Supplementary information

Summer sunlight has immediate and lasting effects on C turnover in standing litter and soil in a seasonal Patagonian woodland

Plant and Soil

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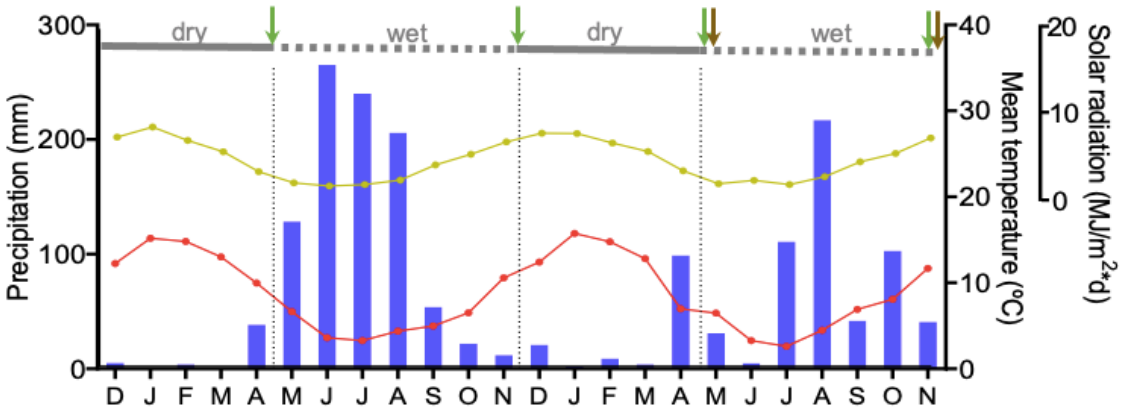

Fig. S1 Precipitation (blue bars), mean temperature (red line), and solar radiation (yellow line) during the two years of the field experiment. Gray line on the figure shows seasons over time: dry summer season (full line) and wet winter season (dotted line). Arrows correspond to sampling dates: litterbag (green arrows) and soil sampling (brown arrows). Sources: AIC (precipitation and temperature) and NASA (radiation). Modified by Berenstecher et al. 2020

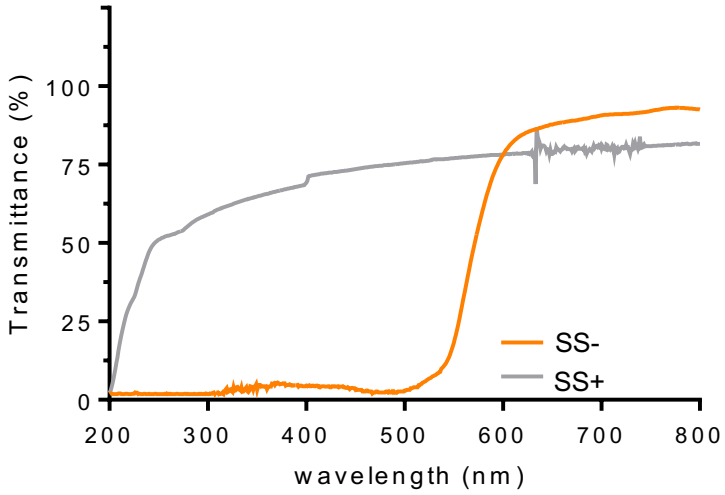

Fig. S2 Transmittance of plastic filters used to generate two solar radiation levels: attenuated summer sunlight [which effectively blocks all wavelengths that cause photodegradation > 550 nm, Rosco E-Color 135 Deep Golden Amber, (Austin and Ballaré 2010) orange line, SS-] and full summer sunlight (> 290 nm, Agropol agroethylene, grey line, SS+). Modified by Berenstecher et al. 2020

Table S1. Solar radiation (PAR, µmol, UV-B y UV-A, watt) and soil temperature (ºC) on surface and in deep (0-10 cm) under filters of two treatment (attenuated, SS-, and full, SS+, summer sunlight) and control (without filter) measured in two sampling dates: at the beginning of the dry season (December 2015) and wet season (May 2016). Mean and standard error is shown (n=5), n/a: no data available. Different letters indicate significant differences ($p < 0.05$)

	SS-	SS+	control
December			
radiation			
PAR	571 ± 96**a**	2.117 ± 52**b**	2.327 ± 104**b**
UV-A	0.28 ± 0.10**a**	29.27 ± 0.44**b**	32.81 ± 0.75**c**
UV-B	0.01 ± 0.005**a**	1.91 ± 0.031**b**	2.15 ± 0.042**c**
temperature			
surface	44.38 ± 0.86**a**	57.71 ± 1.96**b**	n/a
in deep	15.42 ± 0.45**a**	15.37 ± 0.33**a**	n/a
May			
radiation			
PAR	218 ± 18**a**	725 ± 60**b**	938 ± 73**c**
UV-A	0.23 ± 0.06**a**	8.19 ± 0.43**b**	10.44 ± 0.55**c**
UV-B	0.01 ± 0.003**a**	0.39 ± 0.020**b**	0.48 ± 0.25**c**
temperature			
surface	15.29 ± 1.03**a**	16.35 ± 1.27**a**	n/a
in deep	n/a	n/a	n/a

References

Berenstecher P, Vivanco L, Pérez LI, Ballaré C, Austin AT (2020) Sunlight Doubles Aboveground Carbon Loss in a Seasonally Dry Woodland in Patagonia. Curr Biol 30:3243-3251.e3. https://doi.org/10.1016/j.cub.2020.06.005