Appendix A

Park	Creation date	Renovation or extension date	Surface area	District
Square Marigny	1840	1999	131.020 m²	8th
Parc Monceau	1861		83.300 m²	8th
Square du Temple	1857		7.965 m²	3th
Jardin de Ranelagh	1860	1996	60.500 m²	16th
Square des Batignolles	1862		16.615 m²	17th
Parc des Buttes-Chaumont	1864	1967	247.316 m²	19th
Parc Montsouris	1875		154.640 m²	14th
Jardin des Serres d'Auteuil	1898	1954	60.471 m²	16th
Square de la place de la Nation	1875		6.173 m²	11th
Square Henri Galli	1925		2.000 m²	4th
Square Louise Michel	1927	2004	25.488 m²	18th
Parc Kellermann	1937	1951	55.581 m²	13th
Square Parodi	1958	1972 and 1997	23.595 m²	16th
Square Dalpayrat	1985	2008	9.898 m²	15th
Parc de Belleville	1988		36.000 m²	20th
Parc Georges Brassens	1982		87.293 m²	15th
Parc André-Citroën	1986	2014	138.800 m²	15th
Jardins d'Eole	2007		42.000 m²	18th

Table S1. Characteristics of the 18 Parisian parks included in this study.

Appendix B

Table S2. Correlation between soil physico-chemical characteristics and dim1 in cluster analysis

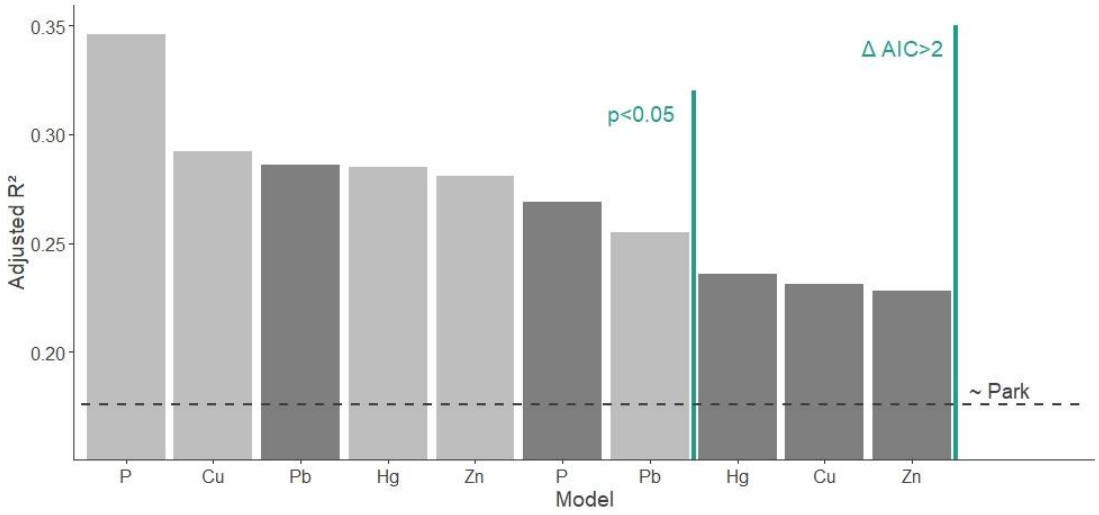
	Topsoils	Subsoils	
Pb	t=-26.69, P<0.001, r=-0.97	t=-14.39, P<0.001, r=-0.89	
Zn	t=-21.35, P<0.001, r=-0.95	t=-18.63, P<0.001, r=-0.93	
Hg	t=-14.69, P<0.001, r=-0.90	t=-15.51, P<0.001, r=-0.91	
Cd	t=-13.30, P<0.001, r=-0.88	t=-11.34, P<0.001, r=-0.84	
Cu	t=-13.62, P<0.001, r=-0.88	t=-10.91, P<0.001, r=-0.83	
SOM	t=-10.94, P<0.001, r=-0.83	t=-10.40, P=0.022, r=-0.82	
As	t=-9.80, P<0.001, r=-0.81	t=-10.58, P<0.001, r=-0.83	
ON	t=-7.94, P<0.001, r=-0.74	t=-8.59, P<0.001, r=-0.77	
P	t=-8.20, P<0.001, r=-0.75	t=-6.70, P<0.001, r=-0.68	
CO_3	t=-7.17, P<0.001, r=-0.70	t=-6.12, P<0.001, r=-0.65	
Se	t=-6.36, P<0.001, r=-0.66	t=-5.89, P<0.001, r=-0.66	
C/N	t=-6.21, P<0.001, r=-0.65	t=-4.34, P<0.001, r=-0.52	
Ni	t=-4.43, P<0.001, r=-0.52	t=-4.45, P<0.001, r=-0.52	
Resistivity	t=2.74, P=0.008, r=0.36	t=2.98, P=0.004, r=0.38	
pH	t=-0.85, P=0.407, r=-0.12	t=-0.76, P=0.468, r=-0.10	
Cr	t=0.23, P=0.819, r=0.03	t=-0.63, P=0.532, r=-0.09	

|r|>0.80

|r|>0.50

Appendix C

(a)



(b)

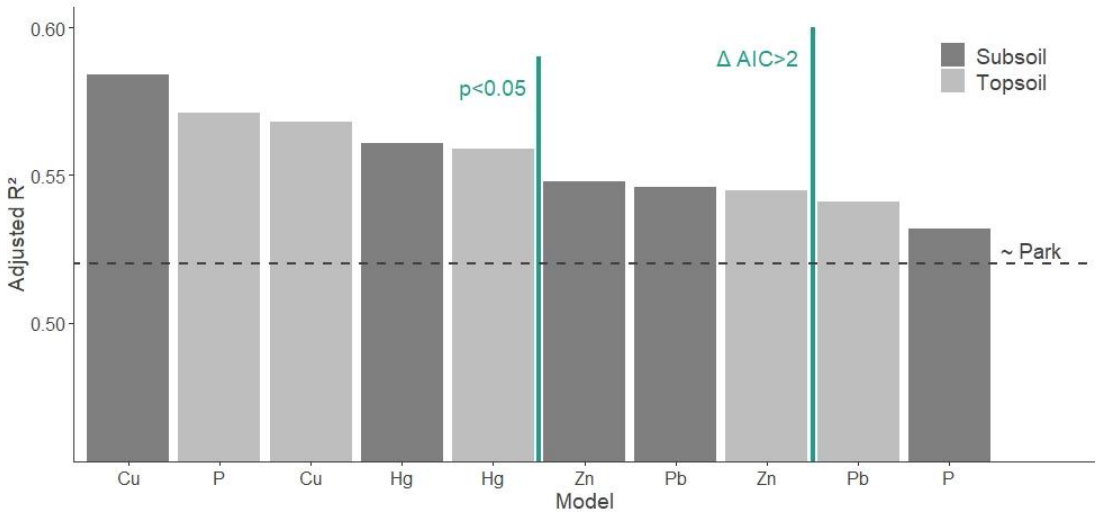


Figure S1. Best environmental variables explaining the abundance of adult and juvenile earthworms – Adjusted regression coefficient R^2 for each model with adult (a) or (b) juvenile abundance as dependent variable and one of the 10 chemical variable measured in the subsoil (in black) and topsoil (in grey) as explanatory variable. The park name was always added as categorical explanatory variable. We highlight the adjusted R^2 of the model including only the park name as explanatory variable ($R^2 = 0.171$ and $R^2 = 0.520$, respectively), as well as the models with an AIC at least two points lower than the model including the park name only (Δ AIC > 2), and in which the association between earthworm abundance and the chemical variable was significant (p-value < 0.05).

P: available phosphorous, Cu: copper, Hg: Mercury, Zn: zinc, Pb: lead.