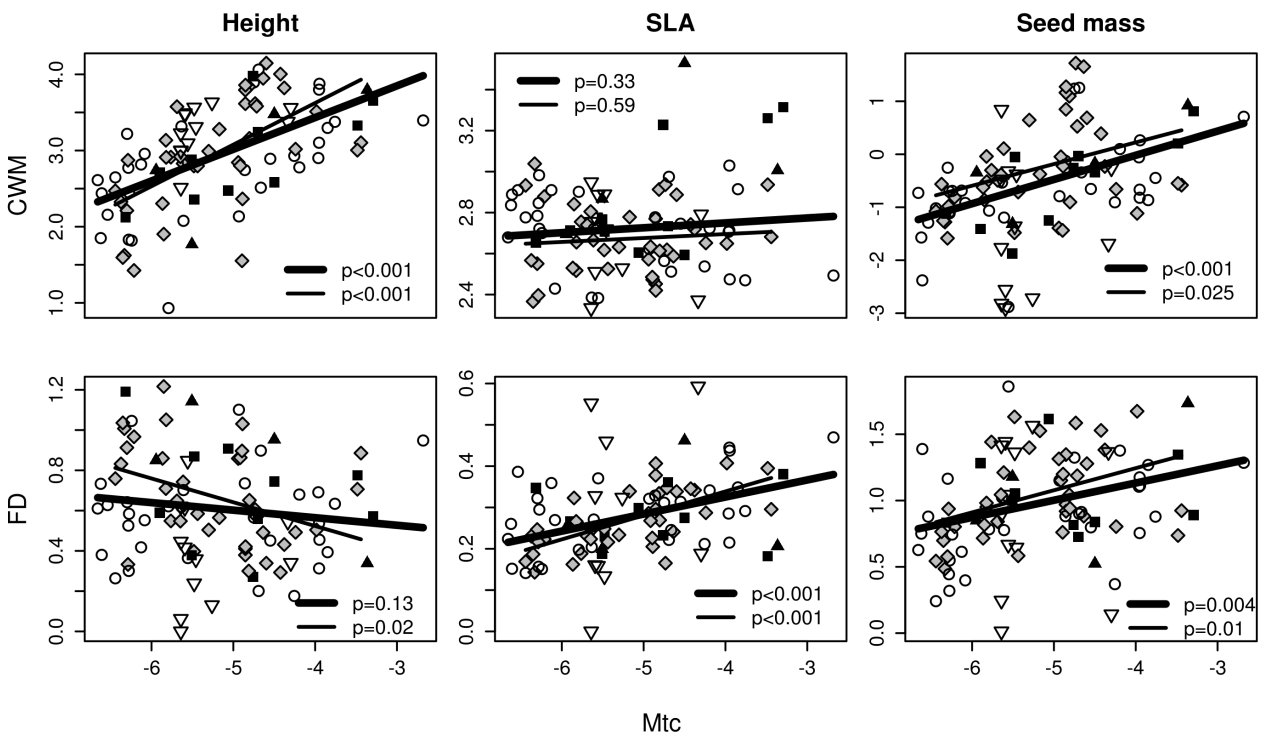
Figure S2. Relationships between the functional traits and the environment. The first row displays the relationship between trait' community-weighted mean (CWM; Pakeman et al. 2008) and the mean temperature of the coldest month (Mtc). The second row displays the relationship between trait diversity estimated as the community-weighted variance of each trait (FD; Mason et al. 2005) and Mtc. Linear model were performed across all studied communities (n=95, thick line) and communities only within the most abundant land cover type in the dataset (alpine grassland, n=38, thin line). The relationships were tested using an Analysis of Variance (Anova). Communities are differentiated according to the land cover category. Herbaceous habitats are in grey (alpine grassland) and white (triangle : wetlands, circle: other open habitat), woody habitats in black (square : shrubland, circle : woodland). The three traits presented a significant relationship to the main environmental gradient (Mtc) across habitat and within habitat. Overall plants tended to be smaller and produced smaller seeds when the environment was more stressful. Moreover, the variability of seed mass and SLA between co-existing species also tended to decrease with stress.



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