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Supplementary material

The effects of altered flow and bed sediment on macroinvertebrates in stream mesocosms

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Table S1. Pseudo-*F* values and probability levels for pairwise permutational analysis of variance (PERMANOVA) comparisons of flow scenarios at Day 30 and Day 70

FF, fast–fast flow scenario; FS, fast–slow scenario, SS, slow–slow scenario; SF, slow–fast scenario

Flow scenario	Day 30	Day 70
FF *v*. SS	2.5**	2.4**
FF *v*. FS	n.s.	2.8**
FF *v*.. SF	2.4**	n.s.
SS *v*. FS	2.5**	1.7**
SS *v*. SF	n.s.	1.9**
FS *v*. SF	2.5**	2.9**

Table S2. Similarity percentage (SIMPER) results of macroinvertebrate taxa and trait-classes contributing to differences (Bray–Curtis distance) among flow scenarios

Codes for trait classes are explained in Table 1 of the main paper

Variable	Mean density in fast flows	Mean prevalence in fast flows	Mean density in slow flows	Mean prevalence in slow flows	Dissimilarity ratio	Cumulative percentage
Taxon						
Day 30						
Athericidae	0.64		0.03		3.12	4.85
Baetidae	0.65		0.06		2.23	9.60
Dytiscidae	0.14		0.62		1.63	13.69
Ephemerellidae	0.69		0.20		3.36	17.54
Day 70						
Hydropsychidae	0.65		0.03		2.10	4.99
Baetidae	0.56		0.10		2.08	8.75
Hydroptilidae	0.45		0.00		1.09	12.45
Polycentropodidae	0.47		0.04		1.29	15.94
Leuctridae	0.52		0.61		1.24	19.38
Trait						
Day 30						
MaxS_1cm		0.40		0.34	1.04	8.39
Pcyc_gt1		0.51		0.56	0.99	15.61
Repr_cfr		0.19		0.23	1.06	22.36
Day 70						
Repr_ccf		0.32		0.26	1.04	13.78
MaxS_1cm		0.36		0.29	1.32	24.99

Table S3. Similarity percentage (SIMPER) results of macroinvertebrate taxa and trait classes contributing to differences (Bray–Curtis distance) between sediment types

Codes for trait classes are explained in Table 1 of the main paper

Variable	Mean density in clean sediment	Mean prevalence in clean sediment	Mean density in experimentally colmated sediment	Mean prevalence in experimentally colmated sediment	Dissimilarity ratio	Cumulative percentage
Taxon						
Leuctridae	0.37		0.49		1.27	3.1
Ephemeridae	0.31		0.34		1.20	6.0
Dytiscidae	0.36		0.24		1.14	8.9
Baetidae	0.26		0.42		1.28	11.6
Hirudinea	0.32		0.15		1.00	14.3
Hydracarina	0.46		0.26		1.40	17.0
Caenidae	0.33		0.27		1.20	19.6
Trait						
Pcyc_gt1		0.483		0.502	0.84	11.05
Repr_ccf		0.295		0.265	0.80	18.09
MaxS_1cm		0.34		0.359	0.78	24.58