Table S1. Collection data and sample codes of mature aplanozygotes of *Chloromonas nivalis* from exposed snow fields in the Austrian Alps. Electrical conductivity (EC; µS.cm^{-1}) and pH of meltwater are given. Furthermore, sizes of cells in µm ± SD (standard deviation), length to width ratio (L:W ratio) ± SD and snow colour are shown; n/a– not available.

Code	Date	Location, Altitude (m)	EC	pH	cell length	cell width	L:W ratio	snow colour
P12	16 June 2002	Kalkkögel, 1950	n/a	n/a	22.8 ± 1.5	13.19 ± 0.9	1.73 ± 0.1	orange
P24/DR4	19 August 2004	Kühtai, 2478	3.6	6.0	21.5 ± 1.6	12.95 ± 1.3	1.67 ± 0.11	orange/brown
DR43	24 July 2008	Kühtai, 2503	4.9	4.6	21.8 ± 1.8	12.6 ± 1.0	1.73 ± 0.11	yellow/brown
GK05	3 June 2009	Kühtai, 2419	5.4	6.2	22.0 ± 1.6	13.4 ± 1.1	1.65 ± 0.15	orange/brown
GK09	1 July 2009	Kühtai, 2463	7.2	5.4	23.5 ± 1.8	14.0 ± 1.0	1.69 ± 0.13	pink

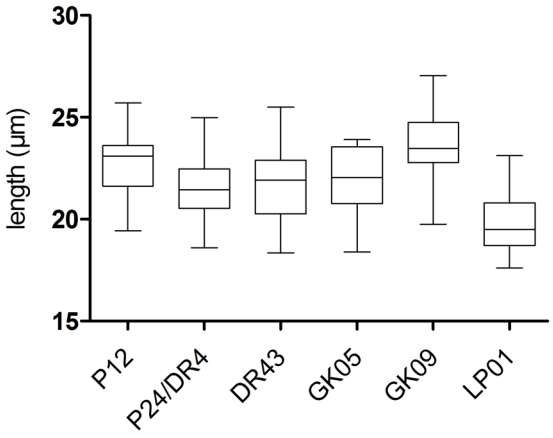


Fig S1. Comparison of lengths of mature aplanozygotes between *Chloromonas nivalis* subsp. *tatrae* (LP01) and *Chloromonas nivalis* from the Austrian Alps (P12, P24/DR4, DR43, GK05, GK09). Details of sample locations are listed in Table 1 and Table S1. Note that the reported size of *Scotiella tatrae* was 18−24 µm (Kol 1965).

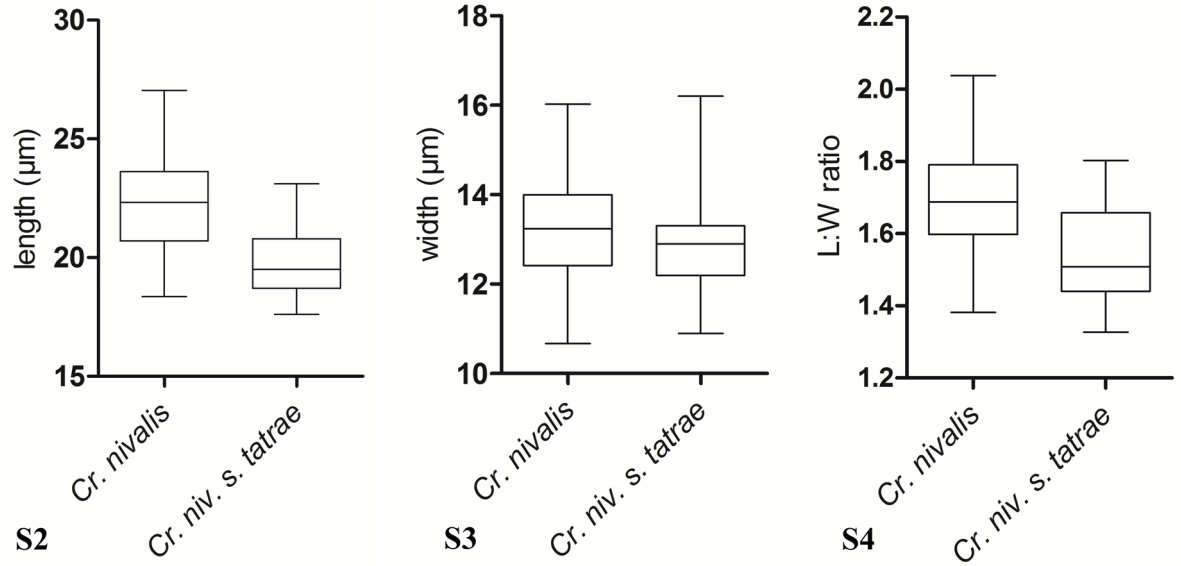


Fig S2−S4. Comparison of lengths, widths and length to width ratio (L:W) of mature aplanozygotes between *Chloromonas nivalis* subsp. *tatrae* (one sample) and *Chloromonas nivalis* from the Austrian Alps (five samples). Note that the reported cell lengths and widths of *Scotiella tatrae* were 18−24 µm and 12−15 µm, respectively (Kol 1965). Statistical significance of differences is shown in Table 4.