

Table S2: Vibrionaceae 19–taxon small chromosome dataset LCBs and trees.

LCB	Aligned bp	Algorithm	Tree topologies (Newick)
1	6,886	MP ML	(18,(10,((9,(11,(4,5))),((17,(15,16))),((0,(2,(1,3))),((6,(7,8)),(14,(12,13)))))))); (18,((16,(14,15)),(17,(12,((5,(8,(6,7))),((10,(9,11)),(4,(13,(0,(1,2,3))))))))));
2	12,859	MP ML	(18,(16,((17,(15,(13,14))),((12,(10,(9,11))),((8,(6,7)),(5,(4,(0,(2,(1,3)))))))))); (18,(12,((4,(13,(0,(1,2,3))),((9,(10,11)),((17,(16,(14,15))),(5,(7,(6,8))))))))));
3	3,317	MP ML	(18,(8,((11,(9,10)),(16,((0,(2,(1,3))),(17,((14,(13,15)),(7,(12,(6,(4,5)))))))))); (18,((11,(9,10)),(4,13),(0,1,2,3)),(12,((17,(16,(14,15))),(8,(5,(6,7))))));
4	3,675	MP ML	(18,((8,(14,((7,(5,6)),(13,(11,(10,12)))))),(3,(2,(0,1))),(9,(4,(17,(15,16)))))); (18,((17,(16,(14,15))),((0,1,2,3),(4,13),(11,(9,10)),(12,(5,(8,(6,7))))))))));
5	15,492	MP ML	(18,((0,(3,(1,2))),(4,(5,((6,(9,(7,8))),((13,(11,12)),(10,(17,(16,(14,15)))))))))); (18,((17,(16,(14,15))),((4,(13,(0,(2,(1,3))))),((11,(9,10)),(12,(5,(8,(6,7))))))))));
6	4,483	MP ML	(18,(15,(8,((1,3),(0,2)),(6,(16,(13,14))),(9,(17,((4,(5,7)),(10,(11,12)))))))))); (18,(16,((14,15)),((17,12),(10,(9,11)),(13,((0,1,2,3),(4,(8,(6,(5,7))))))))));
7	8,457	MP ML	(18,(11,((14,(12,13)),(16,((0,(1,(2,3))),(17,(6,((4,(5,7)),(15,(10,(8,9)))))))))); (18,(17,((16,(14,15))),((4,13),(0,1,2,3)),(12,((10,(9,11)),(5,(7,(6,8))))))))));
8	8,852	MP ML	(18,((17,(15,16))),((6,(5,(4,(0,(2,(1,3))))),((14,(9,(7,8))),(12,(10,(11,13)))))))))); (18,((16,(14,15)),(17,((13,(4,(0,1,2,3))),(12,((11,(9,10)),(5,(7,(6,8))))))))));
9	9,283	MP ML	(18,(14,((17,(15,16)),((5,(4,(0,(3,(1,2))))),((13,(10,(11,12)),(6,(8,(7,9)))))))))); (18,((17,(16,(14,15))),((4,(13,(0,(2,(1,3))))),((12,((9,(10,11)),(5,(7,(6,8))))))))));
10	6,334	MP ML	(18,((11,(9,10)),((15,(16,17)),(8,((6,7),(5,(12,(13,(4,(14,(3,(1,(0,2)))))))))))))); (18,(17,((16,(14,15)),(4,(12,((5,8),(6,7)),(9,(10,11)),(13,(1,(0,2,3))))))))));
11	4,517	MP MP ML	(18,((15,(16,17)),((7,(6,8)),((4,(12,13),(11,(9,10))),((5,14),(0,(2,(1,3)))))))))); (18,((15,(16,17)),((8,(6,7)),((4,(12,13),(11,(9,10))),((5,14),(0,(2,(1,3)))))))))); (18,((17,(16,(14,15))),((12,((4,13),(0,(1,2,3))),((10,(9,11)),(5,(6,(7,8))))))))));
12	3,533	MP ML	(18,((15,16),(17,(11,((14,(12,13)),(5,(6,(4,7))),((8,9),(10,(0,(2,(1,3)))))))))); (18,((16,(14,15)),(17,((0,1,2,3),(12,(4,13)),((10,(9,11)),(5,(8,(6,7))))))))));
13	6,938	MP ML	(18,((16,17)),((6,7),(4,(11,(12,((15,(13,14)),(8,(9,10)),(5,(0,(3,(1,2)))))))))))))); (18,((16,(14,15)),(17,(12,((4,(13,(0,(2,(1,3))))),((9,(10,11)),(5,(7,(6,8))))))))));
14	9,316	MP ML	(18,(16,((15,(13,14)),(17,(5,((1,3),(0,2)),((7,(6,8)),(4,(12,(9,(10,11)))))))))); (18,((16,(14,15)),(17,(12,((4,13),(0,1,2,3)),((10,(9,11)),(5,(8,(6,7))))))))));
15	18,184	MP MP ML	(18,((12,(11,13)),(6,(8,(9,10))),((17,(15,16)),(14,((4,7),(5,(0,(3,(1,2)))))))))); (18,((13,(11,12)),(6,(8,(9,10))),((17,(15,16)),(14,((4,7),(5,(0,(3,(1,2)))))))))); (18,(17,((16,(14,15))),((4,13),(0,(1,2,3))),((5,(6,(7,8))),(12,(11,(9,10))))))));
16	29,591	MP ML	(18,(11,((9,(7,8)),((6,(4,5)),((2,3),(0,1)),((10,12),(13,(14,(17,(15,16)))))))))); (18,((5,7),(6,((8,(17,(16,(15,14))),((9,(10,11)),(12,((4,13),(0,2,(1,3))))))))));
17	4,910	MP ML	(18,((16,17),(14,(12,(13,((2,3),(0,1)),(4,(15,((11,(9,10)),(8,(5,(6,7)))))))))))))); (18,((10,(9,11)),(5,(7,(6,8))),((17,(16,(14,15))),(12,(4,(13,((1,3),(0,2))))))))));
18	7,176	MP ML	(18,(17,(4,((1,3),(0,2)),(8,((5,(6,7)),(13,((16,(14,15)),(9,(10,(11,12)))))))))); (18,((13,((4,17),(0,1,2,3))),((9,(10,11)),((5,6),(7,8))),(12,(16,(14,15))))));
19	8,079	MP	(18,(17,(15,((14,(12,13)),(16,(11,((4,(0,(2,(1,3))),((7,(5,6)),(8,(9,10))))))))));

Table S2: Vibrionaceae 19–taxon small chromosome dataset LCBs and trees (continued).

LCB	Aligned bp	Algorithm	Tree topologies (Newick)
20	10,026	ML	(18,(17,((16,(14,15)),(12,((4,(13,(0,(1,2,3))))),(10,(9,11))),(8,(7,(5,6))))))));
		MP	(18,(11,((8,9),(17,(12,(10,(13,(5,(7,(4,(6,((14,(15,16))),0,(2,(1,3))))))))))));
		MP	(18,(11,((8,9),(17,(12,(10,(13,(5,(7,(4,(6,((16,(14,15))),0,(2,(1,3))))))))))));
21	5,655	ML	(18,((10,(9,11)),((5,(6,(7,8))),12,((4,(17,(16,(14,15))),13,(0,1,2,3))))));
		MP	(18,(14,((0,(2,(1,3))),7,(12,((17,(15,16))),13,((4,(5,6)),8,(11,(9,10))))))));
		ML	(18,(17,((16,(14,15)),((4,(13,(0,(1,2,3))))),(12,((9,(10,11)),5,(8,(6,7))))))));
22	7,884	MP	(18,(14,(5,((7,(6,8)),13,(9,(12,(10,11))))),(4,((17,(15,16))),0,(2,(1,3))))));
		ML	(18,(6,7,(8,(5,(12,((17,(16,(14,15))),4,(13,((9,(10,11))),0,(1,2,3))))))));
23	12,137	MP	(18,((10,(13,((7,(5,6)),9,(11,12))))),(17,(16,(14,15))),4,(8,(0,(2,(1,3))))));
		ML	(18,((17,(16,(14,15))),((12,(7,(6,(5,8))),13,((4,(10,(9,11))),0,1,2,3))))));
24	4,709	MP	(18,(14,((17,(15,16))),12,((13,(11,((1,3),(0,2))),10,(8,9))),4,(7,(5,6))))));
		ML	(18,((17,(16,(14,15))),((9,(10,11))),5,(8,(6,7))),12,(4,(13,(0,1,2,3))))));
25	8,571	MP	(18,((16,17),((4,10),(14,15)),5,((6,(0,(2,(1,3))),7,(8,9))),11,(12,13))))));
		ML	(18,(17,((16,(14,15)),12,((4,13),(0,(1,2,3))),9,(10,11)),5,(8,(6,7))))));
26	14,483	MP	(18,(17,((9,(8,(6,7))),4,(0,(2,(1,3))),13,(11,12)),5,(10,(16,(14,15))))));
		ML	(18,((9,(10,11)),(5,6),(7,8)),12,((17,(16,(14,15))),4,(13,(0,(1,2,3))))));
27	3,394	MP	(18,((17,(16,(14,15))),13,(11,((8,(9,10))),5,(6,7)),12,(4,(0,(2,(1,3))))));
		MP	(18,((17,(16,(14,15))),13,((8,(9,10)),11,((5,(6,7)),12,(4,(0,(2,(1,3))))));
		ML	(18,(11,10,((9,17),((4,(13,(0,(1,2,3))),8,((5,(6,7)),12,(16,(14,15))))))));
28	12,941	MP	(18,(5,(4,(17,(12,(9,((7,8)),6,((13,(14,15))),16,(10,11))),3,(2,(0,1))))));
		ML	(18,((13,(4,(0,(1,2,3))),17,((12,(16,(14,15))),8,(6,(7,(5,(9,(10,11))))))));
29	12,274	MP	(18,((16,(14,15)),((0,(2,(1,3))),5,(6,7)),13,(9,(11,(10,(12,(8,(4,17))))))));
		MP	(18,((16,(14,15)),((0,(2,(1,3))),5,(6,7)),13,((9,11),(10,(12,(8,(4,17))))));
		ML	(18,((16,(17,(14,15))),5,(8,(7,(6,((4,(9,(10,11))),12,(13,(0,(1,2,3))))))));
30	6,769	MP	(18,(14,((17,(15,16))),5,(4,(0,(2,(1,3))),9,(6,(7,8))),13,(10,(11,12))))));
		ML	(18,(17,((16,(14,15))),((9,(10,11)),5,(8,(6,7))),12,(4,(13,(0,(1,2,3))))));
31	8,239	MP	(18,((4,5),((11,(10,12)),9,((8,(6,7)),13,((17,(15,16))),0,(14,(2,(1,3))))));
		ML	(18,((13,(0,(1,2,3))),4,((12,(16,(14,15))),5,(6,(7,8))),17,(9,(10,11))))));
32	7,550	MP	(18,(17,((16,(14,15))),11,((10,(8,9)),13,(4,((12,(7,(5,6))),3,(1,(0,2))))));
		ML	(18,(17,(12,(4,(13,(2,(0,1,3))))),(5,(8,(6,7))),16,(14,15)),11,(9,10))))));
33	10,552	MP	(18,(17,(14,((15,16)),10,(4,5)),3,(1,(0,2))),9,((8,(6,7)),13,(11,12))))));
		ML	(18,((17,(16,(14,15))),13,((2,(0,1,3)),4,(12,((11,(9,10)),8,(7,(5,6))))));
34	11,554	MP	(18,((3,(1,(0,2))),13,(4,((17,(16,(14,15))),12,((10,(9,11)),8,(6,(5,7))))));
		ML	(18,((10,(9,11)),12,(8,(5,(6,7))),17,(16,(14,15))),4,(13,(0,1,2,3))))));
35	11,718	MP	(18,(4,(5,((10,((2,3),(0,1))),16,(14,15)),6,(8,(7,9))),11,(13,(12,17))))));
		ML	(18,((9,(10,11)),6,(7,(5,8))),17,((4,(12,(16,(14,15))),13,(1,3,(0,2))))));
36	16,953	MP	(18,((16,17),((14,15),13,((7,(6,8)),10,(11,12))),9,((4,5),((2,3),(0,1))))));
		ML	(18,((16,(14,15))),((9,(10,11)),8,(6,(5,7))),17,((4,12),13,((1,3),(0,2))))));
37	86,301	MP	(18,((16,(14,15))),17,((11,(12,13)),10,(7,(8,9))),6,(5,(4,((2,3),(0,1))))));

Table S2: Vibrionaceae 19-taxon small chromosome dataset LCBs and trees (continued).

LCB	Aligned bp	Algorithm	Tree topologies (Newick)
		ML	(18,(17,((16,(14,15)),(((10,(9,11)),(5,(8,(6,7))))),(12,(4,(13,((1,3),(0,2))))))))));