

Table S1. A list of zooplankton taxa and abbreviations in Danjiangkou Reservoir, and their occurrence in each sampling month and area. HR: Hanjiang reservoir area, DR: Danjiang reservoir area, BD: the area close to the dam. +: present; -: absent.

Group	Taxa	Taxa code	Functional groups	Month			Area		
				May	August	November	BD	HR	DR
Protozoa	<i>Acanthocystis aculeata</i>	Acaa	PF	+	-	-	-	+	-
	<i>Chilodonella algivora</i>	Chia	PF	+	-	-	+	+	-
	undetermined ciliates	Cil	PF	+	-	+	+	+	+
	<i>Coleps hirtus</i>	Colh	PF	+	-	-	-	+	-
	<i>Cyclidium</i> sp.	Cyc	PF	-	-	+	-	+	-
	<i>Didinium nasutum</i>	Didn	PC	+	-	-	-	+	-
	<i>Diffugia globulosa</i>	Difg	PF	-	+	-	+	+	+
	<i>Glaucoma scintillans</i>	Glas	PF	+	-	-	-	+	+
	<i>Halteria cirrifera</i>	Halc	PF	+	-	-	+	+	+
	<i>Lacrymaria olor</i>	Laco	PC	-	+	+	+	+	-
	<i>Nassula gracilis</i>	Nasg	PF	+	-	-	+	-	-
	<i>Strobilidium gyrans</i>	Strg	PF	+	+	+	+	+	+
	<i>Strombidium viride</i>	Strv	PF	+	+	+	+	+	+
	<i>Tetrahymena pyriformis</i>	Tetp	PF	-	+	-	-	+	-
	<i>Tintinnidium fluviatile</i>	Tinf	PF	+	-	-	+	+	-
	<i>Vorticella</i> sp.	Vor	PF	+	+	+	-	+	+
	<i>Vorticella elongata</i>	Vore	PF	-	+	-	-	+	-
Rotifera	<i>Anuraeopsis coelata</i>	Anuc	RF	+	-	-	-	-	+
	<i>Anuraeopsis fissa</i>	Anuf	RF	-	+	-	+	+	-
	<i>Ascomorpha saltans</i>	Ascs	RF	+	+	-	+	+	+
	<i>Asplanchna brightwelli</i>	Aspb	RC	+	-	-	-	+	-
	<i>Asplanchna priodonta</i>	Aspp	RC	-	+	-	-	+	-

	<i>Brachionus angularis orientalis</i>	Braa	RF	-	+	-	-	+	-
	<i>Brachionus falcatus</i>	Braf	RF	-	+	-	-	+	-
	<i>Brachionus forficula</i>	Brafo	RF	-	+	-	-	+	+
	<i>Collotheca pelagica</i>	Colp	RF	-	+	+	-	+	+
	<i>Encentrum</i> sp.	Enc	RF	-	+	-	+	-	+
	<i>Epiphanes senta</i>	Epis	RF	-	+	-	-	+	-
	<i>Euchlanis dilatata</i>	Eucd	RF	+	-	-	-	-	+
	<i>Filinia longiseta</i>	Fill	RF	+	-	-	-	-	+
	<i>Hexarthra mira</i>	Hexm	RF	-	+	-	+	+	+
	<i>Keratella cochlearis</i>	Kerc	RF	+	+	+	+	+	+
	<i>Keratella serrulata</i>	Kers	RF	-	+	-	-	-	+
	<i>Keratella valga</i>	Kerv	RF	+	-	-	-	+	-
	<i>Ploesoma hudsoni</i>	Ploh	RF	-	+	-	+	-	-
	<i>Polyarthra dolichoptera</i>	Pold	RF	-	+	+	+	+	+
	<i>Polyarthra euryptera</i>	Pole	RF	-	-	+	-	+	-
	<i>Polyarthra vulgaris</i>	Polv	RF	+	-	+	-	+	-
	<i>Pompholyx complanta</i>	Pomc	RF	+	-	-	-	-	+
	<i>Synchaeta oblonga</i>	Syno	RC	+	-	-	-	-	+
	<i>Synchaeta pectinata</i>	Synp	RC	+	-	+	-	+	-
	<i>Trichocerca cylindrica</i>	Tric	RF	-	+	-	+	+	-
	<i>Trichocerca pusilla</i>	Trip	RF	+	-	-	+	+	-
	<i>Trichocerca rousseleti</i>	Trir	RF	-	+	+	+	+	+
	<i>Trichocerca similis</i>	Tris	RF	-	+	+	+	+	-
Cladocera	<i>Alona guttata</i>	Alog	SCF	+	-	-	-	+	+
	<i>Bosmina coregoni</i>	Bosc	SCF	+	+	+	+	+	+
	<i>Ceriodaphnia cornigera</i>	Cerco	SCF	-	-	+	+	+	-
	<i>Chydorus sphaericus</i>	Chys	SCF	+	-	-	-	-	+

	<i>Coronatella rectangula</i>	Corr	SCF	+	-	-	-	-	+
	<i>Daphnia cucullata</i>	Dapc	LCF	+	+	+	+	+	+
	<i>Daphnia galeata</i>	Dapg	LCF	-	+	-	+	-	-
	<i>Daphnia hyalina</i>	Daph	LCF	+	-	-	+	+	+
	<i>Diaphanosoma brachyurum</i>	Diab	MCF	-	-	+	-	+	-
	<i>Diaphanosoma dubium</i>	Diad	MCF	-	+	-	+	+	+
Copepoda	Calanoida copepodids	Canc	SCF	+	+	+	+	+	+
	Cyclopoida copepodids	Cycc	SCC	+	+	+	+	+	+
	<i>Cyclops vicinus</i>	Cycv	LCC	+	-	+	+	+	+
	<i>Eucyclops serrulatus</i>	Eucs	MCF	+	-	-	-	-	+
	<i>Mesocyclops leuckarti</i>	Mesl	MCC	+	+	+	+	+	+
	<i>Microcyclops varicans</i>	Micv	MCC	+	+	+	+	+	+
	Copepoda nauplii	Nau	SCF	+	+	+	+	+	+
	<i>Neodiaptomus schmackeri</i>	Neos	MCF	-	+	-	+	+	+
	<i>Schmackeria forbesi</i>	Schf	MCF	+	+	+	+	+	-
	<i>Sinocalanus dorrii</i>	Sind	LCF	+	-	+	+	+	+

Table S2. Records on the number of taxa (NS), mean abundance (D, ind./L), and mean biomass (B, mg/L) of the four zooplankton taxonomic groups in Danjiangkou Reservoir investigated in this study and documented in the literature, as well as water quality parameters for each period. SD: Secchi disk depth, Chl.*a*: chlorophyll *a*, TN: total nitrogen, TP: total phosphorus, COD_{Mn}: permanganate index. NA: not available.

Sampling time (Year)	Number of sites	SD (m)	Chl. <i>a</i> (µg/L)	TN (mg/L)	TP (mg/L)	COD _{Mn} (mg/L)	Protozoa			Rotifera			Cladocera			Copepoda			Total		
							NS	D	B	NS	D	B	NS	D	B	NS	D	B	NS	D	B
(1986~1987) ¹	7	1.35	NA	0.51	0.01	NA	20	4922	0.1488	15	1.625	0.032	11	2.560	0.128	3	14.393	0.338	49	4940.6	0.646
(1992~1993) ²	13	2.34	NA	0.84	0.042	NA	37	4540.3	0.136	51	210.6	0.072	17	6.6	0.450	19	24.4	0.181	124	4781.9	0.839
(2007~2008) ³	22	2.61	50.99	1.31	0.058	NA				62	579	0.149									
(2013~2014) ⁴	8	NA	NA	NA	NA	NA							13	NA	NA	15	NA	NA			
2017-this study	10	4.65	9.19	1.58	0.03	2.30	17	3589.9	0.180	28	164.1	0.107	10	6.255	0.269	10	80.311	2.844	65	3840.5	3.400

1: Yang et al., 1996; 2: Han et al., 1997; 3: Kong et al., 2010; 4: Wang et al., 2016.

Table S3. A list of fish species composition and major characteristics in Danjiangkou Reservoir, compiled from our survey data during 2013–2018 (Yin et al., 2021). L: Limnicolous, P: Potamophilus, RL: River-lake migratory. C: Carnivorous, D: Detritivorous, F: Filtering, H: Herbivorous; O: Omnivorous.

Order	Species	Trophic category	Ecological category	Artificially stocked or not	Commercial species or not
Cypriniformes	<i>Abbottina rivularis</i>	O	L	No	No
	<i>Acheilognathus macropterus</i>	D	L	No	No
	<i>Aristichthys nobilis</i>	F	RL	Yes	Yes
	<i>Carassius auratus</i>	O	L	No	Yes
	<i>Cobitis sinensis</i>	O	P	No	No
	<i>Ctenopharyngodon idellus</i>	H	RL	Yes	Yes
	<i>Culter alburnus</i>	C	L	Yes	Yes
	<i>Culter mongolicus</i>	C	L	Yes	Yes
	<i>Culter oxycephaloides</i>	C	L	No	Yes
	<i>Cultrichthys erythropterus</i>	C	L	No	Yes
	<i>Cyprinus carpio</i>	O	L	No	Yes
	<i>Elopichthys bambusa</i>	C	P	No	Yes
	<i>Hemiculter leucisculus</i>	O	L	No	Yes
	<i>Hypophthalmichthys molitrix</i>	F	RL	Yes	Yes
	<i>Megalobrama amblycephala</i>	H	L	Yes	Yes
	<i>Megalobrama skolkovii</i>	H	L	Yes	Yes
	<i>Misgurnus anguillicaudatus</i>	O	L	No	Yes
	<i>Mylopharyngodon piceus</i>	O	RL	Yes	Yes
	<i>Opsariichthys bidens</i>	C	P	No	Yes
	<i>Parabramis pekinensis</i>	H	L	Yes	Yes
	<i>Paracheilognathus imberbis</i>	D	L	No	No
	<i>Paramisgurnus dabryanus</i>	D	L	No	No
	<i>Pseudobrama simoni</i>	D	L	No	Yes
	<i>Pseudolaubuca sinensis</i>	O	L	No	Yes
	<i>Pseudorasbora parva</i>	O	L	No	No
	<i>Rhodeus ocellatus</i>	D	L	No	No
	<i>Sarcocheilichthys nigripinnis</i>	O	L	No	No
	<i>Saurogobio dabryi</i>	O	L	No	Yes
	<i>Spinibarbus sinensis</i>	O	L	No	No
	<i>Squalidus argentatus</i>	O	L	No	No
	<i>Squaliobarbus curriculus</i>	O	L	No	Yes
	<i>Xenocypris microlepis</i>	D	L	No	Yes
Siluriformes	<i>Ictalurus punctatus</i>	C	L	No	Yes
	<i>Pelteobagrus fulvidraco</i>	C	L	No	Yes
	<i>Pelteobagrus nitidus</i>	C	L	No	Yes
	<i>Pelteobagrus vachelli</i>	C	L	No	Yes
	<i>Pseudobagrus truncatus</i>	C	P	No	Yes
	<i>Silurus asotus</i>	C	L	No	Yes
Beloniformes	<i>Hyporhamphus intermedius</i>	O	L	No	Yes
Salmoniformes	<i>Neosalanx taihuensis</i>	O	L	No	Yes
Perciformes	<i>Channa argus</i>	C	L	No	Yes
	<i>Ctenogobius giurinus</i>	C	L	No	No
	<i>Micropercops swinhonis</i>	C	L	No	No
	<i>Mastacembelus aculeatus</i>	C	L	No	No

<i>Micropterus salmoides</i>	C	L	No	Yes
<i>Siniperca chuatsi</i>	C	L	Yes	Yes
<i>Siniperca kneri</i>	C	L	No	Yes

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