

TABLE S1 Newly sequenced genes in the present work.

Species	Accession numbers	Lengths (bp)	G&C%	Markers	Sampling site
<i>Colpidium striatum</i>	PX982923	1676	42.60%	SSU rDNA	A freshwater pond, Baishan (42°8'10"N;127°30'41"E)
<i>Colpidium</i> sp.	PX983478	1677	42.70%	SSU rDNA	Puddle water, Baishan (42°6'42"N;127°30'12"E)
<i>Anteglaucoma harbinensis</i> pop1	PX983916	1690	43.25%	SSU rDNA	A freshwater pond, Baishan (42°8'10"N;127°30'41"E)
<i>Anteglaucoma harbinensis</i> pop2	PX983038	1690	43.25%	SSU rDNA	Puddle water, Baishan (42°6'42"N;127°30'12"E)
<i>Glaucoma</i> sp.	PX983559	1679	43.66%	SSU rDNA	Inland rivers, Baishan (42°4'47"N;126°57'46"E)
<i>Uronema nigricans</i>	PX983501	1690	43.25%	SSU rDNA	Inland rivers, Baishan (42°4'47"N;126°57'46"E)
<i>Paramecium caudatum</i> pop1	PX982659	1680	44.17%	SSU rDNA	Puddle water, Baishan (42°6'42"N;127°30'12"E)
	PZ305517	648	33.18%	mtSSU rDNA	
<i>Paramecium caudatum</i> pop2	PX982924	1682	44.29%	SSU rDNA	A freshwater pond, Baishan (42°8'10"N;127°30'41"E)
	PZ277484	648	33.49%	mtSSU rDNA	
<i>Paramecium caudatum</i> pop3	PX983324	1696	44.04%	SSU rDNA	Inland rivers, Baishan (42°4'47"N;126°57'46"E)
	PZ305516	647	33.54%	mtSSU rDNA	
<i>Paramecium multimicronucleatum</i>	PX983039	1694	44.57%	SSU rDNA	Inland rivers, Baishan (42°4'47"N;126°57'46"E)
<i>Paramccium fokini</i>	PX982871	1687	44.28%	SSU rDNA	Puddle water, Baishan (42°6'42"N;127°30'12"E)
<i>Paramecium primaurelia</i>	PX982961	1616	45.05%	SSU rDNA	A freshwater pond, Baishan (42°8'10"N;127°30'41"E)

Species	Accession numbers	Lengths (bp)	G&C%	Markers	Sampling site
<i>Paramecium primaurelia</i>	PZ277485	654	35.63%	mtSSU rDNA	
<i>Paramecium putrinum</i>	PX982987	1676	44.39%	SSU rDNA	Puddle water, Baishan (42°6'42"N;127°30'12"E)
<i>Paramecium bursaria</i>	PX982648	1660	44.34%	SSU rDNA	Puddle water, Baishan (42°6'42"N;127°30'12"E)
<i>Lembadion lucens</i>	PX983606	1685	44.75%	SSU rDNA	Inland rivers, Baishan (42°4'47"N;126°57'46"E)
<i>Euplotes chongmingensis</i> pop1	PX999694	1808	44.19%	SSU rDNA	A freshwater pond, Baishan (42°8'10"N;127°30'41"E)
	PZ295884	749	25.90%	mtSSU rDNA	
<i>Euplotes chongmingensis</i> pop2	PX999907	1809	44.44%	SSU rDNA	Puddle water, Baishan (42°27'31"N;128°9'52"E)
	PZ295886	757	26.02%	mtSSU rDNA	
<i>Euplotes chongmingensis</i> pop3	PZ027932	1805	44.10%	SSU rDNA	Inland rivers, Baishan (42°4'47"N;126°57'46"E)
<i>Euplotes daidaleos</i> pop1	PX999909	1832	43.23%	SSU rDNA	Puddle water, Baishan (42°6'42"N;127°30'12"E)
	PZ295887	675	21.33%	mtSSU rDNA	
<i>Euplotes daidaleos</i> pop2	PX999697	1837	43.44%	SSU rDNA	A freshwater pond, Baishan (42°8'10"N;127°30'41"E)
<i>Euplotes parkei</i> pop1	PZ027935	1754	44.87%	SSU rDNA	A freshwater pond, Baishan (42°8'10"N;127°30'41"E)
<i>Euplotes parkei</i> pop2	PX999662	1765	45.04%	SSU rDNA	Puddle water, Baishan (42°6'42"N;127°30'12"E)
<i>Euplotes encysticus</i> pop1	PZ027934	1811	43.79%	SSU rDNA	A freshwater pond, Harbin (45°51'44"N;126°35'22"E)
<i>Euplotes encysticus</i> pop2	PX999664	1811	43.95%	SSU rDNA	Puddle water, Baishan (42°6'42"N;127°30'12"E)

<i>Species</i>	Accession numbers	Lengths (bp)	G&C%	Markers	Sampling site
<i>Euplotes encysticus</i> pop3	PX999903	1805	43.71%	SSU rDNA	Inland rivers, Baishan (42°4'47"N;126°57'46"E)
<i>Euplotes euryhalinus</i> pop1	PZ027933	1802	44.06%	SSU rDNA	A freshwater pond, Harbin (45°51'43"N;126°35'21"E)
<i>Euplotes euryhalinus</i> pop2	PX999693	1796	43.76%	SSU rDNA	Puddle water, Baishan (42°6'42"N;127°30'12"E)
<i>Euplotes octocarinatus</i> pop1	PX999915	1840	42.88%	SSU rDNA	Puddle water, Baishan (42°3'34"N;128°3'38"E)
<i>Euplotes octocarinatus</i> pop2	PX999980	1834	42.80%	SSU rDNA	Puddle water, Baishan (42°27'31"N;128°9'52"E)
<i>Euplotes octocarinatus</i> pop3	PX999698	1838	42.93%	SSU rDNA	Inland rivers, Baishan (42°4'47"N;126°57'46"E)
<i>Euplotes octocarinatus</i> pop4	PZ027930	1844	42.79%	SSU rDNA	A freshwater pond, Harbin (45°51'44"N;126°35'22"E)
<i>Euplotes aediculatus</i>	PX999741	1819	44.47%	SSU rDNA	Puddle water, Baishan (42°6'42"N;127°30'12"E)
<i>Euplotes heilongjiangensis</i>	PX999883	1843	44.87%	SSU rDNA	Puddle water, Baishan (42°27'31"N;128°9'52"E)
<i>Euplotes daqingensis</i> pop1	PX999884	1932	43.32%	SSU rDNA	Puddle water, Baishan (42°27'31"N;128°9'52"E)
<i>Euplotes daqingensis</i> pop2	PZ027931	1951	43.21%	SSU rDNA	A freshwater pond, Harbin (45°51'44"N;126°35'22"E)
<i>Holostichides</i> sp.	PX999991	1699	45.56%	SSU rDNA	Puddle water, Baishan (42°27'31"N;128°9'52"E)
<i>Hemiamphisiella terricola</i>	PZ273371	1705	45.16%	SSU rDNA	Puddle water, Baishan (42°27'31"N;128°9'52"E)
<i>Hemiurosomoida longa</i>	PZ000004	1693	45.66%	SSU rDNA	Inland rivers, Baishan (42°4'47"N;126°57'46"E)
<i>Stylonychia ammermanni</i>	PZ000005	1709	45.64%	SSU rDNA	A freshwater pond, Baishan (42°8'10"N;127°30'41"E)
<i>Uroleptus longicaudatus</i>	PZ000009	1704	45.66%	SSU rDNA	Puddle water, Baishan (42°3'34"N;128°3'38"E)

<i>Species</i>	Accession numbers	Lengths (bp)	G&C%	Markers	Sampling site
<i>Uroleptus stueberi</i>	PZ000010	1706	45.25%	SSU rDNA	A freshwater pond, Baishan (42°8'10"N;127°30'41"E)
<i>Colpoda inflata</i> pop1	PZ092462	1720	44.42%	SSU rDNA	Soil, Baishan (42°24'32"N, 128°6'20"E)
	PZ295881	717	31.80%	mtSSU rDNA	
<i>Colpoda inflata</i> pop2	PZ092464	1718	44.24%	SSU rDNA	Soil, Baishan (42°5'15"N, 127°30'55"E)
	PZ295885	681	31.86%	mtSSU rDNA	
<i>Colpoda inflata</i> pop3	PZ092815	1732	44.40%	SSU rDNA	Soil, Baishan (42°24'32"N, 128°6'20"E)
	PZ295883	716	31.84%	mtSSU rDNA	
<i>Colpoda grandis</i> pop1	PZ092853	1721	44.51%	SSU rDNA	Soil, Baishan (42°10'21"N, 127°30'16"E)
	PZ295882	1069	31.90%	mtSSU rDNA	
<i>Colpoda grandis</i> pop2	PZ092854	1721	44.39%	SSU rDNA	Soil, Baishan (42°5'15"N, 127°30'55"E)
	PZ309728	1069	31.90%	mtSSU rDNA	
<i>Colpoda maupasi</i> pop1	PZ092811	1716	44.35%	SSU rDNA	Soil, Baishan (42°24'32"N, 128°6'20"E)
<i>Colpoda maupasi</i> pop2	PZ092812	1720	44.65%	SSU rDNA	Soil, Baishan (42°10'21"N, 127°30'16"E)
<i>Colpoda maupasi</i> pop3	PZ092817	1720	44.48%	SSU rDNA	Soil, Harbin (45°51'48"N;126°35'23"E)
<i>Colpoda maupasi</i> pop4	PZ092785	1731	44.89%	SSU rDNA	Soil, Baishan (42°4'13"N, 127°30'58"E)
<i>Tillina</i> sp.	PZ096772	1721	44.63%	SSU rDNA	Soil, Baishan (42°24'32"N, 128°6'20"E)