Supplement

Recently fixed carbon fuels microbial activity several meters below the soil surface

5 Andrea Scheibe[1], Carlos A. Sierra[2,3], Marie Spohn[*,1,4]

[1]Bayreuth Center of Ecology and Environmental Research (BayCEER), University of Bayreuth, Germany
[2]Department of Biogeochemical Processes, Max Planck Institute for Biogeochemistry, Jena, Germany
[3]Department of Ecology, Swedish University of Agricultural Sciences, Uppsala, Sweden
10 [4]Department of Soil and Environment, Swedish University of Agricultural Sciences, Uppsala, Sweden

Correspondence to: Marie Spohn (marie.spohn@slu.se)

15

20
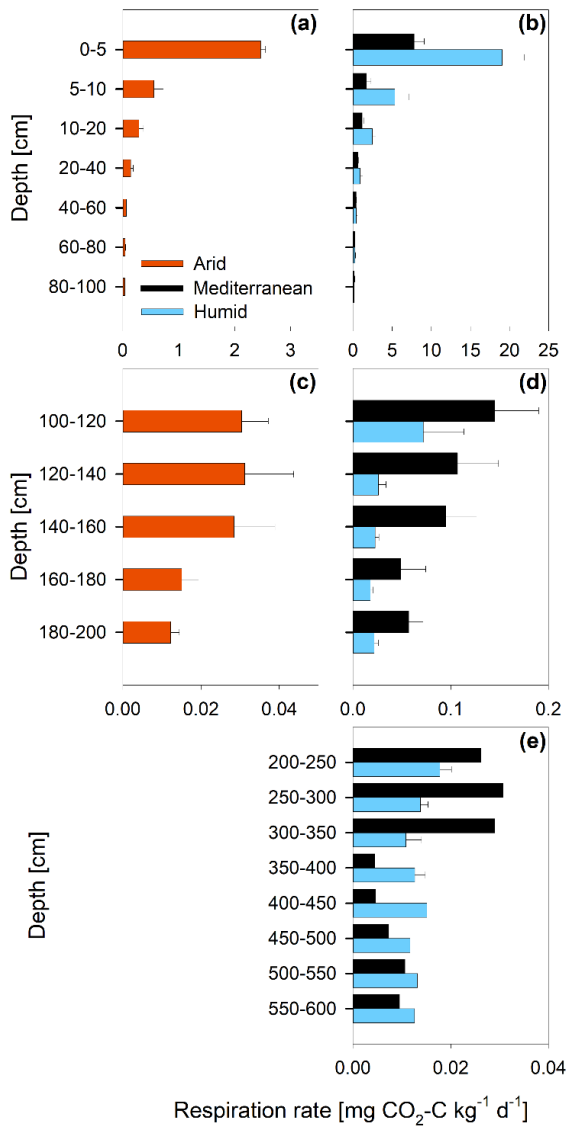
Figure S1: Soil respiration rate (mean ± standard error) of soil depth increments down to **(a, b)** 100 cm, **(c, d)** 200 cm, and **(e)** 600 cm depth at three sites (arid, mediterranean, humid) located along a precipitation gradient in the Coastal Cordillera of Chile (0-200 cm: n = 3, except for humid site with n = 4; > 200 cm: n = 1, except for humid site 200-400 cm with n = 2).

25   **Table S1:** Percentage (% (w/w)) of soil fine fraction (<2 mm; mean ± standard error) in soils at three sites (arid, mediterranean, humid) located along a precipitation gradient in the Coastal Cordillera of Chile (0–200 cm: n = 3, except for humid site with n = 4; 200–600 cm: n = 1, except for humid site 200–400 cm with n = 2).

Depth [cm]	Fine fraction (< 2 mm) [%]		
	Arid	Mediterranean	Humid
0 - 5	87.2 ± 3.0	97.8 ± 1.5	92.7 ± 2.2
5 - 10	87.3 ± 2.0	98.4 ± 1.1	91.4 ± 1.9
10 - 20	83.5 ± 2.0	98.7 ± 1.1	91.1 ± 1.6
20 - 40	68.9 ± 9.5	99.3 ± 0.4	83.3 ± 10.0
40 - 60	59.7 ± 8.2	99.7 ± 0.03	87.0 ± 2.8
60 - 80	59.3 ± 6.7	99.6 ± 0.1	88.8 ± 3.9
80 - 100	59.2 ± 8.1	99.4 ± 0.1	78.3 ± 4.2
100 - 120	61.8 ± 5.8	98.6 ± 0.4	73.7 ± 10.8
120 - 140	54.1 ± 1.9	98.2 ± 0.7	77.3 ± 8.2
140 - 160	53.6 ± 4.8	97.6 ± 0.7	84.9 ± 2.7
160 - 180	50.7 ± 2.9	96.6 ± 1.2	88.7 ± 3.2
180 - 200	46.7 ± 0.8	96.1 ± 1.4	86.6 ± 1.9
200 - 250		95.6	86.8 ± 2.5
250 - 300		94.4	82.3 ± 0.9
300 - 350		93.0	81.0 ± 2.6
350 - 400		93.7	80.6 ± 3.3
400 - 450		95.2	72.3
450 - 500		96.0	77.2
500 - 550		94.5	77.7
550 - 600		96.2	71.9