SUPPLEMENTARY TABLE 1 | Data set of 18S and 28S sequences used for phylogenetic analysis (if not indicated, sequences refer to Waeschenbach et al., 2017).

Tapeworm species	**Host species**	**Country**	**GenBank accession no. for 18S**	**GenBank accession no. for 28S**
Adenocephalus pacificus	*Neophoca cinerea / Callorhinus ursinus*	Australia / USA	KY552776	KY552810
Dibothriocephalus dendriticus	*Larus hyperboreus*	USA	KY552779	KY552814
Dibothriocephalus ditremus	*Salvelinus alpinus*	UK	KY552780	KY552813
Dibothriocephalus latus	*Homo sapiens*	Canada	KY552781	KY552817
Dibothriocephalus nihonkaiensis	*Homo sapiens / Oncorhynchus gorbuscha*	Japan	AB512013 (Yanagida et al., 2010)	KY000484 (Kuchta et al., 2017)
Digramma interrupta	*Hemiculter lucidus*	Russia	DQ925308 (Brabec et al., 2006)	DQ925325 (Brabec et al., 2006)
Diphyllobothriidae sp.	*Trematomus bernacchii*	Antarctica	KY552795	KY552830
Diphyllobothrium balaenopterae	*Homo sapiens*	Japan	KY552792	KY552824
`Diphyllobothrium´ cf. *cameroni*	*Neomonachus schauinslandi*	USA	KY552796	KY552831
`Diphyllobothrium´ cordatum	*Erignathus barbatus*	USA	KY552788	KY552822
`Diphyllobothrium´ lanceolatum	*Erignathus barbatus*	USA	KY552789	KY552823
`Diphyllobothrium´ schistochilos	*Pusa hispida*	Norway	KY552782	KY552821
`Diphyllobothrium´ scoticum	*Mirounga leonina*	Australia	KY552777	KY552811
`Diphyllobothrium´ sp. 1	*Otaria flavescens*	Chile	KY945917 (present study)	KY945917 (present study)
`Diphyllobothrium´ sp. 1(PBI-607)	*Zalophus californianus*	USA	KY552794	KY552829
Diphyllobothrium stemmacephalum	*Tursiops truncatus*	USA	KY552793	KY552825
`Diphyllobothrium´ tetrapterum	*Callorhinus ursinus*	USA	KY552786	KY552826
Ligula intestinalis	*Podiceps cristatus / Oncorhynchus tshawytscha*	Czech Republic / USA	KY552785	KY552818
Ligula pavlovskii	*Neogobius fluviatilis*	Ukraine	KY552784	KY552820
Pyramicocephalus phocarum	*Pollachius virens*	Norway	KY552791	KY552828
Schistocephalus solidus	*Gasterosteus aculeatus*	Norway / USA	KY552798	AF286944 (Olson et al., 2001)
Spirometra erinaceieuropaei	*Xenochrophis flavipunctatus / Canis familiaris*	Vietnam / Australia	KY552802	KY552835

References

Brabec, J., Kuchta, R., and Scholz, T. (2006) Paraphyly of the Pseudophyllidea (Platyhelminthes: Cestoda): circumscription of monophyletic clades based on phylogenetic analysis of ribosomal RNA. *Int. J. Parasitol.* 36, 1535-1541. doi: 10.1016/j.ijpara.2006.08.003

Kuchta, R., Oros, M., Ferguson, J., and Scholz, T. (2017) *Diphyllobothrium nihonkaiense* tapeworm larvae in salmon from North America. *Emerg. Infect. Dis.* 23, 351-353. doi: 10.3201/eid2302.161026

Olson, P. D., Littlewood, D. T. J., Bray, R. A., and Mariaux, J. (2001) Interrelationships and evolution of the tapeworms (Platyhelminthes: Cestoda). *Mol. Phylogenet. Evol.* 19, 443-467. doi: 10.1006/mpev.2001.0930

Waeschenbach, A., Brabec, J., Scholz, T., Littlewood, D. T. J., and Kuchta, R. (2017) The catholic taste of broad tapeworms - multiple routes to human infection. *Int J Parasitol.* 47, 831-843. doi: 10.1016/j.ijpara.2017.06.004

Yanagida, T., Matsuoka, H., Kanai, T., Nakao, M., and Ito, A. (2010) Anomalous segmentation of *Diphyllobothrium nihonkaiense*. *Parasitol. Int.* 59, 268-270. doi: 10.1016/j.parint.2009.12.006