

Supplementary Materials:

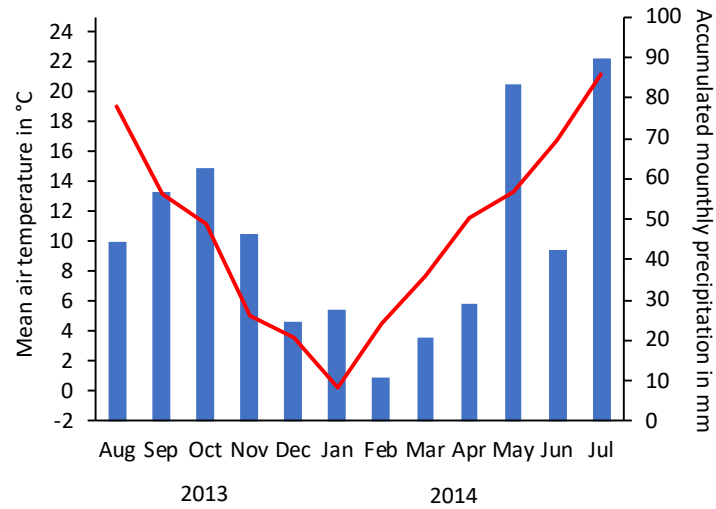


Figure S1. Monthly average precipitation (mm; blue bars) and mean air temperature (°C; red line) during the sampling period (August 2013–July 2014). Aug = August, Sep = September, Oct = October, Nov = November, Dec = December, Jan = January, Feb = February, Mar = March, Apr = April, Jun = June, Ju = July. Data from DWD (German Federal Meteorological Service and CDC (Climate Data Center, Weather Station Lindenberg (Station ID: 3015), 13.07.2018).

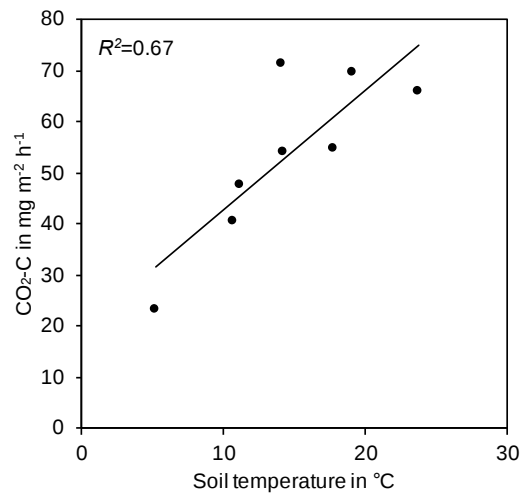


Figure S2. Relationship between mean soil CO₂-C emissions (mg m⁻² h⁻¹) and soil temperature (°C of the top 10 cm soil depth).

Table S1. Elemental composition of the mineral soil, Pine-tree lappet (*Dendrolimus pini* L.) feces, and Scots pine (*Pinus sylvestris* L.) needle litter used in the incubation experiment.

Element	Soil	Needle	Feces
N (%)	0.46	0.93	0.84
C (%)	13.81	61.04	60.59
Ca (%)	0.05	0.49	0.51
Fe (%)	0.36	0.03	0.02
K (%)	0.05	0.20	0.14
Mg (%)	0.02	0.06	0.05
Mn (%)	>0.01	0.03	0.02
Na (%)	0.02	0.01	0.01
P (%)	0.02	0.05	0.05
S (%)	0.05	0.06	0.05

Samples were dried at 40 °C for 48 h, finely ground and 100 mg material based on three subsamples was extracted under pressure in 2 mL 65% HNO₃ at 180 °C for 10 h.