

Supplementary info

Table S1. The data on specimens of lymnaeid snails used in the molecular study

Code	Collection No. SNSD	Locality	ENA/GenBank No.		
			cyt-b	ITS-2	Reference
<i>Austropeplea viridis</i> (Quoy & Gaimard, 1833)					
<i>Austropeplea viridis</i> 1	Moll S5418	China, Province Gansu, Wenxian, N 32.93013° E 104.72156°		LT220499	SCHNIEBS et al. 2017
			OM319403		This paper
<i>Austropeplea viridis</i> 2	Moll S6832	Mongolia, small pool in the floodplain of Khovd River, N 48° 13.718' E 91° 55.408'		LT220500	SCHNIEBS et al. 2017
			OM319404		This paper
<i>Radix natalensis</i> (KRAUSS 1848)					
<i>Radix natalensis</i> 1	Tissue coll. 3252	Egypt, Cairo, Lotus basin in front of the Egyptian Museum, N 30.047038 E 31.233659	LS974266	LS974223	SCHNIEBS et al. 2019
<i>Radix natalensis</i> 2	Tissue coll. 3253	Egypt, Cairo, Lotus basin in front of the Egyptian Museum, N 30.047038 E 31.233659	LS974267	LS974224	SCHNIEBS et al. 2019
<i>Radix rubiginosa</i> (Michelin, 1831)					
<i>Radix rubiginosa</i> 1		Russia, St. Petersburg; Botanical Gardens of Peter the Great, Victoria regia greenhouse, N 59°58'09.9" E 13°19'27.0"	OM319405	OM240663	This paper
<i>Radix rubiginosa</i> 2		Russia, St. Petersburg; Botanical Gardens of Peter the Great, Victoria regia greenhouse, N 59°58'09.9" E 13°19'27.0"	OM319406	OM240664	This paper
<i>Radix dolgini</i> (GUNDRIZER AND STAROBOGATOV 1979)					
<i>Radix dolgini</i> 1	Moll 52861	Russia, Tomsk Region, District Teguldet, lake near Novoshumilovo village, N 57°25'30" E 88°31'13"	LS974268		SCHNIEBS et al. 2019
				KT030064	VINARSKI et al. 2016
<i>Radix dolgini</i> 2	Moll 52863	Russia, Tomsk Region, District Teguldet, lake near Novoshumilovo village, N 57°25'30" E 88°31'13"	LS974270		SCHNIEBS et al. 2019
				KT030066	VINARSKI et al. 2016
<i>Radix dolgini</i> 3	Moll S5217	Russia, Altay Territory, a swamp in the floodplain of Kulunda River, N 50°59'50" E 80°00'07"	LS974271		SCHNIEBS et al. 2019
				KT030061	VINARSKI et al. 2016

<i>Radix dolgini</i> 4	Moll S5218	Russia, Altay Territory, a swamp in the floodplain of Kulunda River, N 50°59'50" E 80°00'07"	LS974272		SCHNIEBS et al. 2019
				KT030062	VINARSKI et al. 2016
<i>Radix labiata</i> (ROSSMÄSSLER 1835)					
<i>Radix labiata</i> 1	Moll 51863	Montenegro, Žabljak, Black Lake, sand pools, 43°08'50"N 19°05'42"E	HE798507	HE798455	SCHNIEBS et al. 2013
<i>Radix labiata</i> 2	Moll 52415	Austria, Carinthia, Hermagor, N 46°37' E 13°22'	HE798484	HE798457	SCHNIEBS et al. 2013
<i>Radix labiata</i> 3	Tissue 3956	Spain, Santa Marina del Valdeon, Picos de Europa, Vega de Liordes, marshy headwater region, 1940 m, 43°09'11" N 4°50'09" W	HE798491	HE798464	SCHNIEBS et al. 2013
<i>Radix labiata</i> 4	Moll S172	France, Bourgogne, Département Cote-d'Or	HE798492	HE798465	SCHNIEBS et al. 2013
<i>Radix labiata</i> 5	Moll S284	Switzerland, Basel City, Riehen, well Nollenbrunnen, 47°34'41" N 7°40'17" E	HE798493	HE798466	SCHNIEBS et al. 2013
<i>Radix labiata</i> 6	Moll S2904	Germany, Saxony, small brook north of Tharandt, N 51°00'08" E 13°34'19"	HE798496	HE798469	SCHNIEBS et al. 2013
<i>Radix balthica</i> (LINNAEUS 1758)					
<i>Radix balthica</i> 1	Moll 51292	Switzerland, canton Basel City, Riehen, Wiesengriener, 47°35'21" N 07°38'32" E	HE573134	HE573083	SCHNIEBS et al. 2011
<i>Radix balthica</i> 2	Moll 51860	Sweden, Øland, east shore near Lille Seby, 56.345°N 16.565°E	HE573141	HE573090	SCHNIEBS et al. 2011
<i>Radix balthica</i> 3	Moll 52412	Croatia, Lake Milanovac near Plitvica, 44°53'45" N 15°36'34" E	HE573139	HE573089	SCHNIEBS et al. 2011
<i>Radix balthica</i> 4	Moll 52663	Germany, Baden-Württemberg, Danube River near Sigmaringendorf, 48°03'45.54" N 09°15'49.36" E	HE573120	HE573080	SCHNIEBS et al. 2011
<i>Radix balthica</i> 5	Moll 52907	Germany, Saxony, pond Rummelteich southwest of Trebsen, R 4552057 H 5683105	LS974275	LS974227	SCHNIEBS et al. 2019
<i>Radix balthica</i> 6	Moll 53111	Germany, Baden-Württemberg, Konstanz-Egg, pond near University, N 47°41'09" E 09°11'29"	HE573116	HE573078	SCHNIEBS et al. 2011
<i>Radix balthica</i> 7	Moll S2151	Germany, Mecklenburg-Western Pomerania, Lake Torgelower See, N 53°34.252' E 12°46.622'	HE573159	HE573096	SCHNIEBS et al. 2011
<i>Radix balthica</i> 8	Moll S4443	Italy, Sardinia, Province Nuoro, Gola su Gorrupu, Rio Flumineddo River, N 40°11'07.14 E 9°30'08.57 E	LR732147	LR732161	SCHNIEBS et al. 2020

<i>Radix balthica</i> 9	Moll S5621	Germany, Bavaria, bank of the Lake Chiemsee in Chieming, N 47°53'46" E 12°31'38"	LR732148	LR732162	SCHNIEBS et al. 2020
<i>Radix balthica</i> 10	Moll S5795	Switzerland, Feldmeilen, bank of the Lake Zurich, N 47°16'18.16" E 08°37'40.46"	LR732149	LR732163	SCHNIEBS et al. 2020
<i>Radix lagotis</i> (SCHRANK 1803)					
<i>Radix lagotis</i> 1	Moll 49868	Germany, Saxony, pond Vierteich near Freiteilsdorf, 13°41'57"E 51°15'43"	HE573114	HE573076	SCHNIEBS et al. 2011
<i>Radix lagotis</i> 2	Moll 51858	Germany, Brandenburg, Strodehne, N 51.74555° E 12.22396°	LN874262	LN874255	SCHNIEBS et al. 2015
<i>Radix lagotis</i> 3	Moll 52563	Saxony, pond Goldgrubenteich near Linz, 13°43'09"E 51°19'46"N	HE573115	HE573077	SCHNIEBS et al. 2011
<i>Radix lagotis</i> 4	Moll 53236	Saxony, dam Doellnitzsee near Mutzschen, 12°55'18"E 51°15'45"N	LS974273	LS974225	SCHNIEBS et al. 2019
<i>Radix lagotis</i> 5	Moll S1777	Ukraine: Donetsk Region, Staromarjevka, Kalmius River	LS974274	LS974226	SCHNIEBS et al. 2019
<i>Radix lagotis</i> 6	Moll S3765	Bulgaria. Dragoman marshland 40 km west of Sofia, N 42°56'11.7" E 22°57'9.3"	LN874264	LN874257	SCHNIEBS et al. 2015
<i>Radix lagotis</i> 7	Moll S3770	Bulgaria. Dragoman marshland 40 km west of Sofia, N 42°56'11.7" E 22°57'9.3"	LN874266	LN874259	SCHNIEBS et al. 2015
<i>Radix ampla</i> (HARTMANN 1821)					
<i>Radix ampla</i> 1	Moll 51113	Russia, Chelyabinsk Region, Miass River near Dynamo village, N 45°57' E 60°02'	HE798471	HE798449	SCHNIEBS et al. 2013
<i>Radix ampla</i> 2	Moll S2193	Germany, Mecklenburg-Western Pomerania, Lake Luebkowsee 2 km east of Schwichtenberg, 13°44.567'E 53°40.967'N	HE573112	HE573074	SCHNIEBS et al. 2011
<i>Radix ampla</i> 3	Moll S2924	Switzerland: Lake Biel, near bridge to St. Peter's Island	LS974281	LS974232	SCHNIEBS et al. 2019
<i>Radix ampla</i> 4	Moll S5347	Czech Republic, Vsetín, Vsetínská Bečva, N 49°19'29" E 17°59'48"	LS974286	LS974237	SCHNIEBS et al. 2019
<i>Radix ampla</i> 5	Moll S7478	Germany, Mecklenburg-Western Pomerania, Lake Tollensesee, N 53.470790 E 13.174872	LS974294	LS974245	SCHNIEBS et al. 2019
<i>Radix ampla</i> 6	Moll S8730	Russia, Moscow region, Oka River near Turovo, 54°50.836'N, 37°52.799'E	LS974306	LS974257	SCHNIEBS et al. 2019
<i>Radix ampla</i> 7	Tissue coll. 9762	Russia, Pskov Region, Velikaya River near Kholoye village, N 56°22'28" E 28°58'05"	LS974302	LS974253	SCHNIEBS et al. 2019
<i>Radix auricularia</i> (LINNAEUS 1758)					

<i>Radix auricularia</i> 1	Moll 50005	Germany, Saxony, Niederspree, pond Neuwiesenteich, N 51°24'19" E 14°52'57"	HE573104	HE573066	SCHNIEBS et al. 2011
<i>Radix auricularia</i> 2	Moll 50079	Germany, Saxony, pond Vierteich near Freitelsdorf, N 51°15'43"E 13°41'57"	HE573105	HE573067	SCHNIEBS et al. 2011
<i>Radix auricularia</i> 3	Moll 51121	Rußland: Tomsk Region, nameless waterbody by Novomichailovka near Tomsk	OM319407	OM240665	This paper
<i>Radix auricularia</i> 4	Moll 51980	Bulgaria: Kamchia River 2,5 km north of Staro Oryahovo, N 43,0195° E 27,8245°	LS974261	LS974218	SCHNIEBS et al. 2019
<i>Radix auricularia</i> 5	Moll 52857	Russia, Novosibirsk Region, Novosibirsk, Reservoir near Kirza River, N 54°14.224' E 81°39.63114'	HE557667	HE557647	SCHNIEBS et al. 2011
<i>Radix auricularia</i> 6	Moll 52859	Russia, Novosibirsk Region, Novosibirsk, Reservoir near Kirza River, N 54°14.224' E 81°39.63114'	HE557668	HE557646	SCHNIEBS et al. 2011
<i>Radix auricularia</i> 7	Moll 53070	Germany, Bavaria, Weichering, pond in riverside forest, N 48°43'34.1" E 11°19'23.6"	FR797902	FR797842	VINARSKI et al. 2011
<i>Radix auricularia</i> 8	Moll 53086	Switzerland, Lake Constance near Güttingen	LT623597	LT623582	SCHNIEBS et al. 2018
<i>Radix auricularia</i> 9	Moll S2270	Turkey, Suganli Valley, 1330 m.a.s.l., N 38 19 49.7 E 34 19 44.5	OM319408	OM240666	This paper
<i>Radix auricularia</i> 10	Moll S4653	France, Saint-Just, Le Bourdelet, northern bank of Ardeche River near the bridge of the road D86, N 44°16'51.73" E 04°37'14.05"	OM319409	OM240667	This paper
<i>Radix auricularia</i> 11	Moll S5210	Italy, Sicily, National Park Bosco della Ficuzza, N 7193157 E 33 359030	HG932122	HG931934	This paper
<i>Radix auricularia</i> 12	Moll S5211	Italy, Sicily, National Park Bosco della Ficuzza, N 7193157 E 33 359030	HG932123	HG931935	This paper
<i>Radix auricularia</i> 13	Moll S5391	Russia, Primorye, Bikin River, 176 m.a.s.l., N 46.68983° E 135.75988°	OM319410	OM240668	This paper
<i>Radix auricularia</i> 14	Moll S5393	China, Hebei Province, Guyan, Zhangjiakou City, 1401 m.a.s.l., N 41.6833333° E 115.7741667°	OM319411	OM240669	This paper
<i>Radix auricularia</i> 15	Moll S5395	China, Hebei Province, Guyan, Zhangjiakou City, 1401 m.a.s.l., N 41.6833333° E 115.7741667°	OM319412	OM240670	This paper
<i>Radix auricularia</i> 16	Moll S5396	China, Hebei Province, Guyan, Zhangjiakou City, 1401 m.a.s.l., N 41.6833333° E 115.7741667°	OM319413	OM240671	This paper
<i>Radix auricularia</i> 17	Moll S5793	Switzerland, Feldmeilen, bank oft he Lake Zürich near road Seestraße, N 47°16'18.16" E 08°37'40.46"	OM319414	OM240672	This paper
<i>Radix auricularia</i> 18	Moll S6596	Kyrgyzstan, Chu River, 1505 m.a.s.l., N 42°31.520' E 75°49.235'	HG932124	HG931936	This paper
<i>Radix auricularia</i> 19	Moll S6597	Kyrgyzstan, Chu River, 1505 m.a.s.l., N 42°31.520' E 75°49.235'	HG932125	HG931937	This paper

<i>Radix auricularia</i> 20	Moll S6599	Kyrgyzstan, Karakal Region, fish pond near Tup, 1623 m.a.s.l., N 42°42.777' E 78°22.506'	OM319415	OM240673	This paper
<i>Radix auricularia</i> 21	Moll S6600	Kyrgyzstan, Karakal Region, fish pond near Tup, 1623 m.a.s.l., N 42°42.777' E 78°22.506'	OM319416	OM240674	This paper
<i>Radix auricularia</i> 22	Moll S6803	Russia, Republic of Sakha, Yakutsk, Lake Saisary, N 62°01.045' E 129° 41.527'	OM319417	OM240675	This paper
<i>Radix auricularia</i> 23	Moll S6811	Western Mongolia, Chono-Khoraikhol River, N 48° 20.013' E 92° 49.543'	OM319418	OM240676	This paper
<i>Radix auricularia</i> 24	Moll S6815	Russia, Republic of Buryatia, Lake Baikal, Kotovo Bay near Monakhovo, N 53° 39.011' E 108° 58.587'	LS974264	LS974219	SCHNIEBS et al. 2019
<i>Radix auricularia</i> 25	Moll S6816	Russia, Republic of Buryatia, Lake Baikal, Kotovo Bay near Monakhovo, N 53° 39.011' E 108° 58.587'	OM319419	OM240677	This paper
<i>Radix auricularia</i> 26	Moll S6836	Western Mongolia, Lake Airag-Nuur, N 48° 52.110' E 93° 23.689'	OM319420	OM240678	This paper
<i>Radix auricularia</i> 27	Moll S6840	Tunisia, artificial water reservoir near Khammamet, N 36° 26.658' E 10° 40.598'	LS974265	LS974220	SCHNIEBS et al. 2019
<i>Radix auricularia</i> 28	Moll S7384	Denmark: Soro, lake Degnemosen, N 55.699417 E 12.504774	LS974263	LS974221	SCHNIEBS et al. 2019
<i>Radix auricularia</i> 29	Moll S7495	Mecklenburg-West Pomerania, Lake Tollensesees near Klein Nemerow, N 53.499711 E 13.220142	OM319421	OM240679	This paper
<i>Radix auricularia</i> 30	Moll S7496	Mecklenburg-West Pomerania, Lake Tollensesees near Klein Nemerow, N 53.499711 E 13.220142	OM319422	OM240680	This paper
<i>Radix auricularia</i> 31	Moll S7525	Hungria, Borsod-Abaúj-Zemplén, oxbow of Botrog River near Sarospatak, N 48°17'38.64" E 21°34'58.08"	OM319423	OM240681	This paper
<i>Radix auricularia</i> 32	Moll S8736	Russia, Volga River delta, Katyushkin Erik channel, N 45.779410 E 47.872876	LS974262	LS974222	SCHNIEBS et al. 2019
<i>Radix intercosa</i> 1	Moll S5127	Russia, Republic of Buryatia, pond on the bank of Lake Baikal near Katun, N 53°41' E 109°17'	OM319424	OM240682	This paper
<i>Radix intercosa</i> 2	Moll S5128	Russia, Republic of Buryatia, pond on the bank of Lake Baikal near Katun, N 53°41' E 109°17'	OM319425	OM240683	This paper
<i>Radix intercosa</i> 3	Tissue coll. 8903	Russia, Republic of Buryatia, pond on the bank of Lake Baikal near Katun, N 53°41' E 109°17'	OM319426	OM240684	This paper
<i>Radix intercosa</i> 4	Moll S7341	Russia, Republic of Buryatia, Lake Baikal, Fertik Bay near the mouth of the Chivyrkuy Bay	OM319427	OM240685	This paper
<i>Radix iturupica</i> 1	Moll S6871	Russia, Kuril Islands, Kunashir Island, channel of the Lake Peschanoe, N 43°527' E 145°30'51"	OM319428	OM240686	This paper
<i>Radix iturupica</i> 2	Moll S6872	Russia, Kuril Islands, Kunashir Island, channel of the Lake Peschanoe, N 43°527' E 145°30'51"	OM319429	OM240687	This paper

<i>Radix narzykulovi</i> 1	Tissue coll. 9734	Tadjikistan, Lake Torantuykul	OM319430	OM240688	This paper
<i>Radix narzykulovi</i> 2	Tissue coll. 9734	Tadjikistan, Lake Torantuykul	OM319431	OM240689	This paper
<i>Radix schubinae</i>	Moll S7376	Russia, Amur Region, pit filled with water in Zeya, N 53°44.657', E 127°16.759'	OM319432	OM240690	This paper
<i>Radix ussuriensis</i> 1	Moll S7391	Russia, Region Khabarowsk, waterbody in the floodplain near Samarka	OM319433	—	This paper
<i>Radix ussuriensis</i> 2	Moll S7392	Russia, Region Khabarowsk, waterbody in the floodplain near Samarka	—	OM240691	This paper
<i>Radix</i> Baikal 1	Moll S9593	Russia, Lake Baikal north of Buguldeyka, 2-3 m depth	—	OM240692	This paper
<i>Radix</i> Baikal 2	Moll S9594	Russia, Lake Baikal north of Buguldeyka, 2-3 m depth	OM319434	OM240693	This paper
<i>Radix</i> Baikal 3	Moll S9596	Russia, Lake Baikal north of Cape Elokhin, 4-10 m depth	OM319435	OM240694	This paper
<i>Radix</i> Baikal 4	Moll S9597	Russia, Lake Baikal north of Cape Elokhin, 4-10 m depth	OM319436	OM240695	This paper
<i>Radix</i> Baikal 5	Moll S9600	Russia, southern Lake Baikal, Cape Zub (Khabartuy), dredged, 3-10 m depth	—	OM240696	This paper
<i>Radix</i> Baikal 6	Moll S9601	Russia, southern Lake Baikal, Cape Zub (Khabartuy), dredged, 3-10 m depth	OM319437	OM240697	This paper
<i>Radix</i> Baikal 7	Moll S9604	Russia, Lake Baikal, Maloye More, Kharin-Irgin Bay, on stones, 1.2 m depth	—	OM240698	This paper
<i>Radix</i> Baikal 8	Moll S9606	Russia, Lake Baikal, Senogda Bay, in a depth of 1.5 m, stones	OM319438	OM240699	This paper
<i>Radix</i> Baikal 9	Moll S9607	Russia, Lake Baikal, Senogda Bay, stones, 1.5 m depth	OM319439	OM240700	This paper
<i>Radix</i> Baikal 10	Moll S9610	Russia, Lake Baikal, Maloye More, Shibetetskaya Bay, fine muddy sand, <i>Chara</i> , dredged, 24-25 m depth	OM319440	OM240701	This paper
<i>Radix</i> Baikal 11	Moll S9611	Russia, Lake Baikal, Maloye More, Shibetetskaya Bay, fine muddy sand, <i>Chara</i> , dredged, 24-25 m depth	OM319441	OM240702	This paper
<i>Radix</i> Baikal 12	Moll S9614	Russia, Lake Baikal, Listvenichnoe, 1-9 m depth	OM319442	OM240703	This paper
<i>Radix</i> Baikal 13	Moll S9615	Russia, Lake Baikal, Listvenichnoe, 1-9 m depth	OM319443	OM240704	This paper
<i>Radix</i> Baikal 14	Moll S9618	Russia, Lake Baikal, Bolshie Koty, groundwater pool 3-5 m from the shore	—	OM240705	This paper
<i>Radix</i> Baikal 15	Moll S9620	Russia, northern Lake Baikal, Slyudyanskiy Cape, 2.8-3.2 m depth	OM319444	OM240706	This paper
<i>Radix</i> Baikal 16	Moll S9622	Russia, northern Lake Baikal, Valukan Cape, on gravel in the shoreline, ca. 10-15 cm depth	OM319445	OM240707	This paper
<i>Radix</i> Baikal 17	Moll S9623	Russia, northern Lake Baikal, Valukan Cape, on gravel in the shoreline, ca. 10-15 cm depth	OM319446	OM240708	This paper
<i>Radix</i> Baikal 18	Moll S9626	Russia, Lake Baikal, Ayaya Bay, stones, 0.5 m depth	OM319447	OM240709	This paper
<i>Radix</i> Baikal 19	Moll S9627	Russia, Lake Baikal, Ayaya Bay, stones, 0.5 m depth	OM319448	OM240710	This paper
<i>Radix</i> Baikal 20	Moll S9629	Russia, Lake Baikal, Zhilische, 2.5-4.2 m depth	OM319449	OM240711	This paper
<i>Radix</i> Baikal 21	Moll S9630	Russia, Lake Baikal, Zhilische, 2.5-4.2 m depth	OM319450	OM240712	This paper
<i>Radix</i> Baikal 22	Moll S9633	Russia, Lake Baikal near Zarechnoe, stones, 0.5 m depth	OM319451	OM240713	This paper
<i>Radix</i> Baikal 23	Moll S9634	Russia, Lake Baikal near Zarechnoe, stones, 0.5 m depth	OM319452	OM240714	This paper
<i>Radix</i> Baikal 24	Moll S9637	Russia, northern Lake Baikal, Bolshaya Kosa Bay (near Muzhinay), dredged, 30 m depth	—	OM240715	This paper

<i>Radix</i> Baikal 25	Moll S9638	Russia, northern Lake Baikal, Bolshaya Kosa Bay (near Muzhinay), dredged, 30 m depth	—	OM240716	This paper
<i>Radix</i> Baikal 26	Moll S9640	Russia, Lake Baikal, Ayaya Bay, sand, dredged, 15 m depth	—	OM240717	This paper
<i>Radix</i> Baikal 27	Moll S9641	Russia, Lake Baikal, Ayaya Bay, sand, dredged, 15 m depth	—	OM240718	This paper
<i>Radix</i> Baikal 28	Moll S9643	Russia, Lake Baikal, mouth of the River Babushka near Peschanaya Bay, gravel, 5 m depth	—	OM240719	This paper
<i>Radix</i> Baikal 29	Moll S9644	Russia, Lake Baikal, mouth of the River Babushka near Peschanaya Bay, gravel, 5 m depth	—	OM240720	This paper
<i>Radix</i> Baikal 30	Moll S9645	Russia, River Angara near Usol'e-Sibirskoe, stones and sand, 0-30 cm depth	—	OM240721	This paper
<i>Radix</i> Baikal 31	Moll S9646	Russia, River Angara near Usol'e-Sibirskoe, stones and sand, 0-30 cm depth	—	OM240722	This paper
<i>Radix</i> Baikal 32	Moll S9654	Russia, Republic of Buryatia, River Pereyemnaja at his mouth in to the Lake Baikal	—	OM240723	This paper