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Supplementary material

Plant litter diversity affects invertebrate shredder activity and the quality of fine particulate organic matter in streams

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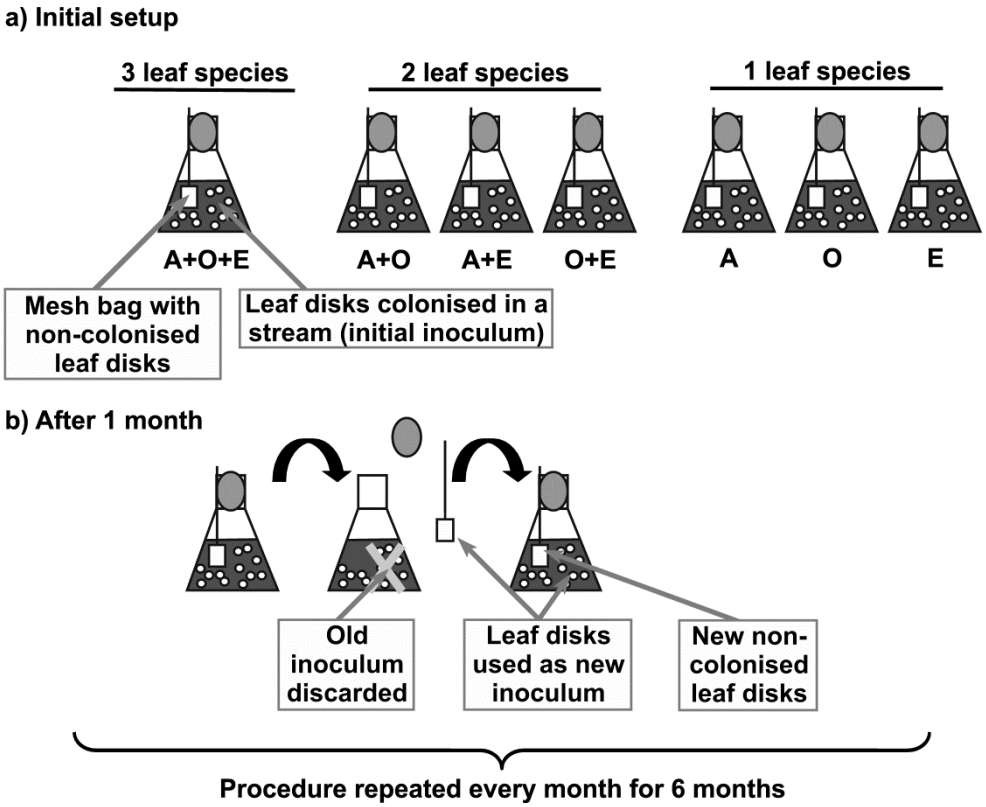

Fig. S1. Scheme of leaf species treatments used in the feeding experiment: (*a*) initial setup included microcosms with mesh bags containing non-colonised leaf discs of alder (A), oak (O) and eucalypt (E) in all possible combinations (3, 2 and 1 leaf species) plus discs of the 3 leaf species colonised in a stream for 2 weeks (initial inoculum); (*b*) after 1 month, the old inoculum was discarded and leaf discs in the mesh bags were used as inoculum for new microcosms containing new mesh bags with non-colonised leaf discs, and keeping leaf species treatment constant. This procedure was repeated under aseptic conditions every month for 6 months. After 2 and 6 months, leaf discs from each mesh bag were used for a feeding experiment with invertebrate shredders.

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Table S1. Elemental composition of leaf litter used to feed invertebrates and C : N imbalance between leaf litter and invertebrate tissues

Leaf litter was colonised in a stream and then transferred to microcosms to simulate leaf species loss at short time (2 months) and long time (6 months). Nitrogen (N) and carbon (C) are percentage of dry mass and C : N is expressed as molar ratio. A, alder; O, oak; E, eucalyptus. M ± s.e.

Leaf treatment	Time (months)	Leaf C (%)	Leaf N (%)	Leaf C : N	C : N imbalance
A	2	52.41 ± 0.18	5.23 ± 0.18	11.73 ± 0.37	5.88 ± 0.37
	6	53.17 ± 0.22	5.34 ± 0.17	11.65 ± 0.40	5.80 ± 0.40
O	2	47.98 ± 0.65	3.23 ± 0.09	17.35 ± 0.61	11.50 ± 0.61
	6	48.83 ± 0.34	3.22 ± 0.04	17.67 ± 0.25	11.83 ± 0.25
E	2	56.83 ± 0.12	2.53 ± 0.02	26.24 ± 0.12	20.39 ± 0.12
	6	56.17 ± 0.10	2.51 ± 0.01	26.08 ± 0.04	20.23 ± 0.04
AO	2	50.23 ± 0.28	4.25 ± 0.05	13.78 ± 0.23	7.94 ± 0.23
	6	51.00 ± 0.19	4.20 ± 0.13	14.19 ± 0.39	8.35 ± 0.39
AE	2	56.44 ± 0.02	3.24 ± 0.06	20.32 ± 0.37	14.47 ± 0.37
	6	53.02 ± 2.45	3.08 ± 0.19	20.12 ± 0.30	14.27 ± 0.30
OE	2	54.75 ± 0.43	2.78 ± 0.03	23.00 ± 0.29	17.16 ± 0.29
	6	53.98 ± 0.15	2.71 ± 0.05	23.24 ± 0.38	17.39 ± 0.38
AOE	2	54.68 ± 0.28	3.54 ± 0.04	18.02 ± 0.12	12.18 ± 0.12
	6	54.01 ± 0.21	3.25 ± 0.05	19.42 ± 0.39	13.57 ± 0.39