

Fig. S1. Resting metabolic rate measured repeatedly during the life of (A) male and (B) female Glanville fritillary (*Melitaea cinxia*) butterflies. The values have not been corrected for body mass.

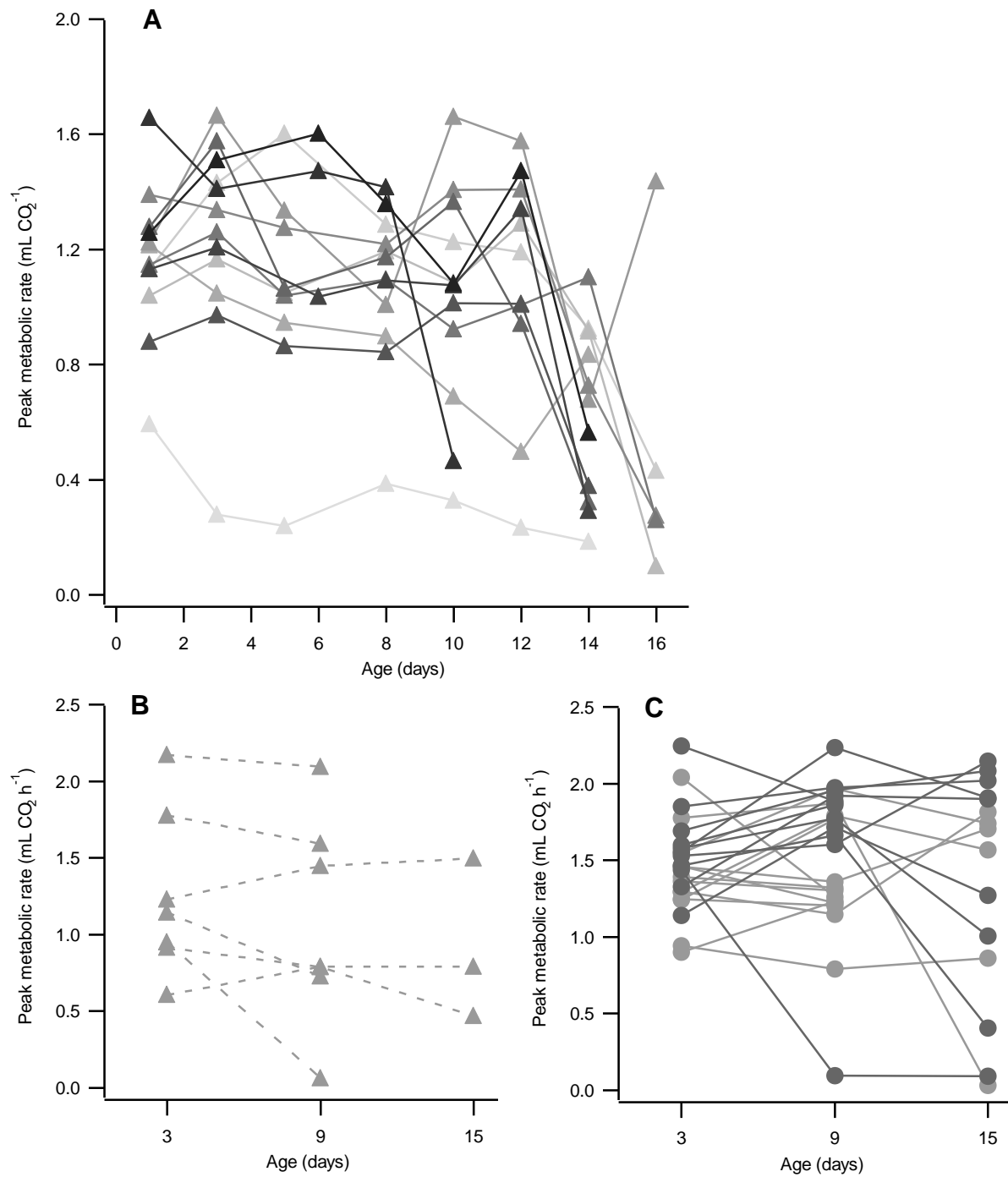


Fig. S2. Peak flight metabolic rate measured repeatedly during the life of (A,B) male and (C) female Glanville fritillaries. The dark grey circles in panel (C) represent mated females, light grey circles unmated females. The values have not been corrected for body mass.

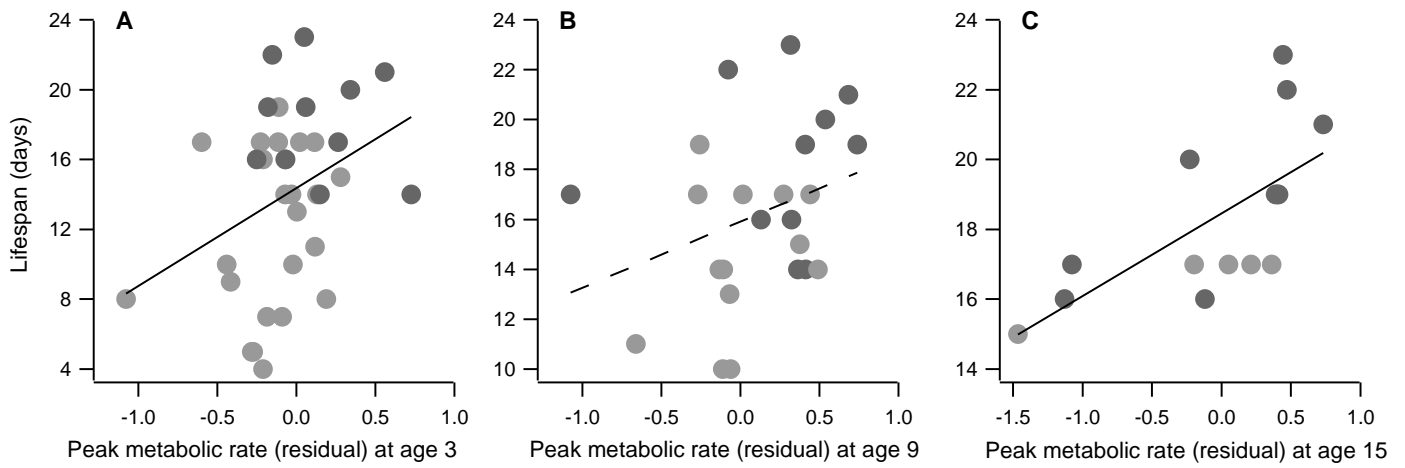


Fig. S3. Lifespan of mated (dark grey circles) and unmated (light grey circles) *Melitaea cinxia* females. Lifespan is plotted against mass-independent peak flight metabolic rate measured at the age of (A) three days ($r^2=0.14$, $t_{34}=2.31$, $P=0.027$), (B) nine days ($r^2=0.10$, $t_{23}=1.58$, $P=0.12$), and (C) 15 days ($r^2=0.45$, $t_{14}=3.28$, $P=0.006$).