0	Bacteria	Bacteroidetes	Bacteroidia	Sphingobacteriales	Sphingobacteriaceae	Pedobacter		1	1	223	external		KF054791	Sphingobacteriaceae; Sphingobacterium
seq163	136	0	0	0	0	0	0	0	0	Bacteria	Bacteroidetes	Bacteroidia					0.02	0.97	222	internal		KF054791	Sphingobacterium, Sphingobacteriaceae;
seq164	0	136	0	0	0	0	0	0	0	Bacteria	Bacteroidetes	Bacteroidia					0.24	1	209	internal		DQ16669	Chryseobacterium, Flavobacteriaceae
seq165	0	0	0	0	0	0	0	0	135	Bacteria	Proteobacteria	Gammaproteobacteria					1	1	224	external		EU705634	Acinetobacter, Pseudomonodales
seq166	0	0	0	0	0	0	0	134	0	Bacteria	Proteobacteria	Alphaproteobacteria	Caulobacterales	Caulobacteraceae	Brevundimonas		0.97	0.97	219	internal		HQ425320	Paracoccus,Rhodobacteraceae
seq167	0	0	0	0	0	0	0	132	0	Bacteria	Proteobacteria	Gammaproteobacteria	Pseudomonadales	Pseudomonadaceae	Pseudomonas		1	1	223	external		JQ977513	Pseudomonas, Pseudomonadaceae
seq168	0	0	0	0	131	0	0	0	0	Bacteria	Acidobacteria	Blastocatellia_(Subgroup_4)	Blastocatellales	Blastocatellaceae	Aridibacter	famiduran	0.05	1	214	external		EU016445	Cellulomonadaceae, Micrococcales
seq169	0	0	0	0	130	0	0	0	0	Bacteria	Firmicutes	Clostridia	Clostridiales	Clostridiaceae_1	Clostridium_sensu_stricto_10		0.04	0.96	5	internal		EU016445	Cellulomonadaceae, Micrococcales
seq170	0	0	0	0	0	0	129	0	0	Bacteria	Proteobacteria	Alphaproteobacteria	Rhodobacterales	Rhodobacteraceae			0.13	1	220	external		HQ425320	Paracoccus,Rhodobacteraceae
seq171	0	0	0	0	0	0	0	126	0	Bacteria	Bacteroidetes	Bacteroidia					0.33	0.99	173	internal			Ostracoda
seq172	125	0	0	0	0	0	0	0	0	Bacteria	Bacteroidetes	Bacteroidia	Flavobacteriales				0.06	0.97	209	internal		DQ16669	Chryseobacterium, Flavobacteriaceae
seq173	0	123	0	0	0	0	0	0	0	Bacteria	Fusobacteria	Fusobacteriia	Fusobacteriales	Fusobacteriaceae			0.01	0.95	219	internal		HQ425320	Paracoccus,Rhodobacteraceae
seq174	0	0	0	0	0	0	122	0	0	Bacteria	Bacteroidetes	Bacteroidia	Flavobacteriales	Weeksellaceae	Chryseobacterium		0.06	0.97	209	external		DQ16669	Chryseobacterium, Flavobacteriaceae
seq175	0	121	0	0	0	0	0	0	0	Bacteria	Proteobacteria	Gammaproteobacteria	Pseudomonadales	Pseudomonadaceae	Pseudomonas		1	1	223	external		JQ977513	Pseudomonas, Pseudomonadaceae
seq176	0	0	121	0	0	0	0	0	0	Bacteria	Actinobacteria	Actinobacteria	Frankiales	Sporichthyaceae			1	1	214	external		EU016445	Cellulomonadaceae, Micrococcales
seq177	0	0	0	0	0	0	0	0	121	Bacteria	Proteobacteria	Gammaproteobacteria	Pseudomonadales	Moraxellaceae	Acinetobacter		1	1	224	external		EU705634	Acinetobacter, Pseudomonodales
seq178	120	0	0	0	0	0	0	0	0	Bacteria	Bacteroidetes	Bacteroidia	Flavobacteriales	Flavobacteriaceae	Flavobacterium		1	1	208	external		KJ957195	Flavobacterium, Flavobacteriaceae
seq179	119	0	0	0	0	0	0	0	0	Bacteria	Bacteroidetes	Bacteroidia	Cytophagales				0.13	0.99	204	external		AB078038	Flammeovirgaceae; Flexithrix
seq180	0	119	0	0	0	0	0	0	0	Bacteria	Bacteroidetes	Bacteroidia					0.07	0.96	219	internal		AB078038	Flammeovirgaceae; Flexithrix
seq181	117	0	0	0	0	0	0	0	0	Bacteria	Proteobacteria	Gammaproteobacteria	Alteromonadales	Alteromonadaceae	Rheinheimera		0.95	0.95	224	external		EU705634	Acinetobacter, Pseudomonodales
seq182	0	117	0	0	0	0	0	0	0	Bacteria	Bacteroidetes	Bacteroidia	Cytophagales	Amoebophilaceae			0.01	0.96	24	internal			
seq183	0	0	0	116	0	0	0	0	0	Bacteria	Patescibacteria	Gracilibacteria	Absconditabacteriales_(SR1)				0.11	0.97	3	internal		JQ435729	Pseudoxanthomonas, Xanthomonadaceae
seq184	114	0	0	0	0	0	0	0	0	Bacteria	Proteobacteria	Gammaproteobacteria	Betaproteobacteriales	Burkholderiaceae			0.28	1	222	internal		EU705634	Acinetobacter, Pseudomonodales
seq185	112	0	0	0	0	0	0	0	0	Bacteria	Proteobacteria	Gammaproteobacteria	Alteromonadales	Alteromonadaceae	Rheinheimera		0.19	1	222	internal		EU705634	Acinetobacter, Pseudomonodales
seq186	112	0	0	0	0	0	0	0	0	Bacteria	Proteobacteria	Gammaproteobacteria	Alteromonadales	Alteromonadaceae	Rheinheimera		0.11	1	222	internal		EU705634	Acinetobacter, Pseudomonodales
seq187	0	0	0	0	0	110	0	0	0	Bacteria	Bacteroidetes	Bacteroidia	Flavobacteriales				0.08	0.97	209	internal		DQ16669	Chryseobacterium, Flavobacteriaceae
seq188	0	0	0	0	0	0	0	0	110	Bacteria	Proteobacteria	Gammaproteobacteria	Betaproteobacteriales				0.23	1	222	internal		EU705634	Acinetobacter, Pseudomonodales
seq189	0	0	0	0	109	0	0	0	0	Bacteria	Proteobacteria	Gammaproteobacteria	Xanthomonadales	Xanthomonadaceae			1	1	0	external		JQ435729	Pseudoxanthomonas, Xanthomonadaceae
seq190	0	0	0	108	0	0	0	0	0	Bacteria	Cyanobacteria	Oxyphotobacteria	Chloroplast				0.04	0.95	213	internal		EU016445	Cellulomonadaceae, Micrococcales
seq191	0	0	0	0	0	0	0	106	0	Bacteria	Bacteroidetes	Bacteroidia	Cytophagales	Amoebophilaceae	Candidatus_Cardinium		0.33	1	175	external		Hi_1C	H. incongruens, Ostracoda
seq192	0	105	0	0	0	0	0	0	0	Bacteria	Proteobacteria	Gammaproteobacteria	Pseudomonadales	Pseudomonadaceae	Pseudomonas		1	1	223	external		JQ977513	Pseudomonas, Pseudomonadaceae
seq193	0	0	0	0	0	0	0	105	0	Bacteria	Bacteroidetes	Bacteroidia	Cytophagales	Amoebophilaceae			0.33	0.99	173	internal			Ostracoda
seq194	104	0	0	0	0	0	0	0	0	Bacteria	Proteobacteria	Gammaproteobacteria	Alteromonadales	Alteromonadaceae	Rheinheimera		0.99	0.99	224	external		EU705634	Acinetobacter, Pseudomonodales
seq195	102	0	0	0	0	0	0	0	0	Bacteria	Proteobacteria	Alphaproteobacteria	Rhodobacterales	Rhodobacteraceae	Albirhodobacter		0.04	0.98	220	external		HQ425320	Paracoccus,Rhodobacteraceae
seq196	0	0	102	0	0	0	0	0	0	Bacteria	Proteobacteria	Gammaproteobacteria	Betaproteobacteriales	Burkholderiaceae			0.29	1	222	internal		EU705634	Acinetobacter, Pseudomonodales
seq197	0	101	0	0	0	0	0	0	0	Bacteria	Bacteroidetes	Bacteroidia	Chitinophagales	Saprospiraceae			0.08	0.97	5	internal		EU016445	Cellulomonadaceae, Micrococcales
seq198	100	0	0	0	0	0	0	0	0	Bacteria	Proteobacteria	Alphaproteobacteria	Rhodobacterales	Rhodobacteraceae	Gemmobacter	lanyuensi	0.03	0.98	220	external		HQ425320	Paracoccus,Rhodobacteraceae
seq199	0	0	100	0	0	0	0	0	0	Bacteria	Bacteroidetes	Bacteroidia	Cytophagales	Amoebophilaceae	Candidatus_Cardinium		0.04	0.97	174	external		454	E. virens, Ostracods
seq200	0	0	0	0	100	0	0	0	0	Bacteria	Proteobacteria	Gammaproteobacteria					0.97	0.97	2	internal		JQ435729	Pseudoxanthomonas, Xanthomonadaceae
seq201	0	0	99	0	0	0	0	0	0	Bacteria	Proteobacteria	Gammaproteobacteria	Betaproteobacteriales	Burkholderiaceae			0.33	1	3	internal		JQ435729	
seq202	98	0	0	0	0	0	0	0	0	Bacteria	Proteobacteria	Gammaproteobacteria	Pseudomonadales	Moraxellaceae			0.97	0.97	224	external		EU705634	Acinetobacter, Pseudomonodales
seq203	98	0	0	0	0	0	0	0	0	Bacteria	Proteobacteria	Gammaproteobacteria	Pseudomonadales	Pseudomonadaceae	Pseudomonas		1	1	223	external		JQ977513	Pseudomonas, Pseudomonadaceae
seq204	0	0	0	97	0	0	0	0	0	Bacteria	Proteobacteria	Gammaproteobacteria	Betaproteobacteriales	Burkholderiaceae			0.24	1	222	internal		EU705634	Acinetobacter, Pseudomonodales
seq205	0	0	0	0	0	96	0	0	0	Bacteria	Bacteroidetes	Bacteroidia	Flavobacteriales				0.07	0.98	208	external		KJ957195	Flavobacterium, Flavobacteriaceae
seq206	0	0	95	0	0	0	0	0	0	Bacteria	Proteobacteria	Gammaproteobacteria	Betaproteobacteriales	Burkholderiaceae			0.24	1	222	internal		EU705634	Acinetobacter, Pseudomonodales
seq207	0	0	95	0	0	0	0	0	0	Bacteria	Bacteroidetes	Bacteroidia	Cytophagales	Amoebophilaceae	Candidatus_Cardinium		0.96	0.96	175	external		Hi_1C	H. incongruens, Ostracoda
seq208	0	0	0	0	0	95	0	0	0	Bacteria	Bacteroidetes	Bacteroidia	Flavobacteriales	Weeksellaceae			0.96	0.96	224	internal		KJ957195	Flavobacterium, Flavobacteriaceae
seq209	94	0	0	0	0	0	0	0	0	Bacteria	Proteobacteria	Gammaproteobacteria	Betaproteobacteriales	Neisseriaceae	Neisseria		0.32	1	3	internal		JQ435729	Pseudoxanthomonas, Xanthomonadaceae
seq210	0	0	0	0	94	0	0	0	0	Bacteria	Chlamydiae	Chlamydiae	Chlamydiales	Parachlamydiaceae	Candidatus_Protochlamydia		0.04	0.96	218	external		JN934492	Bacteriovoracaceae; Bacteriovorax
seq211	0	0	0	0	94	0	0	0	0	Bacteria	Firmicutes	Clostridia	Clostridiales	Clostridiaceae_1			0.02	0.95	216	external		AY695840	Opitutus, Opitutaceae
seq212	0	0	0	0	0	0	0	0	94	Bacteria	Bacteroidetes	Bacteroidia	Flavobacteriales	Flavobacteriaceae	Flavobacterium		1	1	208	external		KJ957195	Flavobacterium, Flavobacteriaceae
seq213	0	0	0	0	0	0	0	0	94	Bacteria	Bacteroidetes	Bacteroidia	Chitinophagales	Chitinophagaceae			0.03	0.97	210	external		DQ16669	Chryseobacterium, Flavobacteriaceae
seq214	0	0	0	0	0	0	0	93	0	Bacteria	Proteobacteria	Alphaproteobacteria	Rhizobiales	Rhizobiaceae			0.99	0.99	219	internal		HQ425320	Paracoccus,Rhodobacteraceae

	Ds.no	Ds.yes	Hi.yes1	Hi.yes2	Hi.no	Cv.yes	Ev.no1	Ev.yes	Ev.no2	Kingdom	Phylum	Class	Order	Family	Genus	Species	EDPL in EPA	RAxML weight in EPA	mapped to branch	internal	external	DNA#	ID
seq215	0	0	0	0	0	0	0	0	93	Bacteria	Proteobacteria	Gammaproteobacteria	Pseudomonadales	Moraxellaceae	Acinetobacter		1	1	224	external		EU705634	Acinetobacter, Pseudomonadales
seq216	92	0	0	0	0	0	0	0	0	Bacteria	Proteobacteria	Gammaproteobacteria	Aeromonadales	Aeromonadaceae	Aeromonas	salmonici	0.03	0.96	222	internal		EU705634	Acinetobacter, Pseudomonadales
seq217	0	0	43	0	0	0	0	0	49	Bacteria	Proteobacteria	Gammaproteobacteria	Betaproteobacteriales	Chitinibacteraceae	Deefgea	chitinilytic	0.33	0.99	2	internal		JQ435729	Pseudoxanthomonas, Xanthomonadaceae
seq218	0	0	0	0	0	0	0	0	92	Bacteria	Proteobacteria	Gammaproteobacteria	Pseudomonadales	Moraxellaceae			1	1	224	external		EU705634	Acinetobacter, Pseudomonadales
seq219	91	0	0	0	0	0	0	0	0	Bacteria	Bacteroidetes	Bacteroidia					0.03	0.95	208	external		KJ957195	Flavobacterium, Flavobacteriaceae
seq220	0	0	0	0	0	0	0	0	91	Bacteria	Proteobacteria	Gammaproteobacteria	Betaproteobacteriales	Chitinibacteraceae	Deefgea		0.29	0.99	2	internal		JQ435729	Pseudoxanthomonas, Xanthomonadaceae
seq221	0	90	0	0	0	0	0	0	0	Bacteria	Proteobacteria	Alphaproteobacteria	Rhizobiales				0.99	0.99	219	internal		HQ425320	Paracoccus,Rhodobacteraceae
seq222	0	0	0	0	0	0	0	0	89	Bacteria	Bacteroidetes	Bacteroidia	Flavobacteriales	Flavobacteriaceae	Flavobacterium		1	1	208	external		KJ957195	Flavobacterium, Flavobacteriaceae
seq223	88	0	0	0	0	0	0	0	0	Bacteria	Bacteroidetes	Bacteroidia	Flavobacteriales	Flavobacteriaceae	Flavobacterium		1	1	208	external		KJ957195	Flavobacterium, Flavobacteriaceae
seq224	0	0	0	0	88	0	0	0	0	Bacteria	Actinobacteria	Actinobacteria	Micrococcales	Cellulomonadaceae	Actinotalea		1	1	214	external		EU016445	Cellulomonadaceae, Micrococcales
seq225	0	0	0	0	0	0	0	0	87	Bacteria	Proteobacteria	Gammaproteobacteria	Pseudomonadales	Moraxellaceae			0.99	0.99	224	external		EU705634	Acinetobacter, Pseudomonadales
seq226	86	0	0	0	0	0	0	0	0	Bacteria	Proteobacteria	Gammaproteobacteria	Alteromonadales	Alteromonadaceae	Rheinheimera		0.06	0.96	223	external		JQ977513	Pseudomonas, Pseudomonadaceae
seq210	85	0	0	0	0	0	0	0	0	Bacteria	Proteobacteria	Gammaproteobacteria	Aeromonadales	Aeromonadaceae	Aeromonas		0.07	0.97	224	external		EU705634	Acinetobacter, Pseudomonadales
seq228	0	0	0	84	0	0	0	0	0	Bacteria	Actinobacteria	Acidimicrobiia	Microtrichales	Ilumatobacteraceae	Ilumatobacter		0.14	0.98	213	internal		EU016445	Cellulomonadaceae, Micrococcales
seq229	0	83	0	0	0	0	0	0	0	Bacteria	Firmicutes	Bacilli	Lactobacillales	Streptococcaceae	Streptococcus		0.02	0.96	212	internal		EU016445	Cellulomonadaceae, Micrococcales
seq230	0	0	0	0	0	0	82	0	0	Bacteria	Bacteroidetes	Bacteroidia	Chitinophagales	Saprospiraceae			0.06	0.98	219	internal		AB078038	Flammeovirgaceae; Flexithrix
seq231	0	0	0	0	0	0	0	80	0	Bacteria	Proteobacteria	Gammaproteobacteria	Aeromonadales	Aeromonadaceae	Aeromonas		0.96	0.96	223	external		JQ977513	Pseudomonas, Pseudomonadaceae
seq232	0	0	0	0	0	0	0	78	0	Bacteria	Bacteroidetes	Bacteroidia	Cytophagales	Amoebophilaceae			0.33	1	173	internal			Ostracoda
seq233	0	0	0	0	0	0	0	78	0	Bacteria	Bacteroidetes	Bacteroidia	Cytophagales	Amoebophilaceae	Candidatus_Cardinium		0.33	1	173	internal			Ostracoda
seq234	0	0	0	0	77	0	0	0	0	Bacteria	Firmicutes	Clostridia	Clostridiales	Lachnospiraceae			0.03	0.97	215	external		AB547639	Firmicutes; Tissierellia
seq235	0	0	0	0	77	0	0	0	0	Bacteria	Proteobacteria	Alphaproteobacteria	Rhizobiales	Rhizobiaceae	Allorhizobium-Neorhizobium-Para		0.98	0.98	219	internal		HQ425320	Paracoccus,Rhodobacteraceae
seq236	0	0	0	0	75	0	0	0	0	Bacteria	Proteobacteria	Gammaproteobacteria	Xanthomonadales	Xanthomonadaceae	Pseudoxanthomonas		1	1	0	external		JQ435729	Pseudoxanthomonas, Xanthomonadaceae
seq237	0	0	0	0	0	75	0	0	0	Bacteria	Proteobacteria	Gammaproteobacteria	Betaproteobacteriales	Burkholderiaceae			0.3	0.97	2	internal		JQ435729	Pseudoxanthomonas, Xanthomonadaceae
seq238	0	0	0	0	0	0	75	0	0	Bacteria	Cyanobacteria	Oxyphotobacteria	Chloroplast				0.05	0.95	2	internal		JQ435729	Pseudoxanthomonas, Xanthomonadaceae
seq239	0	0	0	0	0	0	0	75	0	Bacteria	Bacteroidetes	Bacteroidia	Cytophagales	Amoebophilaceae			0.33	1	173	internal			Ostracoda
seq240	0	0	74	0	0	0	0	0	0	Bacteria	Bacteroidetes	Bacteroidia					0.07	0.99	173	internal			Ostracoda
seq241	0	0	0	74	0	0	0	0	0	Bacteria	Firmicutes	Bacilli	Lactobacillales	Streptococcaceae			0.28	0.95	214	external		EU016445	Cellulomonadaceae, Micrococcales
seq242	0	0	0	0	0	0	0	74	0	Bacteria	Bacteroidetes	Bacteroidia	Flavobacteriales	Weeksellaceae	Chryseobacterium		0.23	1	209	internal		DQ16669	Chryseobacterium, Flavobacteriaceae
seq243	0	0	0	0	0	0	0	0	73	Bacteria	Proteobacteria	Gammaproteobacteria	Betaproteobacteriales	Burkholderiaceae	Polaromonas		0.26	1	222	internal		EU705634	Acinetobacter, Pseudomonadales
seq244	0	0	0	0	0	0	0	0	73	Bacteria	Bacteroidetes	Bacteroidia	Flavobacteriales	Flavobacteriaceae	Flavobacterium		1	1	208	external		KJ957195	Flavobacterium, Flavobacteriaceae
seq245	0	72	0	0	0	0	0	0	0	Bacteria	Bacteroidetes	Bacteroidia	Chitinophagales	Saprospiraceae			0.05	0.96	204	external		AB078038	Flammeovirgaceae; Flexithrix
seq246	70	0	0	0	0	0	0	0	0	Bacteria	Proteobacteria	Gammaproteobacteria	Pseudomonadales	Pseudomonadaceae	Pseudomonas		1	1	223	external		JQ977513	Pseudomonas, Pseudomonadaceae
seq247	0	0	0	69	0	0	0	0	0	Bacteria	Actinobacteria	Acidimicrobiia	Microtrichales	Iamiaceae	Iamia		0.11	0.99	215	external		AB547639	Firmicutes; Tissierellia
seq248	0	0	0	0	0	0	0	0	69	Bacteria	Proteobacteria	Gammaproteobacteria	Pseudomonadales	Moraxellaceae			0.09	0.98	223	external		JQ977513	Pseudomonas, Pseudomonadaceae
seq249	68	0	0	0	0	0	0	0	0	Bacteria	Proteobacteria	Gammaproteobacteria	Betaproteobacteriales	Burkholderiaceae			0.28	1	222	internal		DQ16669	Chryseobacterium, Flavobacteriaceae
seq250	0	0	64	0	0	0	0	0	0	Bacteria	Bacteroidetes	Bacteroidia	Cytophagales	Amoebophilaceae			0.06	1	173	internal			Ostracoda
seq251	0	0	0	0	0	64	0	0	0	Bacteria	Bacteroidetes	Bacteroidia	Flavobacteriales				0.11	0.97	208	external		KJ957195	Flavobacterium, Flavobacteriaceae
seq252	0	62	0	0	0	0	0	0	0	Bacteria	Proteobacteria	Gammaproteobacteria	Betaproteobacteriales				0.1	0.96	2	internal		JQ435729	Pseudoxanthomonas, Xanthomonadaceae
seq253	0	0	0	62	0	0	0	0	0	Bacteria	Bacteroidetes	Bacteroidia	Cytophagales	Amoebophilaceae			0.07	1	173	internal			Ostracoda
seq254	0	0	0	62	0	0	0	0	0	Bacteria	Proteobacteria	Alphaproteobacteria	Micavibrionales				0.09	0.97	219	internal		HQ425320	Paracoccus,Rhodobacteraceae
seq255	60	0	0	0	0	0	0	0	0	Bacteria	Bacteroidetes	Bacteroidia	Flavobacteriales	Flavobacteriaceae	Flavobacterium		1	1	208	external		KJ957195	Flavobacterium, Flavobacteriaceae
seq256	0	0	60	0	0	0	0	0	0	Bacteria	Proteobacteria	Gammaproteobacteria	Pseudomonadales	Moraxellaceae			1	1	224	external		EU705634	Acinetobacter, Pseudomonadales
seq257	0	0	0	0	0	59	0	0	0	Bacteria	Proteobacteria	Gammaproteobacteria	Betaproteobacteriales	Burkholderiaceae			0.31	1	222	internal		EU705634	Acinetobacter, Pseudomonadales
seq258	58	0	0	0	0	0	0	0	0	Bacteria	Bacteroidetes	Bacteroidia					0.23	0.98	208	external		KJ957195	Flavobacterium, Flavobacteriaceae
seq259	0	58	0	0	0	0	0	0	0	Bacteria	Bacteroidetes	Bacteroidia	Chitinophagales	Chitinophagaceae			0.04	0.95	211	external		DQ16669	Chryseobacterium, Flavobacteriaceae
seq260	0	0	0	0	0	0	58	0	0	Bacteria	Bacteroidetes	Bacteroidia	Chitinophagales	Saprospiraceae			0.03	0.97	7	internal		AB078038	Flammeovirgaceae; Flexithrix
seq261	0	0	0	0	0	0	0	58	0	Bacteria	Bacteroidetes	Bacteroidia	Flavobacteriales	Flavobacteriaceae	Flavobacterium		1	1	208	external		KJ957195	Flavobacterium, Flavobacteriaceae
seq262	0	0	0	0	0	0	0	0	58	Bacteria	Proteobacteria	Gammaproteobacteria	Betaproteobacteriales	Burkholderiaceae			0.3	1	222	internal		EU705634	Acinetobacter, Pseudomonadales
seq263	0	0	0	57	0	0	0	0	0	Bacteria	Proteobacteria	Gammaproteobacteria	Betaproteobacteriales	Burkholderiaceae			0.27	1	222	internal		EU705634	Acinetobacter, Pseudomonadales
seq264	0	0	0	0	0	0	57	0	0	Bacteria	Acidobacteria	Subgroup_6					0.03	0.97	223	external		JQ977513	Pseudomonas, Pseudomonadaceae
seq265	0	0	0	0	0	56	0	0	0	Bacteria	Proteobacteria	Gammaproteobacteria	Betaproteobacteriales	Burkholderiaceae			0.21	1	222	internal		EU705634	Acinetobacter, Pseudomonadales
seq266	0	54	0	0	0	0	0	0	0	Bacteria	Proteobacteria	Alphaproteobacteria	Sphingomonadales	Sphingomonadaceae	Rhizorhapis		0.05	0.97	5	internal		JQ435729	Pseudoxanthomonas, Xanthomonadaceae
seq267	0	0	0	0	0	0	0	0	54	Bacteria	Bacteroidetes	Bacteroidia	Flavobacteriales	Flavobacteriaceae	Flavobacterium		1	1	208	external		KJ957195	Flavobacterium, Flavobacteriaceae
seq268	0	0	0	53	0	0	0	0	0	Bacteria	Bacteroidetes	Bacteroidia	Flavobacteriales	Flavobacteriaceae			1	1	208	external		KJ957195	Flavobacterium, Flavobacteriaceae
seq269	52	0	0	0	0	0	0	0	0	Bacteria	Proteobacteria	Gammaproteobacteria	Betaproteobacteriales	Burkholderiaceae			0.31	1	222	internal		EU705634	Acinetobacter, Pseudomonadales
seq270	0	0	0	0	52	0	0	0	0	Bacteria	Cyanobacteria	Oxyphotobacteria	Chloroplast				0.01	0.96	212	internal		EU016445	Cellulomonadaceae, Micrococcales
seq271	0	0	0	0	0	0	0	0	52	Bacteria	Proteobacteria	Gammaproteobacteria	Betaproteobacteriales	Burkholderiaceae			0.3	1	222	internal		EU705634	Acinetobacter, Pseudomonadales
seq272	0	0	47	0	0	0	0	0	0	Bacteria	Bacteroidetes	Bacteroidia	Flavobacteriales	Flavobacteriaceae	Flavobacterium		1	1	208	external		KJ957195	Flavobacterium, Flavobacteriaceae
seq273	0	0	0	0	0	0	0	0	47	Bacteria	Bacteroidetes	Bacteroidia	Sphingobacteriales	Sphingobacteriaceae	Sphingobacterium		1	1	223	external		KF054791	Sphingobacteriaceae; Sphingobacterium
seq274	0	46	0	0	0	0	0	0	0	Bacteria	Proteobacteria	Gammaproteobacteria	Thiotrichales	Thiotrichaceae	Thiothrix	fructosivo	0.99	0.99	3	internal		JQ435729	Pseudoxanthomonas, Xanthomonadaceae
seq275	0	0	0	0	0	46	0	0	0	Bacteria	Cyanobacteria	Oxyphotobacteria	Chloroplast				0.03	0.96	216	external		AY695840	Opitutus, Opitutaceae
seq276	0	44	0	0	0	0	0	0	0	Bacteria	Proteobacteria	Gammaproteobacteria	Pseudomonadales	Moraxellaceae	Acinetobacter		1	1	224	external		EU705634	Acinetobacter, Pseudomonadales
seq277	0	0	44	0	0	0	0	0	0	Bacteria	Bacteroidetes	Bacteroidia	Cytophagales	Amoebophilaceae	Candidatus_Cardinium		0.95	0.95	175	external		Hi_1C	H. incongruens, Ostracoda
seq278	0	0	0	0	0	0	44	0	0	Bacteria	Proteobacteria	Alphaproteobacteria	Rhodobacterales	Rhodobacteraceae			0.11	1	219	internal		HQ425320	Paracoccus,Rhodobacteraceae
seq279	43	0	0	0	0	0	0	0	0	Bacteria	Bacteroidetes	Bacteroidia	Sphingobacteriales	env.OPS_17			0.05	1	209	internal		DQ16669	Chryseobacterium, Flavobacteriaceae
seq280	0	0	0	0	43	0	0	0	0	Bacteria	Bacteroidetes	Bacteroidia	Cytophagales	Microscillaceae	Ohtaekwangia		0.07	0.97	5	internal		JQ435729	Pseudoxanthomonas, Xanthomonadaceae
seq281	0	0	0	0	0	0	0	0	43	Bacteria	Cyanobacteria	Oxyphotobacteria	Chloroplast				0.02	0.97	222	internal		EU705634	Acinetobacter, Pseudomonadales
seq282	0	0	0	0	0	0	0	0	43	Bacteria	Bacteroidetes	Bacteroidia	Chitinophagales	Saprospiraceae			0.04	0.96	209	internal		DQ16669	Chryseobacterium, Flavobacteriaceae
seq283	0	0	0	0	42	0	0	0	0	Bacteria	Bacteroidetes	Bacteroidia	Sphingobacteriales				0.03	0.97	224	internal		KJ957195	Flavobacterium, Flavobacteriaceae
seq284	0	0	0	0	41	0	0	0	0	Bacteria	Patescibacteria	Saccharimonadia	Saccharimonadales				0.03	0.98	216	external		AY695840	Opitutus, Opitutaceae
seq285	0	0	0	0	0	0	41	0	0	Bacteria	Proteobacteria	Gammaproteobacteria	Betaproteobacteriales	Burkholderiaceae			0.19	1	222	internal		EU705634	Acinetobacter, Pseudomonadales
seq286	0	0	0	0	0	0	41	0	0	Bacteria	Bacteroidetes	Bacteroidia	Flavobacteriales	Weeksellaceae	Chryseobacterium		0.05	0.95	210	external		DQ279361	Chryseobacterium, Flavobacteriaceae
seq287	0	0	0	0	0	0	0	41	0	Bacteria	Bacteroidetes	Bacteroidia	Cytophagales	Amoebophilaceae			0.33	0.98	173	internal			Ostracoda
seq288	0	0	0	0	0	0	0	0	41	Bacteria	Bacteroidetes	Bacteroidia	Flavobacteriales	Weeksellaceae			0.16	0.99	210	external		DQ279361	Chryseobacterium, Flavobacteriaceae
seq289	0	0	0	0	0	0	0	0	41	Bacteria	Bacteroidetes	Bacteroidia	Chitinophagales	Saprospiraceae			0.03	0.97	7	internal		AB078038	Flammeovirgaceae; Flexithrix
seq290	0	40	0	0	0	0	0	0	0	Bacteria	Bacteroidetes	Bacteroidia	Chitinophagales	Saprospiraceae			0.03	0.97	204	external		AB078038	Flammeovirgaceae; Flexithrix
seq291	0	0	0	0	0	0	40	0	0	Bacteria	Proteobacteria	Gammaproteobacteria	Betaproteobacteriales	Burkholderiaceae			0.19	1	222	internal		EU705634	Acinetobacter, Pseudomonadales
seq292	0	0	0	0	0	0	0	40	0	Bacteria	Bacteroidetes	Bacteroidia	Cytophagales	Amoebophilaceae	Candidatus_Cardinium		0.33	1	173	internal			Ostracoda
seq293	0	0	0	39	0	0	0	0	0	Bacteria	Proteobacteria	Gammaproteobacteria	Pseudomonadales	Moraxellaceae			0.07	0.98	223	external		JQ977513	Pseudomonas, Pseudomonadaceae
seq294	0	0	0	0	0	0	0	39	0	Bacteria	Bacteroidetes	Bacteroidia	Cytophagales	Amoebophilaceae	Candidatus_Cardinium		0.33	1	173	internal			Ostracoda

	Ds.no	Ds.yes	Hi.yes1	Hi.yes2	Hi.no	Cv.yes	Ev.no1	Ev.yes	Ev.no2	Kingdom	Phylum	Class	Order	Family	Genus	Species	EDPL in EPA	RAxML weight in EPA	mapped to branch	internal	external	DNA#	ID
seq295	38	0	0	0	0	0	0	0	0	Bacteria	Patescibacteria	Gracilibacteria	JGI_0000069-P22				0.07	1	214	external		EU016445	Cellulomonadaceae, Micrococcales
seq296	0	0	0	0	38	0	0	0	0	Bacteria	Bacteroidetes	Bacteroidia	Chitinophagales	Chitinophagaceae	Parasegetibacter	luojiensis	0.06	0.98	221	internal		JQ435729	Pseudoxanthomonas, Xanthomonadaceae
seq297	0	0	0	0	0	0	0	0	38	Bacteria							0.08	0.98	221	internal		JQ435729	Pseudoxanthomonas, Xanthomonadaceae
seq298	0	0	0	0	0	37	0	0	0	Bacteria	Proteobacteria	Alphaproteobacteria	Rhizobiales				0.99	0.99	219	internal		HQ425320	Paracoccus,Rhodobacteraceae
seq299	0	0	0	0	0	37	0	0	0	Bacteria	Bacteroidetes	Bacteroidia					0.05	0.96	219	internal		HQ425320	Paracoccus,Rhodobacteraceae
seq300	36	0	0	0	0	0	0	0	0	Bacteria	Bacteroidetes	Bacteroidia	Flavobacteriales	Flavobacteriaceae	Flavobacterium		1	1	208	external		KJ957195	Flavobacterium, Flavobacteriaceae
seq301	0	36	0	0	0	0	0	0	0	Bacteria	Bacteroidetes	Bacteroidia	Cytophagales	Amoebophilaceae	Candidatus_Cardinium		0.02	0.95	10	internal			Ostracoda, Diptera
seq302	0	0	0	0	35	0	0	0	0	Bacteria	Bacteroidetes	Bacteroidia	Cytophagales				0.99	0.99	204	external		AB078038	Flammeovirgaceae; Flexithrix
seq303	0	0	33	0	0	0	0	0	0	Bacteria	Proteobacteria	Gammaproteobacteria	Betaproteobacteriales	Chitinibacteraceae	Deefgea		0.3	0.97	2	internal		JQ435729	Pseudoxanthomonas, Xanthomonadaceae
seq304	0	0	0	33	0	0	0	0	0	Bacteria	Patescibacteria	Saccharimonadia	Saccharimonadales				0.02	0.96	4	internal		JN934492	Bacteriovoracaceae; Bacteriovorax
seq305	32	0	0	0	0	0	0	0	0	Bacteria	Patescibacteria	Gracilibacteria	JGI_0000069-P22				0.99	0.99	215	external		AB547639	Firmicutes; Tissierellia
seq306	0	0	0	32	0	0	0	0	0	Bacteria	Proteobacteria	Gammaproteobacteria	Pseudomonadales	Moraxellaceae	Cavicella		0.98	0.98	224	external		EU705634	Acinetobacter, Pseudomonodales
seq307	0	0	0	32	0	0	0	0	0	Bacteria	Bacteroidetes	Bacteroidia	Cytophagales				0.04	0.98	219	internal		AB078038	Flammeovirgaceae; Flexithrix
seq308	0	0	0	0	0	0	0	0	32	Bacteria	Bacteroidetes	Bacteroidia	Flavobacteriales	Weeksellaceae	Chryseobacterium		0.06	0.94	209	internal		DQ16669	Chryseobacterium, Flavobacteriaceae
seq309	0	0	31	0	0	0	0	0	0	Bacteria	Bacteroidetes	Bacteroidia	Cytophagales	Amoebophilaceae	Candidatus_Cardinium		0.96	0.96	175	external		Hi_1C	H. incongruens, Ostracoda
seq310	0	0	31	0	0	0	0	0	0	Bacteria	Bacteroidetes	Bacteroidia	Chitinophagales	Chitinophagaceae			0.04	0.97	224	internal		KJ957195	Flavobacterium, Flavobacteriaceae
seq311	0	0	0	0	0	0	31	0	0	Bacteria	Proteobacteria	Gammaproteobacteria	Xanthomonadales	Xanthomonadaceae	Stenotrophomonas	maltophili	0.03	0.97	0	external		JQ435729	Pseudoxanthomonas, Xanthomonadaceae
seq312	0	29	0	0	0	0	0	0	0	Bacteria	Cyanobacteria	Oxyphotobacteria	Chloroplast				0.05	0.96	213	internal		EU016445	Cellulomonadaceae, Micrococcales
seq313	0	0	0	29	0	0	0	0	0	Bacteria	Bacteroidetes	Bacteroidia	Cytophagales	Amoebophilaceae			0.08	0.99	173	internal			Ostracoda
seq314	0	28	0	0	0	0	0	0	0	Bacteria	Bacteroidetes	Bacteroidia	Cytophagales				0.05	0.99	172	external		Ds_ESP	D. stevensoni, Ostracoda
seq315	0	0	0	0	28	0	0	0	0	Bacteria	Cyanobacteria	Oxyphotobacteria	Chloroplast				0.04	0.97	216	external		AY695840	Opitutus, Opitutaceae
seq316	27	0	0	0	0	0	0	0	0	Bacteria	Patescibacteria	Saccharimonadia	Saccharimonadales				0.04	0.95	3	internal		JQ435729	Pseudoxanthomonas, Xanthomonadaceae
seq317	0	27	0	0	0	0	0	0	0	Bacteria	Proteobacteria	Gammaproteobacteria	Betaproteobacteriales				0.05	0.98	224	external		EU705634	Acinetobacter, Pseudomonodales
seq318	0	0	27	0	0	0	0	0	0	Bacteria	Bacteroidetes	Bacteroidia	Cytophagales	Amoebophilaceae			0.06	1	173	internal			Ostracoda
seq319	0	0	27	0	0	0	0	0	0	Bacteria	Bacteroidetes	Bacteroidia	Chitinophagales	Chitinophagaceae			0.09	0.98	209	internal		DQ16669	Chryseobacterium, Flavobacteriaceae
seq320	0	0	0	0	0	0	27	0	0	Bacteria	Firmicutes	Bacilli	Lactobacillales	Lactobacillaceae	Lactobacillus	sanfrancis	0.04	0.98	213	internal		EU016445	Cellulomonadaceae, Micrococcales
seq321	0	0	0	0	0	0	0	27	0	Bacteria	Bacteroidetes	Bacteroidia	Flavobacteriales	Flavobacteriaceae	Flavobacterium		1	1	208	external		KJ957195	Flavobacterium, Flavobacteriaceae
seq322	0	0	0	26	0	0	0	0	0	Bacteria							0.01	0.95	5	internal		JQ435729	Pseudoxanthomonas, Xanthomonadaceae
seq323	25	0	0	0	0	0	0	0	0	Bacteria	Cyanobacteria	Oxyphotobacteria	Chloroplast				0.29	0.99	224	external		EU705634	Acinetobacter, Pseudomonodales
seq324	25	0	0	0	0	0	0	0	0	Bacteria	Cyanobacteria	Oxyphotobacteria	Chloroplast				0.02	0.96	212	internal		EU016445	Cellulomonadaceae, Micrococcales
seq325	25	0	0	0	0	0	0	0	0	Bacteria	Patescibacteria	Saccharimonadia	Saccharimonadales				0.03	0.98	222	internal		EU705634	Acinetobacter, Pseudomonodales
seq326	0	0	0	0	0	0	0	25	0	Bacteria	Bacteroidetes	Bacteroidia	Cytophagales	Amoebophilaceae			0.33	1	173	internal			Ostracoda
seq327	0	0	0	0	0	0	0	0	25	Bacteria							0.09	0.99	224	internal		KJ957195	Flavobacterium, Flavobacteriaceae
seq328	0	0	0	24	0	0	0	0	0	Bacteria							0.01	0.96	3	internal		JQ435729	Pseudoxanthomonas, Xanthomonadaceae
seq329	0	0	0	0	23	0	0	0	0	Bacteria	Bacteroidetes	Bacteroidia	Cytophagales				0.08	1	219	internal		AB078038	Flammeovirgaceae; Flexithrix
seq330	0	0	0	0	0	0	0	0	23	Bacteria	Bacteroidetes	Bacteroidia	Flavobacteriales	Flavobacteriaceae	Flavobacterium		0.99	0.99	208	external		KJ957195	Flavobacterium, Flavobacteriaceae
seq331	0	0	22	0	0	0	0	0	0	Bacteria	Bacteroidetes	Bacteroidia	Cytophagales	Amoebophilaceae			0.06	1	173	internal			Ostracoda
seq332	0	0	0	0	0	0	0	22	0	Bacteria	Bacteroidetes	Bacteroidia	Cytophagales	Amoebophilaceae			0.32	0.96	175	external		Hi_1C	H. incongruens, Ostracoda
seq333	0	0	0	0	21	0	0	0	0	Bacteria	Verrucomicrobia	Verrucomicrobiae	Opitutales	Puniceicoccaceae			1	1	216	external		AY695840	Opitutus, Opitutaceae
seq334	0	0	0	0	21	0	0	0	0	Bacteria	Bacteroidetes	Bacteroidia	Cytophagales				0.99	0.99	204	external		AB078038	Flammeovirgaceae; Flexithrix
seq335	0	0	0	0	21	0	0	0	0	Bacteria	Bacteroidetes	Bacteroidia	Sphingobacteriales	env.OPS_17			0.05	1	209	internal		DQ16669	Chryseobacterium, Flavobacteriaceae
seq336	0	0	0	0	0	0	0	21	0	Bacteria	Bacteroidetes	Bacteroidia	Cytophagales	Amoebophilaceae			0.32	0.99	175	external		Hi_1C	H. incongruens, Ostracoda
seq337	0	0	0	0	0	0	0	0	21	Bacteria	Proteobacteria	Gammaproteobacteria	Betaproteobacteriales				0.12	0.99	222	internal		EU705634	Acinetobacter, Pseudomonodales
seq338	20	0	0	0	0	0	0	0	0	Bacteria							0.97	0.97	215	external		AB547639	Firmicutes; Tissierellia
seq339	20	0	0	0	0	0	0	0	0	Bacteria	Bacteroidetes	Bacteroidia	Flavobacteriales	Flavobacteriaceae	Flavobacterium		1	1	208	external		KJ957195	Flavobacterium, Flavobacteriaceae
seq340	20	0	0	0	0	0	0	0	0	Bacteria	Bacteroidetes	Bacteroidia	Sphingobacteriales	Sphingobacteriaceae	Solitalea		0.09	0.96	224	internal		KJ957195	Flavobacterium, Flavobacteriaceae
seq341	0	20	0	0	0	0	0	0	0	Bacteria	Bacteroidetes	Bacteroidia	Chitinophagales	Saprospiraceae			0.06	0.97	5	internal		JQ435729	Pseudoxanthomonas, Xanthomonadaceae
seq342	0	0	20	0	0	0	0	0	0	Bacteria	Proteobacteria	Gammaproteobacteria	Betaproteobacteriales	Burkholderiaceae			0.27	1	222	internal		EU705634	Acinetobacter, Pseudomonodales
seq343	0	0	0	20	0	0	0	0	0	Bacteria	Proteobacteria	Gammaproteobacteria					0.28	1	222	internal		EU705634	Acinetobacter, Pseudomonodales
seq344	19	0	0	0	0	0	0	0	0	Bacteria	Cyanobacteria	Oxyphotobacteria	Chloroplast				0.05	0.98	3	internal		JQ435729	Pseudoxanthomonas, Xanthomonadaceae
seq345	0	19	0	0	0	0	0	0	0	Bacteria	Firmicutes	Clostridia	Clostridiales	Family_XI	Ezakiella		1	1	215	external		AB547639	Firmicutes; Tissierellia
seq346	0	0	0	0	0	0	0	19	0	Bacteria	Bacteroidetes	Bacteroidia	Cytophagales	Amoebophilaceae			0.33	1	175	external		Hi_1C	H. incongruens, Ostracoda
seq347	18	0	0	0	0	0	0	0	0	Bacteria	Proteobacteria	Alphaproteobacteria	Micavibrionales				0.03	0.96	217	internal		JN934492	Bacteriovoracaceae; Bacteriovorax
seq348	0	18	0	0	0	0	0	0	0	Bacteria	Bacteroidetes	Bacteroidia	Flavobacteriales				0.06	0.96	210	external		DQ279361	Chryseobacterium, Flavobacteriaceae
seq349	0	0	0	0	18	0	0	0	0	Bacteria	Proteobacteria	Gammaproteobacteria	Pseudomonadales	Moraxellaceae	Alkanindiges		0.98	0.98	224	external		EU705634	Acinetobacter, Pseudomonodales
seq350	0	0	0	0	0	0	0	18	0	Bacteria	Bacteroidetes	Bacteroidia	Cytophagales	Amoebophilaceae	Candidatus_Cardinium		0.33	1	173	internal			Ostracoda
seq351	0	0	0	0	0	0	0	18	0	Bacteria	Bacteroidetes	Bacteroidia	Cytophagales	Amoebophilaceae			0.33	1	173	internal			Ostracoda
seq352	0	0	0	0	0	0	0	0	18	Bacteria	Bacteroidetes	Bacteroidia	Flavobacteriales	Flavobacteriaceae	Flavobacterium		1	1	208	external		KJ957195	Flavobacterium, Flavobacteriaceae
seq353	0	0	0	0	16	0	0	0	0	Bacteria	Bacteroidetes	Bacteroidia	Sphingobacteriales				0.17	0.96	7	internal		AB078038	Flammeovirgaceae; Flexithrix
seq354	0	0	0	0	0	0	0	0	16	Bacteria	Bacteroidetes	Bacteroidia	Flavobacteriales	Flavobacteriaceae	Flavobacterium		1	1	208	external		KJ957195	Flavobacterium, Flavobacteriaceae
seq355	0	0	0	0	0	0	0	0	16	Bacteria	Proteobacteria	Gammaproteobacteria					1	1	224	external		EU705634	Acinetobacter, Pseudomonodales
seq356	0	0	0	0	0	0	0	15	0	Bacteria	Bacteroidetes	Bacteroidia	Cytophagales	Amoebophilaceae			0.33	1	173	internal			Ostracoda
seq357	0	0	0	0	0	0	0	15	0	Bacteria	Bacteroidetes	Bacteroidia					0.32	0.97	173	internal			Ostracoda
seq358	0	0	0	0	0	0	0	0	15	Bacteria	Proteobacteria	Gammaproteobacteria	Betaproteobacteriales				0.03	0.97	217	internal		JN934492	Bacteriovoracaceae; Bacteriovorax
seq359	0	0	0	0	0	0	0	0	15	Bacteria	Bacteroidetes	Bacteroidia	Flavobacteriales	Flavobacteriaceae	Flavobacterium		1	1	208	external		KJ957195	Flavobacterium, Flavobacteriaceae
seq360	0	0	0	0	14	0	0	0	0	Bacteria	Bacteroidetes	Bacteroidia					0.02	0.96	223	external		KF054791	Sphingobacteriaceae; Sphingobacterium
seq361	0	0	0	0	0	14	0	0	0	Bacteria	Bacteroidetes	Bacteroidia	Flavobacteriales	Weeksellaceae			0.02	0.97	223	external		KF054791	Sphingobacteriaceae; Sphingobacterium
seq362	0	0	0	0	0	14	0	0	0	Bacteria	Proteobacteria	Gammaproteobacteria	Betaproteobacteriales	Burkholderiaceae			0.15	0.98	222	internal		EU705634	Acinetobacter, Pseudomonodales
seq363	0	0	0	0	0	0	0	14	0	Bacteria	Bacteroidetes	Bacteroidia	Cytophagales	Amoebophilaceae			0.33	0.99	173	internal			Ostracoda
seq364	0	0	0	0	0	0	0	14	0	Bacteria	Bacteroidetes	Bacteroidia	Cytophagales	Amoebophilaceae	Candidatus_Cardinium		0.33	1	173	internal			Ostracoda
seq365	0	0	0	0	0	0	0	13	0	Bacteria	Bacteroidetes	Bacteroidia	Cytophagales	Amoebophilaceae			0.32	0.96	175	external		Hi_1C	H. incongruens, Ostracoda
seq366	0	0	11	0	0	0	0	0	0	Bacteria	Bacteroidetes	Bacteroidia	Cytophagales	Amoebophilaceae			0.06	1	173	internal			Ostracoda
seq367	0	0	11	0	0	0	0	0	0	Bacteria	Proteobacteria	Gammaproteobacteria	Betaproteobacteriales	Burkholderiaceae			0.2	0.95	2	internal		JQ435729	Pseudoxanthomonas, Xanthomonadaceae
seq368	0	0	0	0	0	11	0	0	0	Bacteria	Bacteroidetes	Bacteroidia	Flavobacteriales				0.12	0.96	208	external		KJ957195	Flavobacterium, Flavobacteriaceae
seq369	0	0	0	0	0	0	0	11	0	Bacteria	Bacteroidetes	Bacteroidia	Cytophagales	Amoebophilaceae			0.33	0.99	175	external		Hi_1C	H. incongruens, Ostracoda
seq370	0	10	0	0	0	0	0	0	0	Bacteria	Patescibacteria	Saccharimonadia	Saccharimonadales				0.02	0.95	213	internal		EU016445	Cellulomonadaceae, Micrococcales
seq371	0	0	10	0	0	0	0	0	0	Bacteria	Bacteroidetes	Bacteroidia	Cytophagales	Amoebophilaceae			0.05	1	173	internal			Ostracoda
seq372	0	0	0	0	0	10	0	0	0	Bacteria	Bacteroidetes	Bacteroidia	Flavobacteriales				0.25	1	208	external		KJ957195	Flavobacterium, Flavobacteriaceae
seq373	0	0	0	0	0	10	0	0	0	Bacteria	Bacteroidetes	Bacteroidia	Flavobacteriales	Weeksellaceae			0.1	0.98	208	external		KJ957195	Flavobacterium, Flavobacteriaceae
seq374	0	0	0	0	0	0	10	0	0	Bacteria	Proteobacteria	Gammaproteobacteria	Betaproteobacteriales				0.03	0.95	2	internal		JQ435729	Pseudoxanthomonas, Xanthomonadaceae

	Ds.no	Ds.yes	Hi.yes1	Hi.yes2	Hi.no	Cv.yes	Ev.no1	Ev.yes	Ev.no2	Kingdom	Phylum	Class	Order	Family	Genus	Species	EDPL in EPA	RAxML weight in EPA	mapped to branch	internal_external	DNA#	ID
seq375	0	0	9	0	0	0	0	0	0	Bacteria	Bacteroidetes	Bacteroidia	Cytophagales	Amoebophilaceae			0.08	0.99	173	internal		Ostracoda
seq376	0	0	0	0	9	0	0	0	0	Bacteria	Proteobacteria	Alphaproteobacteria	Rhizobiales	Rhizobiaceae			0.99	0.99	219	internal	HQ425320	Paracoccus,Rhodobacteraceae
seq377	0	0	0	0	0	0	9	0	0	Bacteria	Proteobacteria	Gammaproteobacteria	Betaproteobacteriales				0.02	0.96	223	external	JQ977513	Pseudomonas, Pseudomonadaceae
seq378	0	0	0	0	0	0	0	9	0	Bacteria	Bacteroidetes	Bacteroidia	Cytophagales	Amoebophilaceae			0.33	0.99	175	external	Hi_1C	H. incongruens, Ostracoda
seq379	0	0	0	0	0	0	0	9	0	Bacteria	Bacteroidetes	Bacteroidia	Cytophagales	Amoebophilaceae			0.33	1	173	internal		Ostracoda
seq380	0	0	7	0	0	0	0	0	0	Bacteria	Bacteroidetes	Bacteroidia	Cytophagales	Amoebophilaceae	Candidatus_Cardinium		0.05	1	173	internal		Ostracoda
seq381	0	0	0	0	0	0	7	0	0	Bacteria	Proteobacteria	Gammaproteobacteria	Betaproteobacteriales	Burkholderiaceae	Polaromonas		0.31	0.97	3	internal	JQ435729	Pseudoxanthomonas, Xanthomonadaceae
seq382	0	6	0	0	0	0	0	0	0	Bacteria	Firmicutes	Bacilli	Bacillales	Staphylococcaceae	Staphylococcus		0.19	0.98	214	external	EU016445	Cellulomonadaceae, Micrococcales
seq383	0	0	6	0	0	0	0	0	0	Bacteria	Bacteroidetes	Bacteroidia	Cytophagales	Amoebophilaceae			0.06	1	173	internal		Ostracoda
seq384	0	0	0	0	0	0	0	6	0	Bacteria	Bacteroidetes	Bacteroidia	Cytophagales	Amoebophilaceae	Candidatus_Cardinium		0.33	1	173	internal		Ostracoda
seq385	0	0	5	0	0	0	0	0	0	Bacteria	Bacteroidetes	Bacteroidia	Cytophagales	Amoebophilaceae			0.08	0.99	173	internal		Ostracoda
seq386	0	0	5	0	0	0	0	0	0	Bacteria	Bacteroidetes	Bacteroidia	Cytophagales	Amoebophilaceae			0.04	0.96	174	external	454	E. virens, Ostracods
seq387	0	0	0	0	5	0	0	0	0	Bacteria	Bacteroidetes	Bacteroidia	Chitinophagales	Chitinophagaceae	Parasegetibacter	luojiensis	0.32	1	223	external	KF054791	Sphingobacteriaceae; Sphingobacterium
seq388	0	0	0	0	0	0	5	0	0	Bacteria	Bacteroidetes	Bacteroidia	Flavobacteriales	Weeksellaceae			0.11	1	210	external	DQ279361	Chryseobacterium, Flavobacteriaceae
seq389	0	0	0	0	0	0	5	0	0	Bacteria	Bacteroidetes	Bacteroidia	Flavobacteriales	Weeksellaceae			0.18	1	210	external	DQ279361	Chryseobacterium, Flavobacteriaceae
seq390	0	0	0	0	0	0	0	5	0	Bacteria	Bacteroidetes	Bacteroidia	Cytophagales	Amoebophilaceae			0.33	0.99	173	internal		Ostracoda
seq391	0	0	0	0	0	0	0	5	0	Bacteria	Bacteroidetes	Bacteroidia	Cytophagales	Amoebophilaceae	Candidatus_Cardinium		0.33	1	173	internal		Ostracoda
seq392	0	0	4	0	0	0	0	0	0	Bacteria	Bacteroidetes	Bacteroidia	Cytophagales	Amoebophilaceae			0.07	0.99	173	internal		Ostracoda
seq393	0	0	4	0	0	0	0	0	0	Bacteria	Bacteroidetes	Bacteroidia	Cytophagales	Amoebophilaceae			0.06	1	173	internal		Ostracoda
seq394	0	0	4	0	0	0	0	0	0	Bacteria	Proteobacteria	Gammaproteobacteria	Betaproteobacteriales	Burkholderiaceae			0.02	0.97	223	external	JQ977513	Pseudomonas, Pseudomonadaceae
seq395	0	0	4	0	0	0	0	0	0	Bacteria	Bacteroidetes	Bacteroidia	Cytophagales	Amoebophilaceae	Candidatus_Cardinium		0.06	1	173	internal		Ostracoda
seq396	0	0	4	0	0	0	0	0	0	Bacteria	Bacteroidetes	Bacteroidia	Cytophagales	Amoebophilaceae	Candidatus_Cardinium		0.96	0.96	175	external	Hi_1C	H. incongruens, Ostracoda
seq397	0	0	0	0	0	0	4	0	0	Bacteria	Bacteroidetes	Bacteroidia	Flavobacteriales	Weeksellaceae			0.05	1	210	external	DQ279361	Chryseobacterium, Flavobacteriaceae
seq398	0	0	0	0	0	0	0	4	0	Bacteria	Bacteroidetes	Bacteroidia	Cytophagales	Amoebophilaceae			0.32	0.97	175	external	Hi_1C	H. incongruens, Ostracoda
seq399	0	0	0	0	0	0	0	4	0	Bacteria	Bacteroidetes	Bacteroidia	Cytophagales	Amoebophilaceae			0.33	1	173	internal		Ostracoda
seq400	0	0	0	0	0	0	0	0	4	Bacteria	Bacteroidetes	Bacteroidia	Flavobacteriales	Flavobacteriaceae	Flavobacterium		1	1	208	external	KJ957195	Flavobacterium, Flavobacteriaceae
seq401	3	0	0	0	0	0	0	0	0	Bacteria	Proteobacteria	Gammaproteobacteria	Betaproteobacteriales	Burkholderiaceae			0.27	0.97	2	internal	JQ435729	Pseudoxanthomonas, Xanthomonadaceae
seq402	0	0	0	0	0	0	0	3	0	Bacteria	Bacteroidetes	Bacteroidia	Cytophagales	Amoebophilaceae			0.32	0.97	175	external	Hi_1C	H. incongruens, Ostracoda
seq403	0	0	0	0	0	0	0	3	0	Bacteria	Bacteroidetes	Bacteroidia	Cytophagales	Amoebophilaceae			0.33	1	173	internal		Ostracoda
seq404	0	0	0	0	0	0	0	3	0	Bacteria	Bacteroidetes	Bacteroidia	Cytophagales	Amoebophilaceae			0.33	1	173	internal		Ostracoda
seq405	2	0	0	0	0	0	0	0	0	Bacteria	Proteobacteria	Gammaproteobacteria	Betaproteobacteriales	Burkholderiaceae			0.23	0.96	2	internal	JQ435729	Pseudoxanthomonas, Xanthomonadaceae
seq406	0	0	2	0	0	0	0	0	0	Bacteria	Bacteroidetes	Bacteroidia	Cytophagales	Amoebophilaceae	Candidatus_Cardinium		0.03	0.97	174	external	454	E. virens, Ostracods
seq407	0	0	2	0	0	0	0	0	0	Bacteria	Bacteroidetes	Bacteroidia	Cytophagales	Amoebophilaceae	Candidatus_Cardinium		0.03	0.97	174	external	454	E. virens, Ostracods
seq408	0	0	0	2	0	0	0	0	0	Bacteria	Bacteroidetes	Bacteroidia	Flavobacteriales	Flavobacteriaceae			0.07	0.98	223	external	KF054791	Sphingobacteriaceae; Sphingobacterium
seq409	0	0	0	0	0	0	2	0	0	Bacteria	Bacteroidetes	Bacteroidia	Flavobacteriales	Weeksellaceae			0.04	0.97	209	internal	DQ16669	Chryseobacterium, Flavobacteriaceae
seq410	0	0	0	0	0	0	0	2	0	Bacteria	Bacteroidetes	Bacteroidia	Cytophagales	Amoebophilaceae			0.33	0.99	173	internal		Ostracoda
seq411	0	0	0	0	0	0	0	2	0	Bacteria	Bacteroidetes	Bacteroidia	Cytophagales	Amoebophilaceae			0.32	0.99	175	external	Hi_1C	H. incongruens, Ostracoda
seq412	0	0	0	0	0	0	0	2	0	Bacteria	Bacteroidetes	Bacteroidia	Cytophagales	Amoebophilaceae			0.33	1	173	internal		Ostracoda
seq413	0	1	0	0	0	0	0	0	0	Bacteria	Bacteroidetes	Bacteroidia	Cytophagales	Amoebophilaceae	Candidatus_Cardinium		1	1	172	external	Ds_ESP	D. stevensoni, Ostracoda
seq414	0	0	1	0	0	0	0	0	0	Bacteria	Bacteroidetes	Bacteroidia	Cytophagales	Amoebophilaceae			0.04	0.96	174	external	454	E. virens, Ostracods
seq415	0	0	1	0	0	0	0	0	0	Bacteria	Bacteroidetes	Bacteroidia	Cytophagales	Amoebophilaceae	Candidatus_Cardinium		0.96	0.96	175	external	Hi_1C	H. incongruens, Ostracoda
seq416	0	0	1	0	0	0	0	0	0	Bacteria	Bacteroidetes	Bacteroidia	Cytophagales	Amoebophilaceae			0.08	1	173	internal		Ostracoda
seq417	0	0	0	0	0	0	0	1	0	Bacteria	Bacteroidetes	Bacteroidia	Cytophagales	Amoebophilaceae			0.32	0.99	175	external	Hi_1C	H. incongruens, Ostracoda

Table S4B: Results of mapping the shorter 5' and 3' 16S sequences of Cardinium from ostracod hosts on the RAxML reference tree with EPA.
The RAxML tree was based on an alignment of 1638 basepairs of 16S from various bacteria, including *Cardinium* from different hosts. More details on the identity of ostracod DNA numbers is provided in Table S1A, on the 16S reference sequences in Table S1B. Branch numbers refer to the RAxML reference tree, of which the relevant section is shown in Figure S2B. Green indicates that 16S sequences are placed on external or internal branches of *Cardinium* from non-marine ostracods. EDPL= Expected Distance between Placement Locations (Matsen et al., 2010). Estimated values for EDPL and RAxML weight can range between 0 and 1. Here, only the highest RAxML weights and corresponding EDPL values are shown. The complete EPA results are available from the first author on request.

DNA#	ID	16S region	EDPL in EPA	RAxML weight in EPA	mapped to branch	internal_external	ID branch
143	E. virens	5'	0.09	1	40	external	1C, H. incongruens
151	E. virens	3'	0.33	1	40	external	1C, H. incongruens
198	E. virens	3'	0.33	1	41	external	454, E. virens
207	E. virens	5'	0.09	1	40	external	1C, H. incongruens
217	E. virens	3'	0.33	1	40	external	1C, H. incongruens
218	E. virens	3'	0.33	1	41	external	454, E. virens
225	E. virens	5'	0.2	1	39	internal	Ostracoda
262	E. virens	3'	0.33	1	40	external	1C, H. incongruens
324	E. virens	3'	0.33	1	41	external	454, E. virens
349	E. virens	3'	0.33	1	40	external	1C, H. incongruens
351	E. virens	3'	0.33	1	40	external	1C, H. incongruens
361	E. virens	3'	0.33	1	40	external	1C, H. incongruens
362	E. virens	3'	0.33	1	40	external	1C, H. incongruens
363	E. virens	3'	0.33	1	40	external	1C, H. incongruens
364	E. virens	3'	0.33	1	41	external	454, E. virens
386	E. virens	3'	0.33	1	40	external	1C, H. incongruens
391	E. virens	3'	0.33	1	40	external	1C, H. incongruens
450	E. virens	5'	0.2	1	39	internal	Ostracoda
451	E. virens	3'	0.33	1	40	external	1C, H. incongruens
466	E. virens	3'	0.33	1	40	external	1C, H. incongruens
CALC	H. incongruens	5'	1	1	40	external	1C, H. incongruens
Hi_A	H. incongruens	3'	1	1	40	external	1C, H. incongruens
Hi_B	H. incongruens	3'	1	1	40	external	1C, H. incongruens
Hi_C	H. incongruens	3'	1	1	40	external	1C, H. incongruens
Hi_D	H. incongruens	3'	1	1	40	external	1C, H. incongruens
Hi_E	H. incongruens	3'	1	1	40	external	1C, H. incongruens
Hi_F	H. incongruens	3'	1	1	40	external	1C, H. incongruens
Hi_6A	H. incongruens	5'	1	1	40	external	1C, H. incongruens
3A	H. incongruens	5'	1	1	40	external	1C, H. incongruens
5B	H. incongruens	5'	1	1	40	external	1C, H. incongruens

DNA#	ID	16S region	EDPL in EPA	RAxML weight in EPA	mapped to branch	internal_external	ID branch
MC025	C. vidua	3'	0.12	1	41	external	454, E. virens
MC090	C. vidua	3'	0.12	1	41	external	454, E. virens
MC110	C. vidua	3'	0.12	1	41	external	454, E. virens
MC113	C. vidua	3'	0.12	1	41	external	454, E. virens
MC183	C. vidua	3'	0.12	1	41	external	454, E. virens
pbBR0917	V. paglioli	3'	0.16	1	38	internal	Ostracoda
pbBR0918	V. paglioli	3'	0.16	1	38	internal	Ostracoda
Vjp1c	V. cornelia	3'	0.13	1	38	internal	Ostracoda
VC309	V. cornelia	3'	1	1	42	external	D. stevensoni
DsESPII	D. stevensoni	3'	1	1	42	external	D. stevensoni
DsESP3	D. stevensoni	5'	1	1	42	external	D. stevensoni
T5	D. stevensoni	3'	1	1	42	external	D. stevensoni
Ds36	D. stevensoni	3'	1	1	42	external	D. stevensoni
Cl1	C. lacustris	3'	0.07	0.96	42	external	D. stevensoni
Cl3	C. lacustris	3'	0.07	0.96	42	external	D. stevensoni
Cl4	C. lacustris	3'	0.06	0.97	42	external	D. stevensoni
Cl5	C. lacustris	3'	0.06	0.97	42	external	D. stevensoni

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