

Table S2 Identified taxa of macroinvertebrates found in the Sharong stream of Baima Snow Mountain, Yunnan, China. Abund refers to abundance and Prop refers to proportions of each taxon in different years. The top 3 dominant species have shown in bold in the table for each year.

Phyla	Classes	Families	Orders	Genus/Taxa	id	2017 Abund	2017 Prop	2018 Abund	2018 Prop	2019 Abund	2019 Prop
Arthropoda	Insecta	Perlidae	Plecoptera	<i>Kamimuria</i> sp.	Sp1	2	0.04	2	0.05	7	0.06
Arthropoda	Insecta	Perlidae	Plecoptera	<i>Neoperla</i> sp.	Sp2	1	0.02	0	0	0	0
Arthropoda	Insecta	Perlodidae	Plecoptera	<i>Paracapnia</i> sp.	Sp3	57	1.36	12	0.34	57	0.56
Arthropoda	Insecta	Perlodidae	Plecoptera	<i>Isoperla</i> sp.	Sp4	25	0.59	4	0.11	13	0.12
Arthropoda	Insecta	Peltoperlidae	Plecoptera	<i>Cryptoterla</i> sp.	Sp5	27	0.64	20	0.56	25	0.24
Arthropoda	Insecta	Chloroperlidae	Plecoptera	<i>Sweltsa</i> sp.	Sp6	12	0.28	0	0	67	0.66
Arthropoda	Insecta	Capniidae	Plecoptera	<i>Eucapnopsis</i> sp.	Sp7	113	2.70	260	7.40	364	3.59
Arthropoda	Insecta	Nemouridae	Plecoptera	<i>Amphinemura</i> sp1.	Sp8	119	2.84	136	3.87	1050	10.36
Arthropoda	Insecta	Nemouridae	Plecoptera	<i>Amphinemura</i> sp2.	Sp9	38	0.90	0	0	2	0.01
Arthropoda	Insecta	Nemouridae	Plecoptera	<i>Nemoura</i> sp.	Sp10	0	0	0	0	1	0.009
Arthropoda	Insecta	Rhyacophilidae	Trichoptera	<i>Rhyacophila</i> sp1.	Sp11	18	0.43	16	0.45	90	0.88
Arthropoda	Insecta	Rhyacophilidae	Trichoptera	<i>Rhyacophila</i> sp2.	Sp12	1	0.02	0	0	0	0
Arthropoda	Insecta	Stenopsychidae	Trichoptera	<i>Stenopsyche</i> sp.	Sp13	122	2.91	24	0.68	35	0.34
Arthropoda	Insecta	Rhyacophilidae	Trichoptera	<i>Himalopsyche</i> sp1.	Sp14	1	0.02	1	0.02	4	0.03
Arthropoda	Insecta	Rhyacophilidae	Trichoptera	<i>Himalopsyche</i> sp2.	Sp15	0	0	0	0	6	0.05
Arthropoda	Insecta	Hydropsychidae	Trichoptera	<i>Hydropsyche</i> sp.	Sp16	15	0.35	14	0.39	52	0.51
Arthropoda	Insecta	Hydropsychidae	Trichoptera	<i>Macrostemum</i> sp.	Sp17	0	0	0	0	1	0.009
Arthropoda	Insecta	Lepidostomatidae	Trichoptera	<i>Lepidostoma</i> sp1.	Sp18	5	0.11	7	0.19	0	0
Arthropoda	Insecta	Lepidostomatidae	Trichoptera	<i>Lepidostoma</i> sp2.	Sp19	44	1.05	17	0.48	0	0
Arthropoda	Insecta	Limnephilidae	Trichoptera	<i>Phylloicus</i> sp.	Sp20	15	0.35	25	0.71	35	0.34
Arthropoda	Insecta	Leptocerdae	Trichoptera	<i>Nectopsyche</i> sp.	Sp21	3	0.07	0	0	19	0.18
Arthropoda	Insecta	Glossosomatidae	Trichoptera	<i>Glossosoma</i> sp.	Sp22	3	0.07	2	0.05	77	0.76
Arthropoda	Insecta	Philopotamidae	Trichoptera	<i>Chimarra</i> sp.	Sp23	0	0	1	0.02	13	0.12
Arthropoda	Insecta	Athericidae	Diptera	<i>Suragina</i> sp.	Sp24	6	0.14	19	0.54	31	0.30
Arthropoda	Insecta	Tipulidae	Diptera	<i>Tipula</i> sp.	Sp25	1	0.02	2	0.05	7	0.06
Arthropoda	Insecta	Limoniidae	Diptera	<i>Hexatoma</i> sp.	Sp26	15	0.35	10	0.28	38	0.37
Arthropoda	Insecta	Tipulidae	Diptera	<i>Antocha</i> sp.	Sp27	23	0.54	1	0.02	58	0.57
Arthropoda	Insecta	Tabanidae	Diptera	<i>Tabanus</i> sp.	Sp28	0	0	0	0	1	0.009
Arthropoda	Insecta	Tipulidae	Diptera	<i>Dicranota</i> sp.	Sp29	19	0.45	23	0.65	50	0.49
Arthropoda	Insecta	Ceratopogonidae	Diptera	<i>Bezzia</i> sp.	Sp30	1	0.02	2	0.05	11	0.10
Arthropoda	Insecta	Orthocladiidae	Diptera	Orthocladiidae	Sp31	62	1.48	382	10.88	521	5.14
Arthropoda	Insecta	Tanypodinae	Diptera	Tanypodinae	Sp32	0	0	0	0	3	0.02
Arthropoda	Insecta	Chironominae	Diptera	Chironominae	Sp33	25	0.59	19	0.54	101	0.99
Arthropoda	Insecta	Chironomidae	Diptera	Chironomidae	Sp34	9	0.21	8	0.22	36	0.35
Arthropoda	Insecta	Dixidae	Diptera	<i>Dixella</i> sp	Sp35	2	0.04	0	0	11	0.10
Arthropoda	Insecta	Deuterophlebiidae	Diptera	<i>Deuterophlebia</i> sp.	Sp36	6	0.14	6	0.17	63	0.62
Arthropoda	Insecta	Deuterophlebiidae	Diptera	<i>Deuterophlebia</i> sp.	Sp37	0	0	1	0.02	0	0

Arthropoda	Insecta	Dolichopodidae	Diptera	Dolichopodidae	Sp38	0	0	3	0.08	9	0.08
Arthropoda	Insecta	Simuliidae	Diptera	<i>Prosimulium</i> sp.	Sp39	151	3.60	100	2.84	1232	12.16
Arthropoda	Insecta	Psychodidae	Diptera	<i>Pericoma</i> sp.	Sp40	64	1.52	112	3.19	193	1.90
Arthropoda	Insecta	Psychodidae	Diptera	<i>Maruina</i> sp.	Sp41	0	0	0	0	1	0.009
Arthropoda	Insecta	Baetidae	Ephemeroptera	<i>Baetis</i> sp1.	Sp42	976	23.32	283	8.06	968	9.55
Arthropoda	Insecta	Baetidae	Ephemeroptera	<i>Baetis</i> sp2.	Sp43	2	0.04	0	0	0	0
Arthropoda	Insecta	Baetidae	Ephemeroptera	<i>Alainites</i> sp.	Sp44	200	4.78	193	5.49	181	1.78
Arthropoda	Insecta	Baetidae	Ephemeroptera	<i>Baetiella marginata</i> .	Sp45	541	12.93	753	21.45	2447	24.15
Arthropoda	Insecta	Baetidae	Ephemeroptera	<i>Baetiella sexta</i> .	Sp46	25	0.59	0	0	8	0.078
Arthropoda	Insecta	Siphonuridae	Ephemeroptera	<i>Ameletus</i> sp.	Sp47	1	0.02	5	0.14	3	0.02
Arthropoda	Insecta	Leptophlebiidae	Ephemeroptera	<i>Habrophlebiodes</i> sp.	Sp48	1	0.02	0	0	42	0.41
Arthropoda	Insecta	Caenidae	Ephemeroptera	<i>Caenis</i> sp.	Sp49	1	0.02	0	0	0	0
Arthropoda	Insecta	Heptageniidae	Ephemeroptera	<i>Iron</i> sp1.	Sp50	13	0.31	1	0.02	0	0
Arthropoda	Insecta	Heptageniidae	Ephemeroptera	<i>Epeorus</i> sp.	Sp51	94	2.24	99	2.82	248	2.44
Arthropoda	Insecta	Heptageniidae	Ephemeroptera	<i>Iron</i> sp2.	Sp52	0	0	11	0.31	15	0.14
Arthropoda	Insecta	Heptageniidae	Ephemeroptera	<i>Ecdyonurus</i> sp.	Sp53	33	0.78	147	4.18	181	1.78
Arthropoda	Insecta	Heptageniidae	Ephemeroptera	<i>Rhithrogena</i> sp1.	Sp54	818	19.55	57	1.62	18	0.17
Arthropoda	Insecta	Heptageniidae	Ephemeroptera	<i>Rhithrogena</i> sp2.	Sp55	1	0.02	0	0	0	0
Arthropoda	Insecta	Ephemera	Ephemeroptera	<i>Ephemera</i> sp.	Sp56	0	0	1	0.02	1	0.009
Arthropoda	Insecta	Ephemera	Ephemeroptera	<i>Ephemera</i> hsui	Sp57	0	0	1	0.02	0	0
Arthropoda	Insecta	Psephenidae	Coleoptera	<i>Nipponeubria</i> sp.	Sp58	0	0	0	0	1	0.009
Arthropoda	Insecta	Scirtidae	Coleoptera	<i>Hydrocyphon</i> sp.	Sp59	42	1.00	40	1.13	82	0.80
Arthropoda	Insecta	Elmidae	Coleoptera	Elmidae	Sp60	26	0.62	29	0.82	13	0.12
Arthropoda	Insecta	Elmidae	Coleoptera	<i>Stenelmis</i> sp.	Sp61	3	0.07	25	0.71	93	0.91
Arthropoda	Insecta	Elmidae	Coleoptera	<i>Oulimnius</i> sp.	Sp62	75	1.79	1	0.02	18	0.17
Arthropoda	Insecta	Dytiscidae	Coleoptera	<i>Hydaticus</i> sp.	Sp63	0	0	1	0.02	0	0
Arthropoda	Insecta	Hydrophilidae	Coleoptera	<i>Berosus</i> sp.	Sp64	0	0	1	0.02	0	0
Annelida	Clitellata	Tubificidae	Tubificida	<i>Limnodrilus</i> sp.	Sp65	304	7.26	599	17.06	1458	14.39
Platyhelminthes	Rhabditophora	Planariidae	Tricladida	<i>Planaria</i> sp.	Sp66	0	0	4	0.11	15	0.14
Annelida	Clitellata	Glossiphoniidae	Arhynchobdellida	<i>Erpobdella</i> sp.	Sp67	1	0.02	2	0.05	4	0.04
Arthropoda	Arachnida	Hydrachnidae	Trombidiformes	water mites	Sp68	1	0.02	1	0.02	17	0.16
Arthropoda	Entognatha	Poduridae	Poduromorpha	<i>Podura</i> sp.	Sp69	0	0	4	0.11	4	0.04
Arthropoda	Malacostraca	Gammaridae	Amphipoda	<i>Gammarus</i> sp.	Sp70	21	0.50	23	0.65	27	0.26
Arthropoda	Insecta	Osmylidae	Neuroptera	<i>Osmylus</i> sp.	Sp71	0	0	0	0	1	0.009