

Supplementary material, Table S1. List of additional *Dactylogyrus* species and outgroup used in phylogenetic analyses.

Parasite species	Host species	18S accession	28S accession
<i>D. auriculatus</i>	<i>Abramis brama</i>	MG792838	MG792952
<i>D. zandti</i>	<i>Abramis brama</i>	MG792839	MG792953
<i>D. alatus</i>	<i>Alburnus neretvae</i>	MG792842	MG792956
<i>D. caucasicus</i>	<i>Alburnoides prespensis</i>	MG792847	MG792961
<i>D. tissensis</i>	<i>Alburnoides thessalicus</i>	MG792852	MG792966
<i>D. omenti</i>	<i>Aulopyge huegelii</i>	KY201091	KY201105
<i>D. petenyi</i>	<i>Barbus balcanicus</i>	KY201097	KY201113
<i>D. carpathicus</i>	<i>Barbus barbus</i>	KY201098	KY201111
<i>D. dyki</i>	<i>Barbus barbus</i>	KY629338	KY629367
<i>D. malleus</i>	<i>Barbus barbus</i>	KY201099	KY201112
<i>D. balkanicus</i>	<i>Barbus prespensis</i>	KY201093	KY201107
<i>D. crivellius</i>	<i>Barbus prespensis</i>	KY201094	KY201108
<i>D. prespensis</i>	<i>Barbus prespensis</i>	KY201096	KY201110
<i>D. anchoratus</i>	<i>Carassius gibelio</i>	KY859795	KY863555
<i>D. formosus</i>	<i>Carassius gibelio</i>	MG792869	MG792984
<i>D. vastator</i>	<i>Carassius gibelio</i>	KY201103	KY629366
<i>D. ergensi</i>	<i>Chondrostoma vardareense</i>	MG792878	MG792993
<i>Dactylogyrus</i> sp. A	<i>Luciobarbus albanicus</i>	KY201100	KY201114
<i>Dactylogyrus</i> sp. B	<i>Luciobarbus graecus</i>	KY201101	KY201115
<i>D. ivanovich</i>	<i>Pachychilon pictum</i>	MG792883	MG792999
<i>D. martinovici</i>	<i>Pachychilon pictum</i>	MG792885	MG793001
<i>D. petkovici</i>	<i>Pachychilon pictum</i>	MG792887	MG793003
<i>D. borealis</i>	<i>Phoxinus</i> sp.	KY629343	KY629372
<i>D. rarissimus</i>	<i>Rutilus lacustris</i>	MG792899	MG793015
<i>D. rutili</i>	<i>Rutilus lacustris</i>	MG792900	MG793016
<i>D. crucifer</i>	<i>Rutilus rutilus</i>	AJ564120	KY629374
<i>D. fallax</i>	<i>Rutilus rutilus</i>	MG792906	MG793023
<i>D. folkmanovae</i>	<i>Squalius cephalus</i>	MG792911	MG793028
<i>D. nanoides</i>	<i>Squalius cephalus</i>	MG792913	MG793030
<i>D. vistulae</i>	<i>Squalius prespensis</i>	KY629340	KY629369
<i>D. cornu</i>	<i>Vimba vimba</i>	KY629342	KY629371
<i>D. sphyrna</i>	<i>Vimba vimba</i>	MG792951	MG793066
<i>Ancyrocephalus percae</i>	<i>Perca fluviatilis</i>	AJ490166.1	KF499080.1

18S and 28S accession numbers correspond with sequences obtained from GenBank. 18S = sequences of partial gene coding 18S rRNA combined with complete ITS1 region, 28S = sequences or partial gene coding 28S rRNA.

Supplementary material, Table S2. *Coordinates and additional data for collection localities.*

Host species	ID	Locality	Drainage/District/Ocean Slope	Coordinates
<i>Achondrostoma arcasii</i>	S1	Chico River, flow of Palancia	Palancia/Central Iberian/Mediterranean	39°54'09.78"N 00°27'19.66"W
	S2	Tera River	Douro/Central Iberian/Atlantic	41°54'47.49"N 02°28'44.13"W
<i>Achondrostoma occidentale</i>	P1	Alcabrichel	Alcabrichel/Central Iberian/Atlantic	39°08'51.33"N 09°14'29.14"W
<i>Barbus haasi</i>	S3	Beceite, Uldemo River	Ebro/Ebro-Cantabric/Mediterranean	40°50'25.59"N 00°11'38.12"E
<i>Iberochondrostoma almacai</i>	P2	Torgal River, Mira basin	Mira/Southern Iberian/Atlantic	37°38'16.76"N 08°37'10.58"W
<i>Iberocypris alburnoides</i>	S4	Near Llera, Retin River	Guadiana/Southern Iberian/Atlantic	38°27'10.02"N 06°06'24.99"W
<i>Luciobarbus bocagei</i>	P3	Colares	Colares//Central Iberian/Atlantic	38°47'53.37"N 09°26'14.16"W
	S5	Ucero River	Douro/Central Iberian/Atlantic	41°32'49.11"N 03°04'32.50"W
	S6	Peraleda de Zancejo, Zujar River	Guadiana/Southern Iberian/Atlantic	38°27'12.02"N 05°31'59.67"W
<i>Luciobarbus graellsii</i>	S3	Beceite, Uldemo River	Ebro/Ebro-Cantabric/Mediterranean	40°50'25.59"N 00°11'38.12"E
	S7	upstream Mella, tributary of Materraña	Ebro/Ebro-Cantabric/Mediterranean	41°06'41.00"N 00°08'05.00"E
<i>Luciobarbus guiraonis</i>	S8	Magro River	Jucar/Central Iberian/Mediterranean	39°21'18.85"N 00°40'38.85"W
	S9	Turia River	Turia/Central Iberian/Mediterranean	39°34'46.46"N 00°37'09.63"W
	P2	Torgal River, Mira basin	Mira/Southern Iberian/Atlantic	37°38'16.76"N 08°37'10.58"W
<i>Luciobarbus sclateri</i>	S10	Benehavis, Guadalmina River	Guadalmina/Southern Iberian/Mediterranean	36°31'03.45"N 05°02'25.07"W
	S3	Beceite, Uldemo River	Ebro/Ebro-Cantabric/Mediterranean	40°50'25.59"N 00°11'38.12"E
<i>Parachondrostoma miegii</i>	S3	Beceite, Uldemo River	Ebro/Ebro-Cantabric/Mediterranean	40°50'25.59"N 00°11'38.12"E
<i>Parachondrostoma turiense</i>	S9	Turia River	Turia/Central Iberian/Mediterranean	39°34'46.46"N 00°37'09.63"W
<i>Phoxinus bigerri</i>	S5	Ucero River	Douro/Central Iberian/Atlantic	41°32'49.11"N 03°04'32.50"W
<i>Pseudochondrostoma duriense</i>	S5	Ucero River	Douro/Central Iberian/Atlantic	41°32'49.11"N 03°04'32.50"W
<i>Pseudochondrostoma polylepis</i>	P4	Alcoa, Fervenca	Alcobaça/Central Iberian/Atlantic	39°34'00.94"N 08°59'20.34"W
	P3	Colares	Colares//Central Iberian/Atlantic	38°47'53.37"N 09°26'14.16"W
	P5	Seixe	Seixe/Southern Iberian/Atlantic	37°25'22.41"N 08°44'56.42"W
<i>Squalius aradensis</i>	P6	tributary of Seixe	Seixe/Southern Iberian/Atlantic	37°21'47.87"N 08°40'07.45"W
	P7	Arunca, Mondego basin (Vermoil)	Mondego/Central Iberian/Atlantic	39°51'04.61"N 08°39'19.22"W
<i>Squalius pyrenaicus</i>	P3	Colares	Colares//Central Iberian/Atlantic	38°47'53.37"N 09°26'14.16"W
<i>Squalius torgalensis</i>	S6	Peraleda de Zancejo, Zujar River	Guadiana/Southern Iberian/Atlantic	38°27'12.02"N 05°31'59.67"W
	P2	Torgal River, Mira basin	Mira/Southern Iberian/Atlantic	37°38'16.76"N 08°37'10.58"W