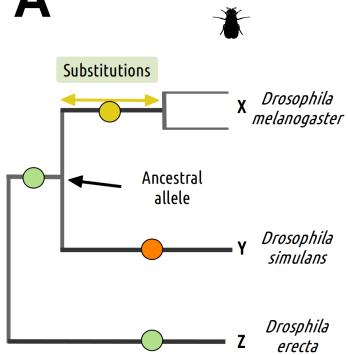


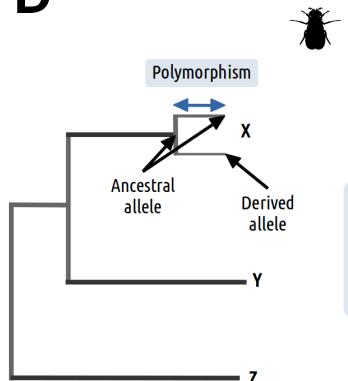
A

We defined the ancestral allele invoking at most one substitution event to explain the observation on the three species

If $X = Y$ or $X = Z \rightarrow$ ancestral = X (i.e. no substitution)

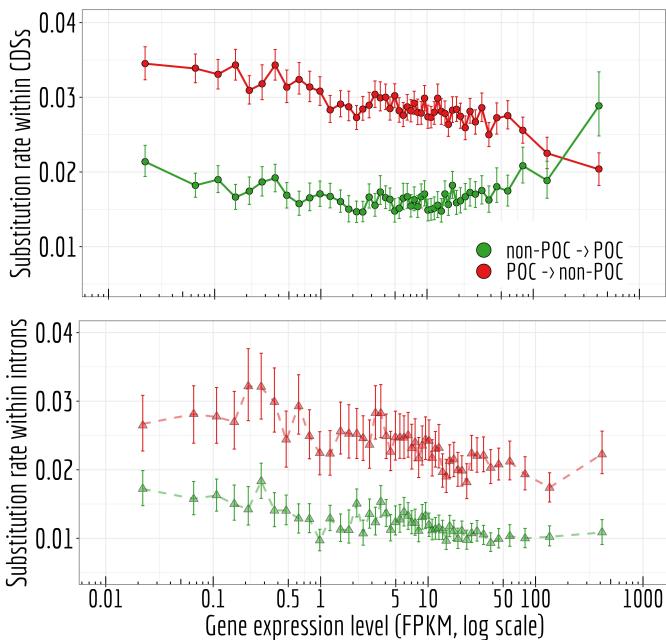
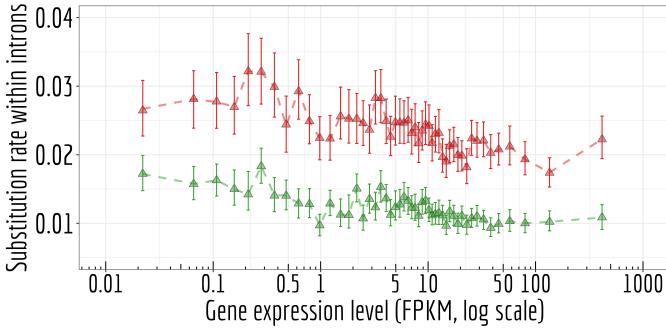
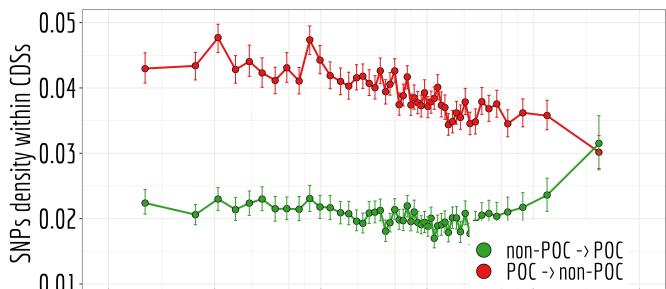
If $Y = Z$ and $Y \neq X \rightarrow$ ancestral = Y (i.e. substitution $Y \rightarrow X$)

Else \rightarrow ancestral = Undefined

D

For polymorphic sites with less than 181 genotyped individuals Undefined

SNP polarization with est-sfs based on Derived Allele frequency spectrum and outgroup species

B**C****E****F**