

Table. S1: Concentration (Conc mg g⁻¹organic carbon) of the aliphatic monomers present in the hydrolysable lipids of leaves, and roots of incense cedar (*Calocedrus decurrens*), sugar pine (*Pinus lambertiana*), mix of grass aboveground parts around the plots and stone oak (*Lithocarpus*).

	<i>Calocedrus decurrens</i>		<i>Pinus lambertiana</i>		Mix of Grass		<i>Lithocarpus</i>	
	Leaves	Roots	Needles	Roots	Leaves	Roots	Leaves	Roots
	Conc (mg g ⁻¹ OC)	Conc (mg g ⁻¹ OC)	Conc (mg g ⁻¹ OC)	Conc (mg g ⁻¹ OC)	Conc (mg g ⁻¹ OC)	Conc (mg g ⁻¹ OC)	Conc (mg g ⁻¹ OC)	Conc (mg g ⁻¹ OC)
<i>n</i> -Carboxylic acids								
Tetradecanoic acid (<i>n</i> -C _{14:0})	0.12	0.02	0.39	0.02	0.17	0.01	0.22	0.03
Hexadecanoic acid (<i>n</i> -C _{16:0})	0.98	0.52	1.43	0.56	2.17	0.82	2.06	0.75
Octadecanoic acid (<i>n</i> -C _{18:0})	0.09	0.14	0.16	0.15	0.33	0.44	0.31	0.12
Eicosanoic acid (<i>n</i> -C _{20:0})	0.09	1.02	0.09	1.25	0.04	0.10	0.44	0.05
Docosanoic acid (<i>n</i> -C _{22:0})	0.08	0.14	0.02	0.12	0.29	0.11	1.53	0.19
Tetracosanoic acid (<i>n</i> -C _{24:0})	0.13	0.49	0.11	0.61	0.09	0.17	1.28	0.07
ω -Hydroxy carboxylic acids								
16-Hydroxy hexadecanoic acid (ω C _{16:0})	5.44	3.51	2.51	2.99	0.69	0.60	1.30	1.71
18-Hydroxy Octadecanoic acid (ω C _{18:0})	0.19	3.84	0.12	2.52	0.05	0.06	0.20	0.37
20-Hydroxy eicosanoic acid (ω C _{20:0})	0.16	4.11	0.06	3.76	0.10	0.17	0.09	0.79
22-Hydroxy docosanoic acid (ω C _{22:0})	0.13	2.73	0.11	3.98	0.25	0.40	0.33	0.70

	<i>Calocedrus decurrens</i>		<i>Pinus lambertiana</i>		Mix of Grass		<i>Lithocarpus</i>	
	Leaves	Roots	Needles	Roots	Leaves	Roots	Leaves	Roots
	Conc (mg g ⁻¹ OC)	Conc (mg g ⁻¹ OC)	Conc (mg g ⁻¹ OC)	Conc (mg g ⁻¹ OC)	Conc (mg g ⁻¹ OC)	Conc (mg g ⁻¹ OC)	Conc (mg g ⁻¹ OC)	Conc (mg g ⁻¹ OC)
24-Hydroxy tetracosanoic acid (ω C _{24:0})	0.02	0.48	0.03	0.57	0.16	0.35	0.06	0.04
α,ω -Alkanedioic acids								
1,16-Hexadecanedioic acid (C _{16:0} diacid)	0.52	1.58	0.07	1.64	0.04	0.16	0.29	0.73
1,18-Octadecanedioic acid (C _{18:0} diacid)	0.19	2.17	–	1.47	0.02	0.07	0.20	0.48
1,20-Eicosanedioic acid (C _{20:0} diacid)	0.07	1.77	0.07	1.40	0.02	0.04	0.20	0.27
1,22-Docosanedioic acid (C _{22:0} diacid)	0.07	1.20	0.14	1.35	0.13	0.11	0.12	0.21
Mid-chain acids								
Mix of α,ω -Dihydroxyhexadecanoic acid (α = 9 and 10) (α,ω -diOH C _{16:0}) and 18-Hydroxy octadecenoic acid (ω C _{18:1})	45.48	12.87	4.02	12.89	0.09	1.38	23.09	19.79
α -Hydroxy hexadecanedioic acid (α -OH C _{16:0} diacid)	3.59	9.47	0.24	9.16	0.51	1.41	0.54	1.66
11,18-Dihydroxyoctadecenoic acid (11, 18-diOH C _{18:1})	0.11	0.12	–	0.10	–	0.08	2.68	0.57
α ,18-Dihydroxyoctadecenoic acids (α = 9 and 10) (α , 18 diOH C _{18:1})	0.31	0.22	0.03	0.23	0.10	0.07	1.74	0.74
9,10,18-Trihydroxyoctadecanoic acid (9, 10,18-triOH C _{18:0})	–	–	–	–	0.11	0.03	1.34	0.44

Table. S2: Normalised concentration (conc mg g⁻¹organic carbon) of each monomer in the hydrolysable lipids in the added ¹³C-labelled roots and mass change of the aliphatic monomers present in added ¹³C labelled roots (*Avena fatua*) after three years of incubation (%; mean ± SE; n = 3).

	<i>Avena fatua</i>	Ambient plots			Warmed plots		
		10-14 cm	45-49 cm	85-89 cm	10-14 cm	45-49 cm	85-89 cm
	Conc (mg g ⁻¹ OC)	Mass change (%)	Mass change (%)	Mass change (%)	Mass change (%)	Mass change (%)	Mass change (%)
<i>n</i> -Carboxylic acids							
Tetradecanoic acid (<i>n</i> -C _{14:0})	66.56	61.14 ± 9.65	92.95 ± 10.77	89.96 ± 7.84	46.48 ± 10.32	76.33 ± 18.39	56.82 ± 13.49
Hexadecenoic acid (<i>n</i> -C _{16:1})	289.78	12.56 ± 5.61	23.43 ± 7.74	35.00 ± 6.93	13.31 ± 1.94	20.21 ± 4.71	24.86 ± 5.78
Hexadecanoic acid (<i>n</i> -C _{16:0})	1071.63	46.91 ± 8.81	116.43 ± 24.02	131.68 ± 6.35	32.49 ± 2.22	90.63 ± 31.91	68.22 ± 12.60
Octadecadienoic acid (<i>n</i> -C _{18:2})	362.21	31.10 ± 16.02	53.78 ± 17.80	43.36 ± 1.09	28.76 ± 10.29	39.49 ± 12.98	31.58 ± 7.41
Octadecenoic acid (<i>n</i> -C _{18:1})	265.80	78.31 ± 38.27	174.32 ± 73.59	228.19 ± 26.84	54.50 ± 6.40	124.83 ± 36.44	124.30 ± 29.97
Octadecanoic acid (<i>n</i> -C _{18:0})	93.59	116.15 ± 29.93	311.09 ± 81.51	347.68 ± 48.88	74.67 ± 6.65	243.47 ± 96.22	180.93 ± 24.26
Eicosanoic acid (<i>n</i> -C _{20:0})	163.75	44.28 ± 4.59	56.75 ± 12.12	82.83 ± 7.27	28.61 ± 7.11	65.36 ± 21.93	50.10 ± 6.03
Tetracosanoic acid (<i>n</i> -C _{24:0})	1313.88	26.21 ± 1.82	23.64 ± 3.47	34.63 ± 7.32	17.71 ± 2.60	29.74 ± 5.35	29.26 ± 5.00
Hexacosanoic acid (<i>n</i> -C _{26:0})	666.71	52.40 ± 5.25	41.51 ± 7.87	54.02 ± 10.71	33.65 ± 5.68	52.66 ± 12.29	51.33 ± 18.15

	<i>Avena fatua</i>	Ambient plots			Warmed plots		
		10-14 cm	45-49 cm	85-89 cm	10-14 cm	45-49 cm	85-89 cm
	Conc (mg g ⁻¹ OC)	Mass change (%)	Mass change (%)	Mass change (%)	Mass change (%)	Mass change (%)	Mass change (%)
<i>n</i> -Alcohols							
Docosanol (Alcohol C _{20:0})	415.08	39.59 ± 4.47	36.30 ± 7.14	28.96 ± 10.51	29.42 ± 6.99	44.40 ± 8.16	47.68 ± 9.10
Mid-chain acids							
11,18-Dihydroxyoctadecenoic acid (11,18-diOH C _{18:1})	114.61	25.40 ± 3.42	21.33 ± 5.05	15.34 ± 7.65	16.33 ± 4.09	28.69 ± 5.02	29.93 ± 4.10
χ ,18-Dihydroxyoctadecenoic acids (χ = 9 and 10) (χ , 18 diOH C _{18:1})	72.16	106.09 ± 23.77	91.86 ± 11.74	96.84 ± 23.52	53.99 ± 10.07	117.53 ± 7.24	108.16 ± 17.08
ω -Hydroxy carboxylic acids							
16-Hydroxy hexadecanoic acid (ω C _{16:0})	970.04	34.80 ± 4.63	44.40 ± 8.24	43.07 ± 6.48	22.31 ± 4.53	42.26 ± 7.91	42.18 ± 8.44
18-Hydroxy Octadecanoic acid (ω C _{18:0})	37.49	42.99 ± 13.50	59.92 ± 16.95	56.84 ± 8.99	29.62 ± 16.23	72.28 ± 7.23	64.36 ± 7.57
20-Hydroxy eicosanoic acid (ω C _{20:0})	101.06	53.59 ± 10.81	58.67 ± 11.88	63.54 ± 20.88	48.01 ± 10.90	90.15 ± 3.23	79.50 ± 17.33
22-Hydroxy docosanoic acid (ω C _{22:0})	719.54	82.44 ± 4.89	78.99 ± 12.42	72.57 ± 12.05	61.26 ± 8.53	104.36 ± 11.25	91.15 ± 16.75

	<i>Avena fatua</i>	Ambient plots			Warmed plots		
		10-14 cm	45-49 cm	85-89 cm	10-14 cm	45-49 cm	85-89 cm
	Conc (mg g ⁻¹ OC)	Mass change (%)	Mass change (%)	Mass change (%)	Mass change (%)	Mass change (%)	Mass change (%)
24-Hydroxy tetracosanoic acid (ω C _{24:0})	1450.37	67.85 ± 6.34	57.60 ± 10.25	56.94 ± 11.52	50.68 ± 7.89	80.87 ± 2.88	72.77 ± 10.57
α,ω -Alkanedioic acids							
1,16-Hexadecanedioic acid (C _{16:0} diacid)	189.44	40.78 ± 1.95	40.92 ± 7.39	39.58 ± 9.13	28.31 ± 7.24	50.22 ± 7.05	48.66 ± 13.89
1,18-Octadecanedioic acid (C _{18:0} diacid)	51.04	53.88 ± 9.95	45.18 ± 7.08	50.11 ± 15.04	34.36 ± 12.30	74.48 ± 4.63	76.77 ± 28.33
1,22-Docosanedioic acid (C _{22:0} diacid)	93.02	92.06 ± 6.80	84.19 ± 15.10	76.84 ± 14.22	73.03 ± 20.04	133.65 ± 9.49	126.00 ± 35.18
1,24-Tetracosanedioic acid (C _{24:0} diacid)	199.81	71.19 ± 7.49	53.24 ± 9.93	58.63 ± 16.85	52.74 ± 8.89	81.37 ± 9.36	89.04 ± 24.11

Table. S3: Weighted mean residence time (MRT) in years of each compound class (with a chain length ≥ 20 in *n*-Carboxylic acids) in hydrolysable lipids that originally derived from added ^{13}C -labelled roots (mean; n = 3).

	Ambient plots			Warmed plots		
	10-14 cm	45-49 cm	85-89 cm	10-14 cm	45-49 cm	85-89 cm
	MRT	MRT	MRT	MRT	MRT	MRT
	(y)	(y)	(y)	(y)	(y)	(y)
<i>n</i> -Carboxylic acids	3.00	3.37	5.88	2.15	4.78	3.41
<i>n</i> -Alcohols	3.29	3.09	2.60	2.52	3.90	4.39
ω -Hydroxy carboxylic acids	5.77	6.82	7.00	3.39	11.87	10.18
α,ω -Alkanedioic acids	5.62	5.35	5.66	3.61	15.02	6.31*

* There are only two replicates because for one sample, there is accumulation of diacids.

Mid-chain fatty acids are not included because there are also several samples from deep soil have accumulation of mid-chain fatty acids.

Figure. S1: Weighted mass change of all the compound classes (with a carbon chain length ≥ 20 for fatty acids) present in added ^{13}C labelled roots (*Avena fatua*) after three years of incubation (mean in %, error bars denotes standard error; n = 3)

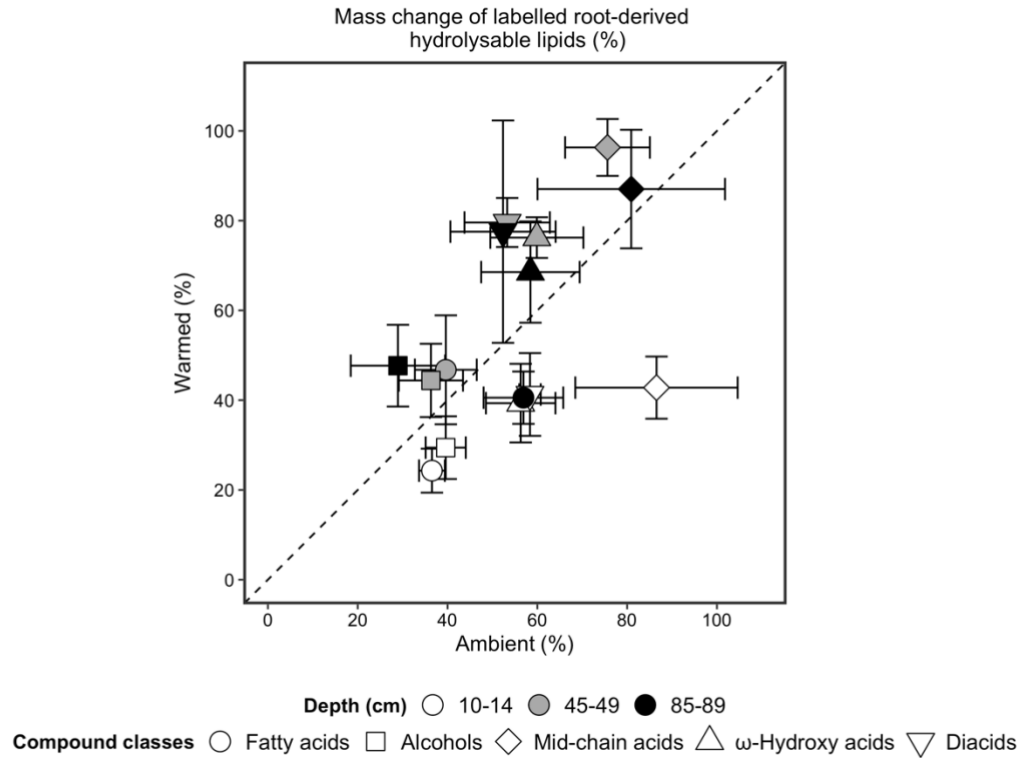


Figure. S2: (a) Concentration of long-chain hydrolysable lipids (with carbon chain lengths ≥ 20 for fatty acids, alcohols, ω -Hydroxy acids, and diacids) in disturbance control plots (mean $\pm$ SE, $n = 3$). (b) Relative contribution of each long-chain compound class (mean; $n = 3$).

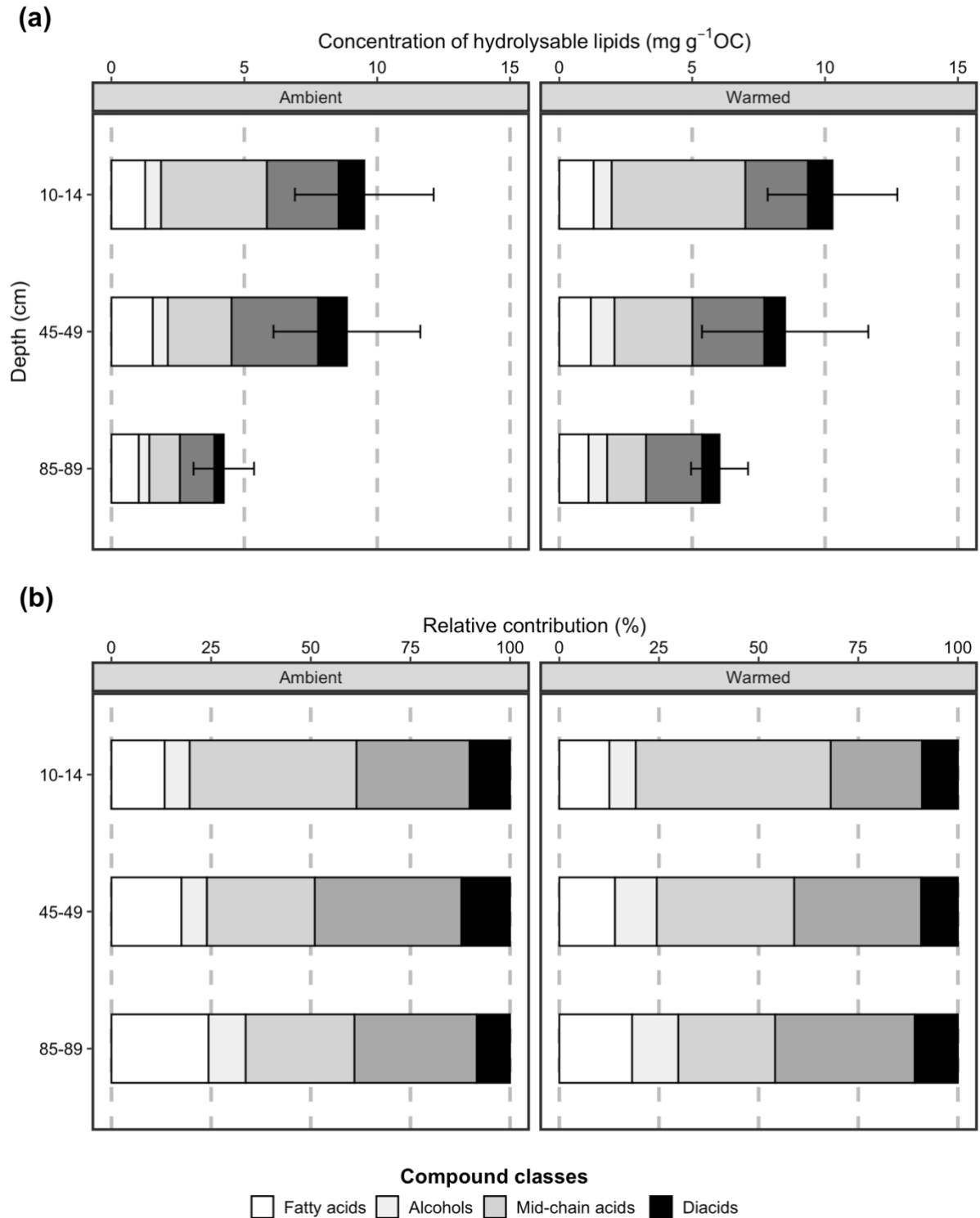


Table S4: $\delta^{13}\text{C}$ of each aliphatic monomers in hydrolysable lipids in disturbance control plots (mean $\pm$ SE; n = 3).

	Ambient plots			Warmed plots		
	10-14 cm	45-49 cm	85-89 cm	10-14 cm	45-49 cm	85-89 cm
	$\delta^{13}\text{C}$ (‰)	$\delta^{13}\text{C}$ (‰)	$\delta^{13}\text{C}$ (‰)	$\delta^{13}\text{C}$ (‰)	$\delta^{13}\text{C}$ (‰)	$\delta^{13}\text{C}$ (‰)
<i>n</i> -Carboxylic acids						
Tetradecanoic acid (<i>n</i> -C _{14:0})	-35.9 $\pm$ 1.9	-34.5 $\pm$ 2.2	-30.6 $\pm$ 1.2	-37.9 $\pm$ 2.7	-39.1 $\pm$ 2.5	-37.1 $\pm$ 2.7
Hexadecenoic acid (<i>n</i> -C _{16:1})	-27.7 $\pm$ 1.6	-25.3 $\pm$ 1.0	-27.6 $\pm$ 0.4	-28.7 $\pm$ 3.9	-32.1 $\pm$ 0.5	-30.2 $\pm$ 3.3
Hexadecanoic acid (<i>n</i> -C _{16:0})	-27.8 $\pm$ 0.1	-28.9 $\pm$ 1.4	-27.6 $\pm$ 0.4	-28.4 $\pm$ 1.2	-30.4 $\pm$ 2.1	-28.4 $\pm$ 1.8
Octadecadienoic acid (<i>n</i> -C _{18:2})	-30.1 $\pm$ 1.2	-25.1 $\pm$ 2.3	-29.0 $\pm$ 1.7	-26.0 $\pm$ 1.6	-29.8 $\pm$ 1.9	-29.1 $\pm$ 0.8
Octadecenoic acid (<i>n</i> -C _{18:1})	-26.8 $\pm$ 0.3	-28.1 $\pm$ 1.0	-28.1 $\pm$ 0.2	-26.7 $\pm$ 1.1	-30.6 $\pm$ 0.7	-29.5 $\pm$ 0.1
Octadecanoic acid (<i>n</i> -C _{18:0})	-28.1 $\pm$ 1.4	-29.8 $\pm$ 1.7	-28.3 $\pm$ 0.4	-28.5 $\pm$ 0.8	-31.6 $\pm$ 1.0	-29.4 $\pm$ 1.4
Eicosanoic acid (<i>n</i> -C _{20:0})	-27.9 $\pm$ 2.1	-27.8 $\pm$ 1.3	-28.0 $\pm$ 1.3	-29.7 $\pm$ 1.8	-32.2 $\pm$ 0.8	-29.2 $\pm$ 0.0
Docosenoic acid (<i>n</i> -C _{22:1})	-28.8 $\pm$ 0.7	-28.5 $\pm$ 1.0	-27.9 $\pm$ 0.2	-28.9 $\pm$ 0.8	-29.2 $\pm$ 0.3	-28.2 $\pm$ 1.0
Tetracosanoic acid (<i>n</i> -C _{24:0})	-26.3 $\pm$ 0.6	-26.5 $\pm$ 1.0	-25.0 $\pm$ 1.4	-27.5 $\pm$ 2.4	-27.3 $\pm$ 1.7	-28.8 $\pm$ 3.2
Hexacosanoic acid (<i>n</i> -C _{26:0})	-28.3 $\pm$ 0.9	-28.3 $\pm$ 0.8	-26.5 $\pm$ 0.6	-27.7 $\pm$ 2.8	-28.9 $\pm$ 1.8	—
<i>n</i> -Alcohols						
Octadecanol (Alcohol C _{18:0})	-29.9 $\pm$ 0.4	-29.4 $\pm$ 1.2	-29.9 $\pm$ 1.0	-29.5 $\pm$ 0.9	-32.5 $\pm$ 2.4	-31.4 $\pm$ 0.6
Docosanol (Alcohol C _{20:0})	-28.9 $\pm$ 3.5	-29.7 $\pm$ 0.5	-25.7 $\pm$ 1.6	-32.5 $\pm$ 4.2	-31.5 $\pm$ 4.6	-30.0 $\pm$ 5.4

	Ambient plots			Warmed plots		
	10-14 cm	45-49 cm	85-89 cm	10-14 cm	45-49 cm	85-89 cm
	$\delta^{13}\text{C}$ (‰)	$\delta^{13}\text{C}$ (‰)	$\delta^{13}\text{C}$ (‰)	$\delta^{13}\text{C}$ (‰)	$\delta^{13}\text{C}$ (‰)	$\delta^{13}\text{C}$ (‰)
Mid-chain acids						
11,18-Dihydroxyoctadecenoic acid (11,18-diOH C _{18:1})	-21.7 ± 0*	-21.9 ± 1.2	—	-24.9 ± 1.1	-23.3 ± 1.5	-20.3 ± 0*
x,18-Dihydroxyoctadecenoic acids (x = 9 and 10) (x, 18 diOH C _{18:1})	-22.7 ± 0.5	-20.9 ± 0.5	-18.2 ± 2.3	-21.0 ± 2.1	-22.9 ± 1.8	-22.0 ± 0.1
ω -Hydroxy carboxylic acids						
16-Hydroxy hexadecanoic acid (ω C _{16:0})	-25.5 ± 0.8	-24.1 ± 0.5	-24.9 ± 0.9	-24.7 ± 2.2	-25.7 ± 3.1	-26.1 ± 1.1
18-Hydroxy Octadecanoic acid (ω C _{18:0})	-25.6 ± 1.0	-24.2 ± 0.5	-23.3 ± 0.5	-26.5 ± 2.6	-27.8 ± 1.4	-26.0 ± 2.3
20-Hydroxy eicosanoic acid (ω C _{20:0})	-24.8 ± 0.4	-24.4 ± 0.6	-23.0 ± 2.3	-25.4 ± 1.8	-26.7 ± 1.6	-25.3 ± 2.1
22-Hydroxy docosanoic acid (ω C _{22:0})	-26.1 ± 1.2	-26.0 ± 0.3	-25.7 ± 1.4	-28.8 ± 3.2	-26.7 ± 1.9	-24.9 ± 2.2
24-Hydroxy tetracosanoic acid (ω C _{24:0})	-23.3 ± 2.3	-24.0 ± 3.4	-22.6 ± 3.0	-25.0 ± 3.0	-22.6 ± 1.5	-27.4 ± 2.6
α,ω -Alkanedioic acids						
1,16-Hexadecanedioic acid (C _{16:0} diacid)	-24.5 ± 0.4	-23.8 ± 0.2	-24.6 ± 1.2	-24.8 ± 2.0	-25.6 ± 1.8	-27.3 ± 0.6
1,18-Octadecanedioic acid (C _{18:0} diacid)	-25.2 ± 1.8	-28.0 ± 1.2	-28.3 ± 1.1	-25.3 ± 2.7	-30.4 ± 0.3	-29.7 ± 2.1
1,22-Docosanedioic acid (C _{22:0} diacid)	-24.6 ± 1.7	-24.5 ± 1.8	-26.8 ± 1.4	-27.2 ± 3.2	-26.4 ± 1.3	-26.1 ± 1.4
1,24-Tetracosanedioic acid (C _{24:0} diacid)	-21.7 ± 0.6	-25.0 ± 0.4	-24.4 ± 1.2	-27.0 ± 1.9	—	-23.2 ± 0*

* Monomers are only detected in one of all the three plots.

Octadecanol (Alcohol C_{18:0}) and Docosenoic acid (*n*-C_{22:1}) are not detected in added ¹³C-labelled roots but exist in disturbance control plots.

Table S5: Mean ± SE (n = 3) bulk soil carbon, δ¹³C, and hydrolysable lipids for each depth (10-14, 45-49, and 85-89 cm) in ambient and warmed, without root-litter addition (Disturbance control), and with root-litter addition (labelled) plots.

Depth (cm)	Warming treatment	Root treatment	Carbon (%)	Std Error Carbon (%)	δ ¹³ C (‰)	Std Error δ ¹³ C (‰)	Total hydrolysable lipids (mg g ⁻¹ OC)	Std Error Hydrolysable lipids
10-14	Ambient	Disturbance control	1.95	0.55	-25.8	0.3	18.40	4.19
45-49	Ambient	Disturbance control	0.74	0.48	-25.5	0.1	17.84	5.40
85-89	Ambient	Disturbance control	0.40	0.21	-25.8	0.5	10.96	1.90
10-14	Warmed	Disturbance control	4.38	0.88	-26.3	0-4	18.58	3.11
45-49	Warmed	Disturbance control	1.54	0.61	-25.7	0.5	16.83	3.84

85-89	Warmed	Disturbance control	0.68	0.23	-25.7	0.5	12.49	0.41
10-14	Ambient	Labelled	2.26	0.34	26.3	8.2	11.54	5.44
45-49	Ambient	Labelled	1.53	0.86	65.5	27.5	12.29	1.94
85-89	Ambient	Labelled	0.33	0.07	202.1	46.3	12.37	4.38
10-14	Warmed	Labelled	3.65	0.90	-0.5	6.3	14.82	4.53
45-49	Warmed	Labelled	1.11	0.54	90.9	36.0	12.21	1.94
85-89	Warmed	Labelled	0.47	0.25	247.7	122.7	14.98	4.52

Table S6: Hydrolysable lipids concentration (mg g⁻¹OC) in response to warming treatment, depth, and their interactions. The t-value and p-value are reported. DF is degree of freedom.

Final model: Total hydrolysable lipids (mg g⁻¹OC) ~ warming treatment × depth, random = ~1|Block

Fixed effects	Estimated values	Sdt.Error	DF	t-value	p-value
Intercept	18.40	3.53	10	5.21	0.0004
Warming	0.17	4.99	10	0.03	0.9733
Depth 45-49 cm	-0.57	4.99	10	-0.11	0.9119
Depth 85-89 cm	-7.44	4.99	10	-1.49	0.1669
Warming × 45-49 cm	-1.18	7.06	10	-0.17	0.8704

Warming × 85-89 cm	1.35	7.06	10	0.19	0.8518
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Table S7: Root recovery (%) in response to warming treatment, depth, and their interactions. The t-value and p-value are reported. DF is degree of freedom. Recovery was log-transformed due to the heteroscedasticity.

Final model: Log_root recovery ~ warming treatment × depth, random = ~1|Block

Fixed effects	Estimated values	Sdt.Error	DF	t-value	p-value
Intercept	-1.41	0.17	10	-8.16	0.0000
Warming	0.69	0.22	10	-3.10	0.0112
Depth 45-49 cm	-0.06	0.22	10	-0.25	0.8057
Depth 85-89 cm	-0.11	0.22	10	-0.48	0.6406
Warming × 45-49 cm	0.77	0.31	10	2.45	0.0340
Warming × 85-89 cm	0.66	0.31	10	2.10	0.0612

Table S8: Mass change of hydrolysable lipids (%) in response to warming treatment, depth, and their interactions, and different compounds. DF is degree of freedom. Recovery was log-transformed due to the heteroscedasticity.

Full model: Log_mass change of hydrolysable lipids ~ compound × warming × depth, random = ~1|Block

Final model: Log_mass change of hydrolysable lipids ~ compound + warming × depth, random = ~1|Block

Fixed effects	Estimated values	Sdt.Error	DF	t-value	p-value
Intercept	-0.18	0.13	78	-1.33	0.1861
Alcohols	-0.90	0.12	78	-7.21	0.0000

Mid-chain acids	-0.16	0.12	78	-1.26	0.2122
ω -hydroxy acids	-0.41	0.12	78	-3.30	0.0015
Diacids	-0.42	0.12	78	-3.37	0.0012
Depth 45-49 cm	0.08	0.14	78	0.60	0.5481
Depth 85-89 cm	0.07	0.14	78	0.48	0.6295
Warming	-0.45	0.14	78	-3.32	0.0014
Warming $\times$ 45-49 cm	0.63	0.19	78	3.28	0.0016
Warming $\times$ 85-89 cm	0.57	0.19	78	2.96	0.0040

Table S9: Priming effect of added root-litter on native bulk soil (mass change in %, (Labelled – Disturbance control)/Disturbance control)) in response to depth, warming, and their interactions. DF is degree of freedom.

Fixed effects	Estimated values	Sdt.Error	DF	t-value	p-value
Intercept	-0.17	0.34	9	-0.55	0.5958
Warming	-0.04	0.48	9	-0.08	0.9407
Depth 45-49 cm	-0.35	0.53	9	-0.65	0.5291
Depth 85-89 cm	0.45	0.48	9	0.94	0.3722
Warming $\times$ 45-49 cm	0.34	0.72	9	0.47	0.6492
Warming $\times$ 85-89 cm	-0.10	0.68	9	-0.15	0.8875

Table S10: Priming effect of added root-litter on native hydrolysable lipids (mass change in %, (Labelled – Disturbance control)/Disturbance control)) in response to depth, warming, and their interactions. DF is degree of freedom.

Fixed effects	Estimated values	Sdt.Error	DF	t-value	p-value
Intercept	0.28	0.24	9	-1.17	0.2729
Warming	-0.17	0.34	9	-0.50	0.6293
Depth 45-49 cm	-0.37	0.38	9	-0.97	0.3588
Depth 85-89 cm	-0.32	0.34	9	-0.93	0.3745
Warming $\times$ 45-49 cm	0.17	0.51	9	0.32	0.7528
Warming $\times$ 85-89 cm	0.03	0.48	9	-0.06	0.9566