^{13}C and ^{15}N allocations of two alpine species from early and late snowmelt locations reflect their different growth strategies

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Supplementary materials

Table S1 Labelling-derived ^{13}C mass ($\gamma^{13}C_M$) at each chase time (mg ^{13}C) for *K. myosuroides* and *C. foetida*. See equation 6 for calculations and text for statistical details. Values are the mean ± se (n=3). Different letters indicate significant differences between chase times (P<0.05).

Chase time	*K. myosuroides*	*C. foetida*
T_0	1.28 (0.12)[a]	1.36 (0.22)[a]
T_1	0.95 (0.02)[b]	0.97 (0.09)[a]
T_3	0.80 (0.09)[b]	1.13 (0.14)[a]
T_{11}	0.63 (0.05)[b]	0.94 (0.13)[a]

Figure S1

Net leaf CO_2 assimilation per g DW of *Kobresia myosuroides* (black circle) and *Carex foetida* (white circle) in relation to PAR (Photosynthetic Active Radiation). Net leaf CO_2 assimilation at saturating light reached 1755.5±1097.7 ng C g^{-1} leaf DW s^{-1} and 2660.2±93.3 ngC g^{-1} leaf DW $s^{-1}$for *Kobresia myosuroides* and *Carex foetida* respectively. Values are the mean ± se (n = 3).

An open-flow photosynthesis system (model 6400, LI-COR, Nebraska, USA) equipped with a CO_2 controller (CO_2 concentration equalled 400 ppm) was used to measure the light–response curves of *Carex foetida* and *Kobresia myosuroides* under constant temperature and humidity in July 2004. The system was maintained in a closed thermostated chamber, and the leaf temperature averaged ± 20°C.

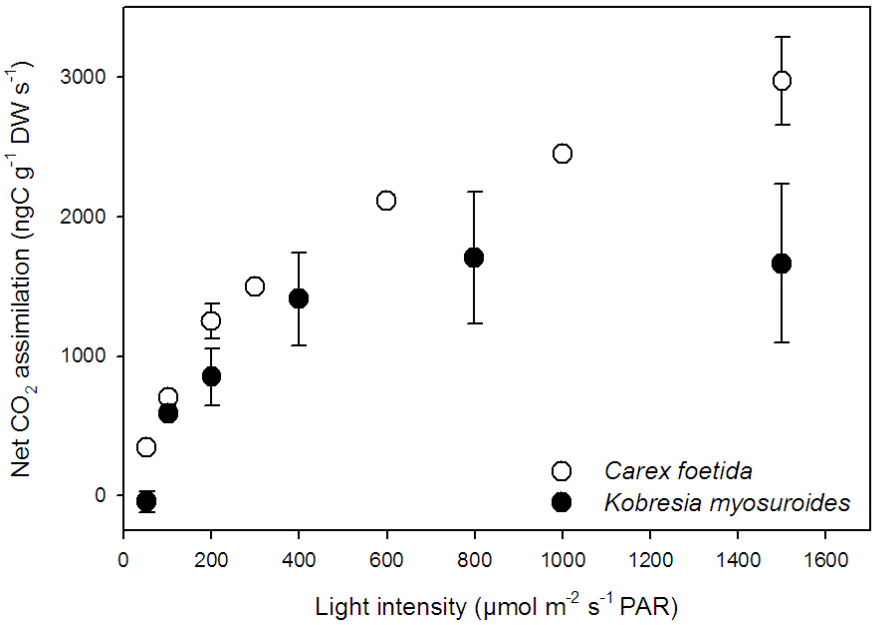
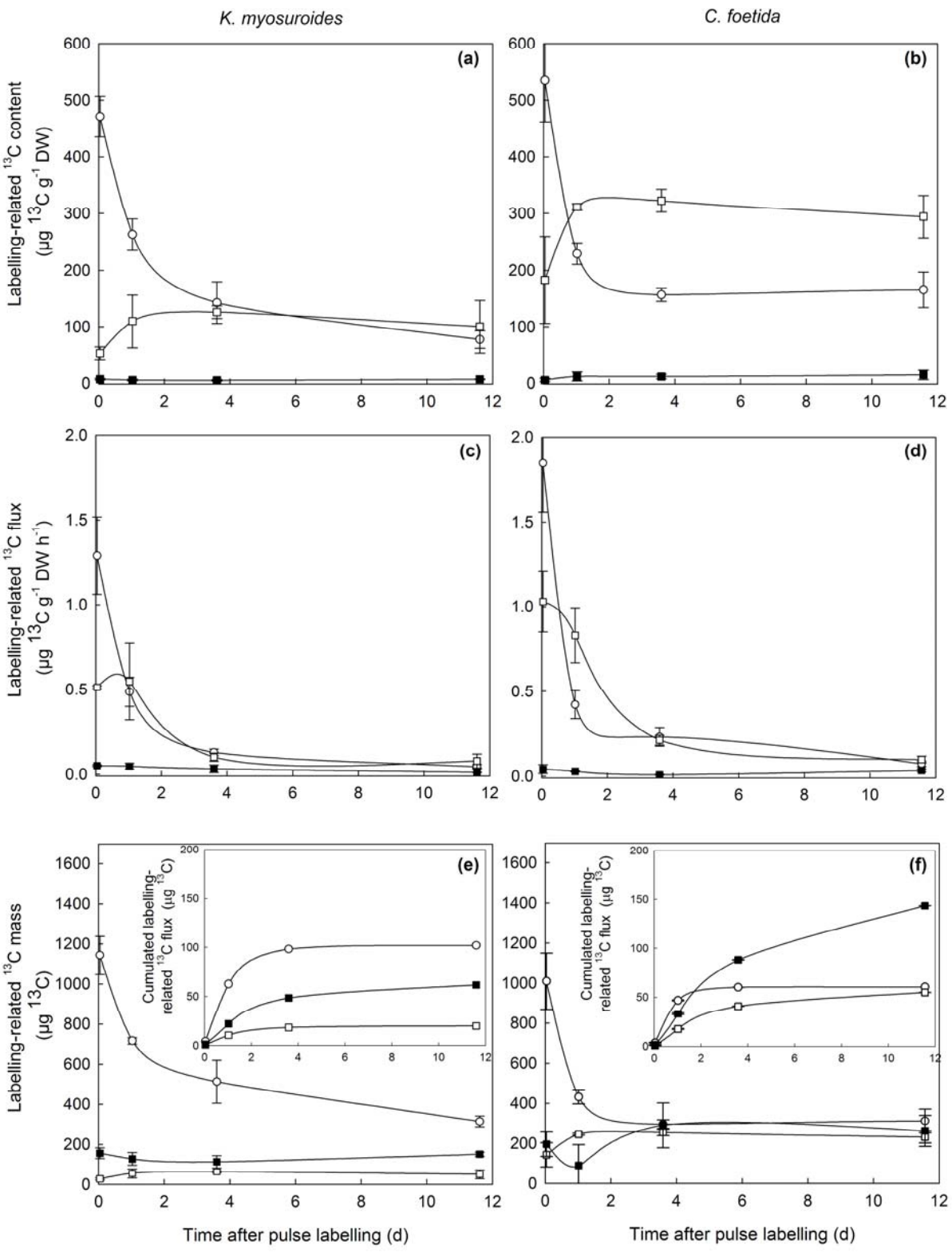


Figure S2 Labelling-derived ^{13}C content ($\gamma^{13}C$, µg ^{13}C g^{-1} DW) (a-b), labelling-derived ^{13}C flux ($\gamma^{13}C_R$, µg ^{13}C g^{-1} DW h^{-1}) (c-d) and labelling-derived ^{13}C mass ($\gamma^{13}C_M$, µg ^{13}C) (e-f) in leaves and new and old roots of *K. myosuroides* and *C. foetida* following pulse labelling. Inlet graphs: cumulative labelling-derived ^{13}C mass (µg ^{13}C) respired by the leaves and new and old roots of *K. myosuroides* (e) and *C. foetida* (f) following pulse labelling. Leaves: white circle, new roots: white square, old roots: black square. All *X* –axes show the time elapsed since pulse labelling (in days). Values are the mean ± se (n=3).


K. myosuroides
C. foetida
(a)
(b)
(c)
(d)
(e)
(f)
Labelling-related ^{13}C content (µg ^{13}C g^{-1} DW)
Labelling-related ^{13}C flux (µg ^{13}C g^{-1} DW h^{-1})
Labelling-related ^{13}C mass (µg ^{13}C)
Cumulated labelling-related ^{13}C flux (µg ^{13}C)
Time after pulse labelling (d)
Time after pulse labelling (d)