

Table A. Earthworm species found at each site after hand-sorting of the litter and hot mustard extraction for the mineral soil. Data from Lejoly et al. (2021).

Site	Species	Functional group
EMEND	<i>Dendrobaena octaedra</i> Savigny	Epigeic
Valcartier	<i>Dendrobaena octaedra</i> Savigny	Epigeic
	<i>Aporrectodea turgida</i> Eisen	Endogeic
	<i>Lumbricus rubellus</i> Hoffmeister	Endogeic
	<i>Lumbricus</i> sp.	Anecic
Grands Jardins	<i>Dendrodrilus rubidus</i> Savigny (now <i>Bimastos rubidus</i>)	Epigeic
	<i>Aporrectodea</i> spp.	Endogeic
	<i>Octolasion tyrtaeum</i> Savigny	Endogeic
	<i>Lumbricus terrestris</i> L.	Anecic

Table B. Post-hoc pairwise comparisons of the permutational ANOVA (Table 1 of the manuscript). When the interaction between site and invasion was non-significant, the differences between sites are presented. When the interaction was significant (for ITS – MIN), the comparison between invaded and control samples is presented for each site separately. Grands Jardins (GJ) is a Podzol, Valcartier (VAL) a Brunisol, and EMEND a Luvisol.

		Pairs	SumofSq	F model	R ²	p-value
Fungi	LFH	EMEND vs VAL	1.25	8.7	0.35	<0.01
		EMEND vs GJ	0.95	6.1	0.33	<0.01
		VAL vs GJ	0.90	9.0	0.45	<0.01
	MIN	EMEND: Control vs invaded	0.23	1.8	0.16	<0.01
		VAL: Control vs invaded	0.17	1.1	0.12	0.30
		GJ: Control vs invaded	0.27	1.5	0.27	0.10
Bacteria	LFH	EMEND vs VAL	0.98	11.2	0.40	<0.01
		EMEND vs GJ	1.40	21.8	0.61	<0.01
		VAL vs GJ	0.66	6.8	0.38	<0.01
	MIN	EMEND vs VAL	0.87	12.3	0.38	<0.01
		EMEND vs GJ	0.31	2.9	0.16	<0.05
		VAL vs GJ	0.36	4.2	0.23	<0.01
PLFA	LFH	EMEND vs VAL	0.07	6.0	0.26	<0.05
		EMEND vs GJ	0.14	38.2	0.76	<0.01
		VAL vs GJ	0.14	10.6	0.45	<0.01
	MIN	EMEND vs VAL	0.09	15.5	0.45	<0.01
		EMEND vs GJ	0.03	4.3	0.21	<0.01
		VAL vs GJ	0.04	7.5	0.33	<0.01

Table C. Additional pairwise comparisons for the ITS – Mineral soils (where the interaction between site and invasion was significant).

Pairs	SumofSq	F model	R ²	p-value
EW-EMEND vs EW-VAL	0.87	6.4	0.33	<0.01
EW-EMEND vs CONT-EMEND	0.23	1.8	0.16	<0.01
EW-EMEND vs EW-GJ	0.38	2.5	0.24	<0.05
EW-EMEND vs CONT-GJ	0.46	3.7	0.32	<0.05
EW-EMEND vs CONT-VAL	0.41	3.1	0.31	<0.05
EW-VAL vs CONT-EMEND	0.68	4.7	0.32	<0.01
EW-VAL vs EW-GJ	0.45	2.7	0.23	<0.01
EW-VAL vs CONT-GJ	0.54	3.8	0.30	<0.01
EW-VAL vs CONT-VAL	0.17	1.1	0.12	0.30
CONT-EMEND vs EW-GJ	0.35	1.9	0.28	<0.05
CONT-EMEND vs CONT-GJ	0.39	2.9	0.37	<0.05
CONT-EMEND vs CONT-VAL	0.35	2.3	0.37	<0.10
EW-GJ vs CONT-GJ	0.27	1.5	0.27	0.10
EW-GJ vs CONT-VAL	0.30	1.4	0.32	0.20
CONT-GJ vs CONT-VAL	0.28	1.9	0.39	0.10

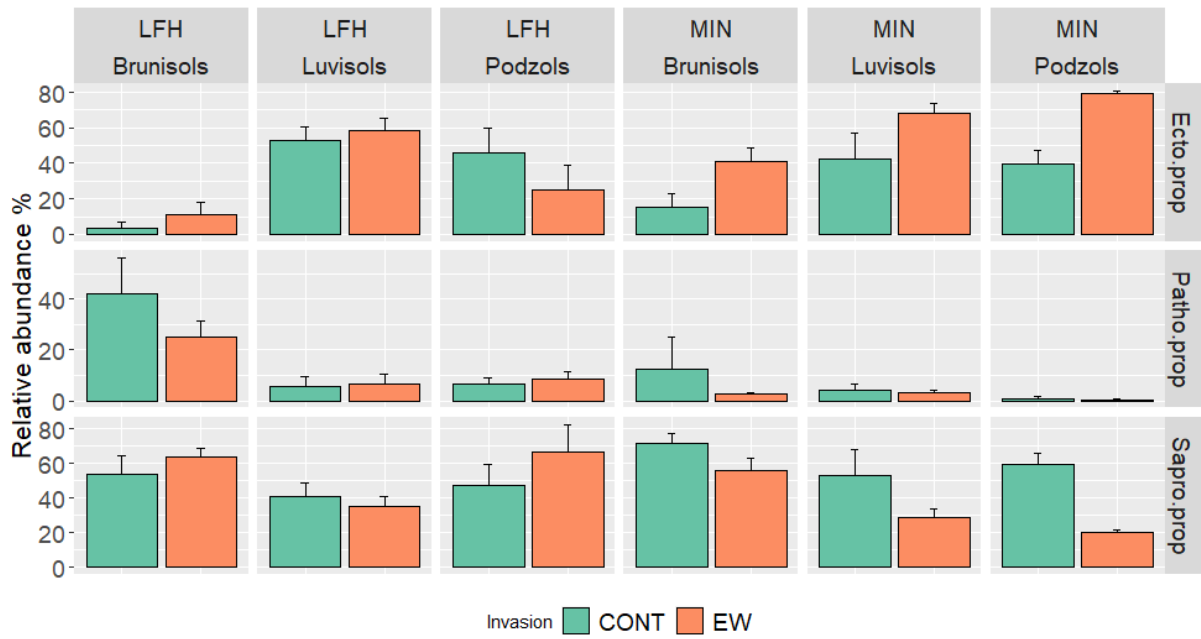


Figure A. Average (± 1 SE) relative abundances (as number of reads) of fungal guilds per site. This corresponds to Figure 2 of the current manuscript.

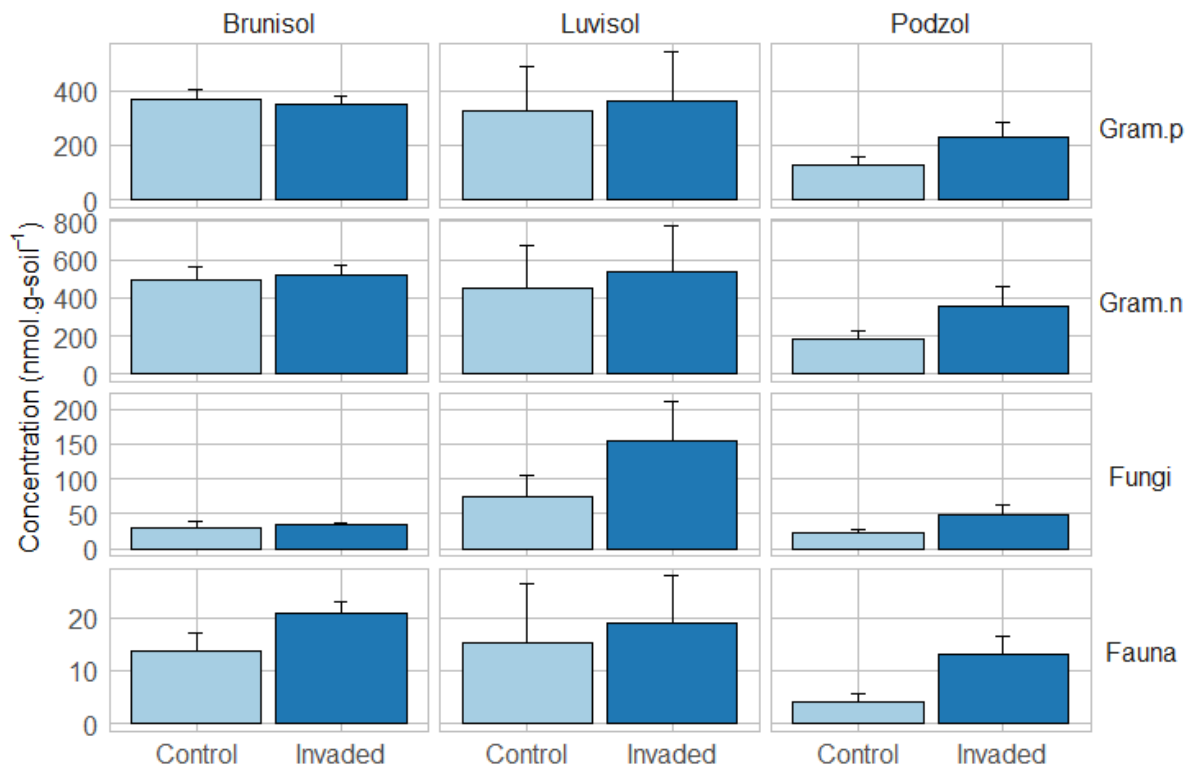


Figure B. Average (± 1 SE) concentrations of PLFA groups per site/soil type. This corresponds to Figure 4 of the current manuscript.

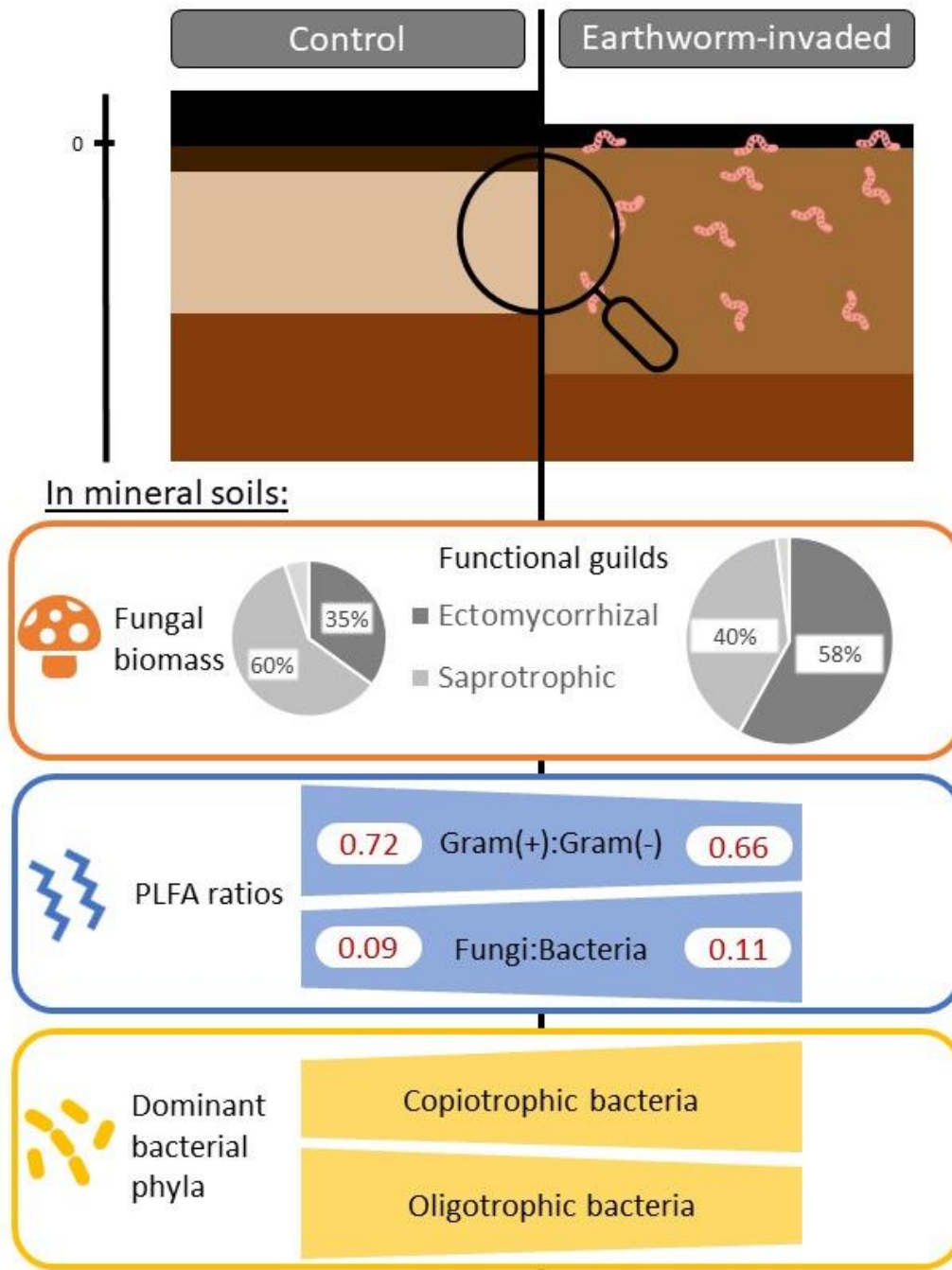


Figure C. Graphical abstract.