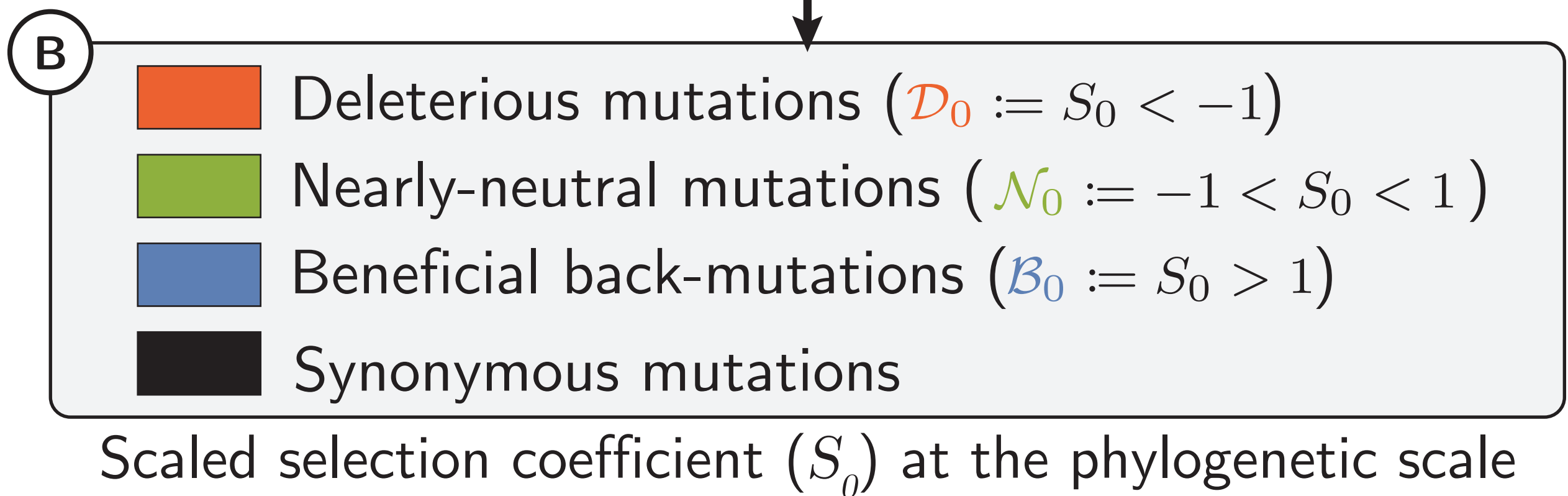
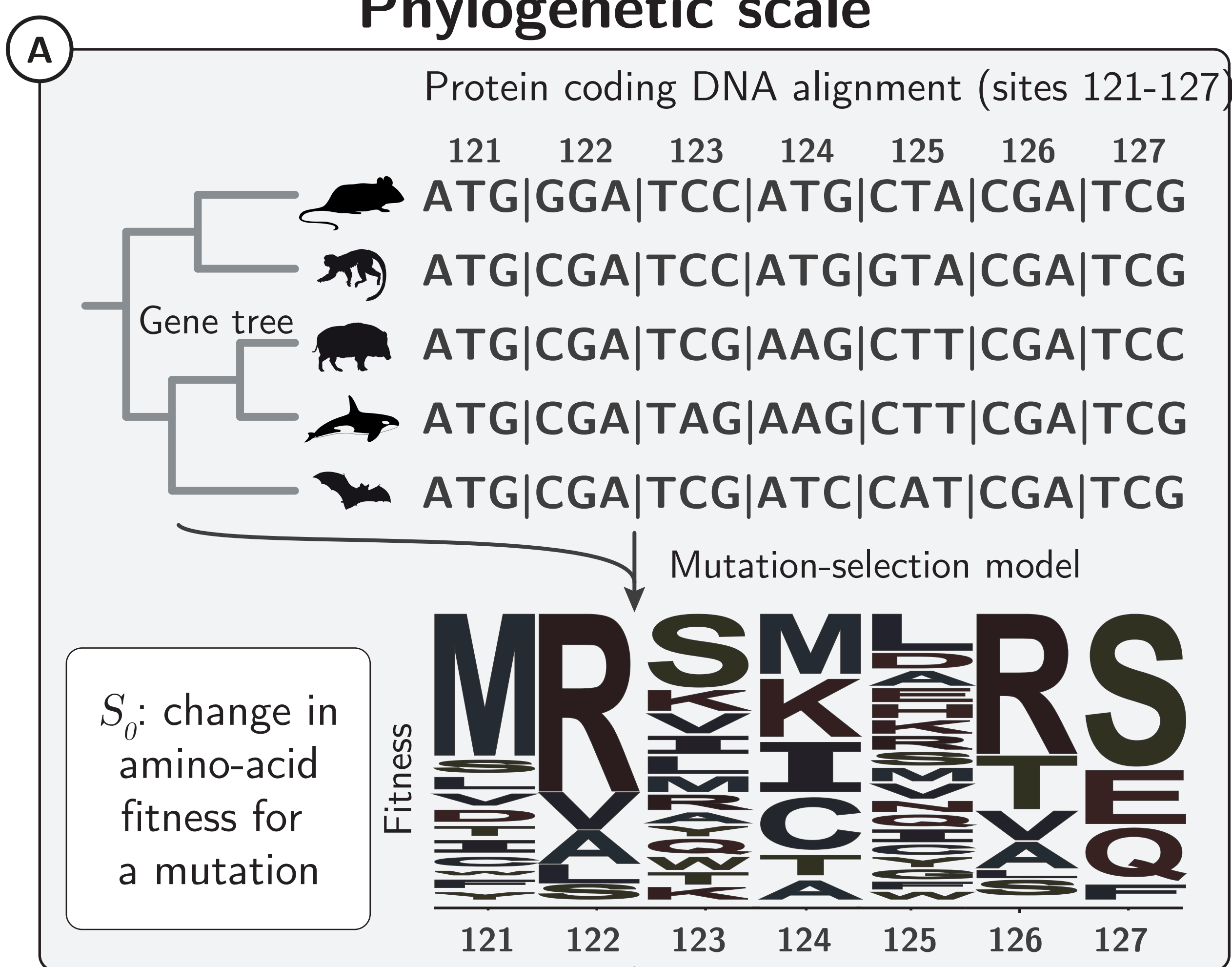
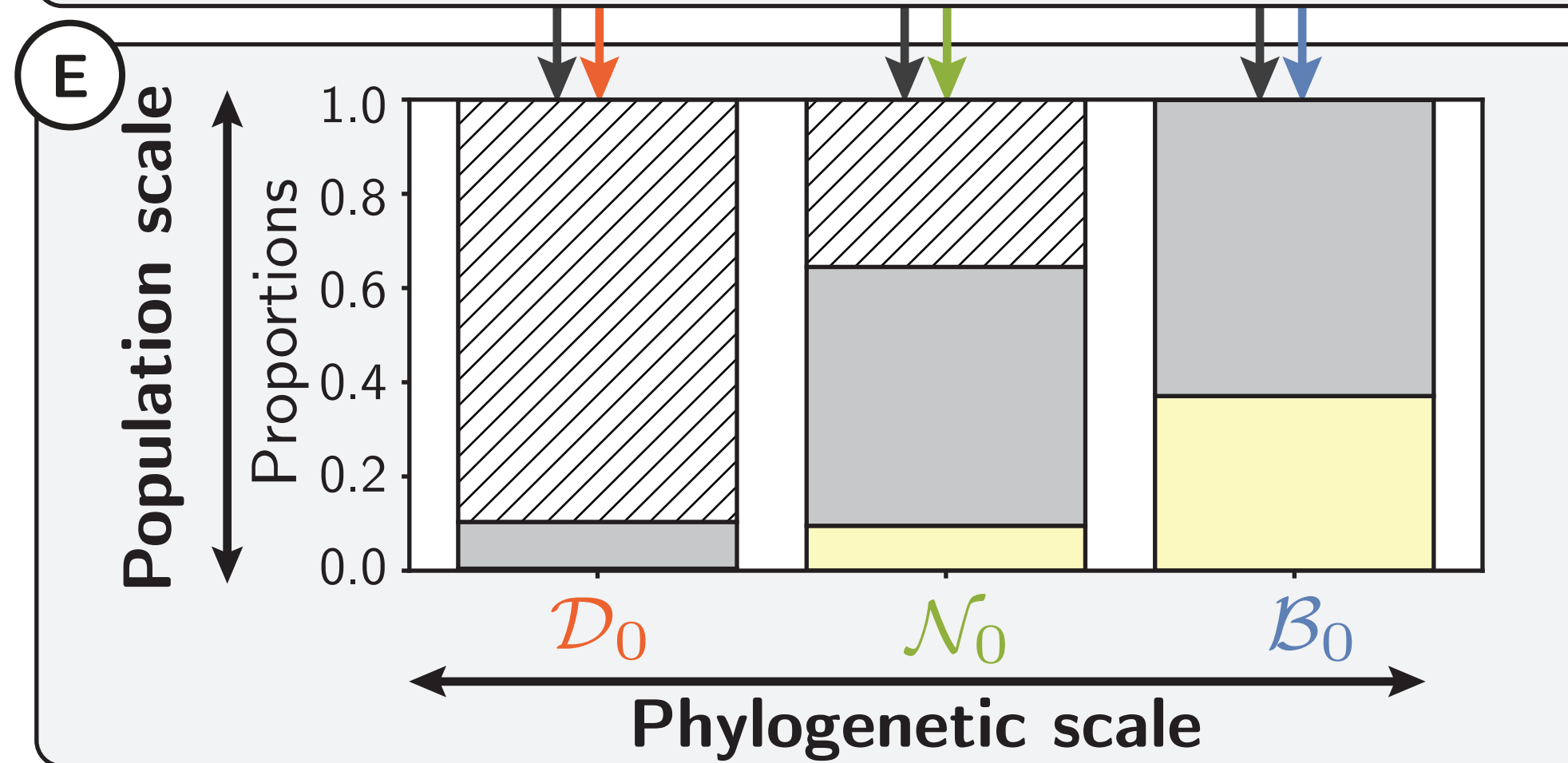
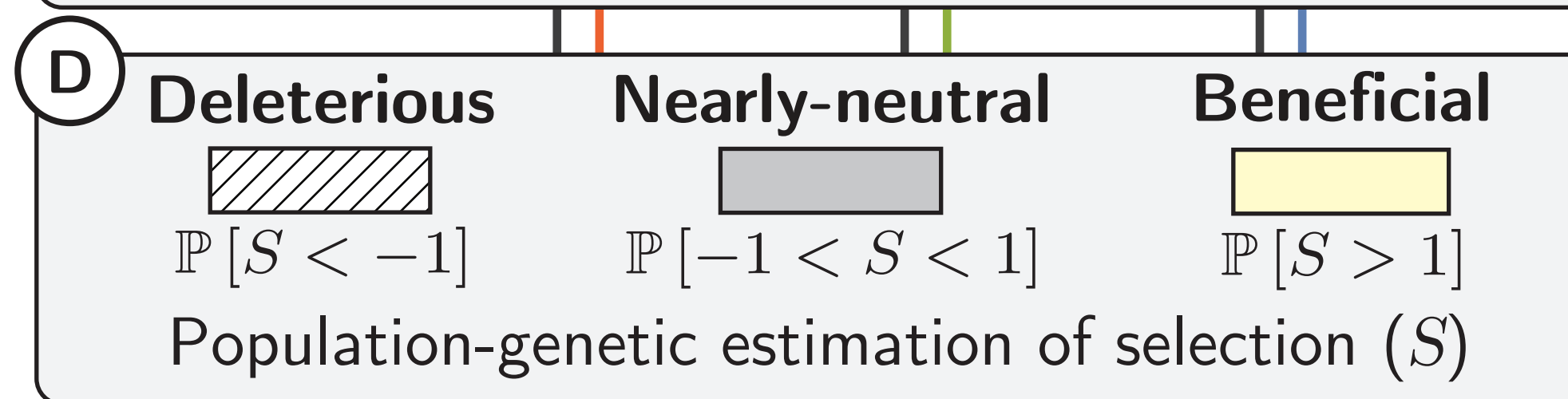
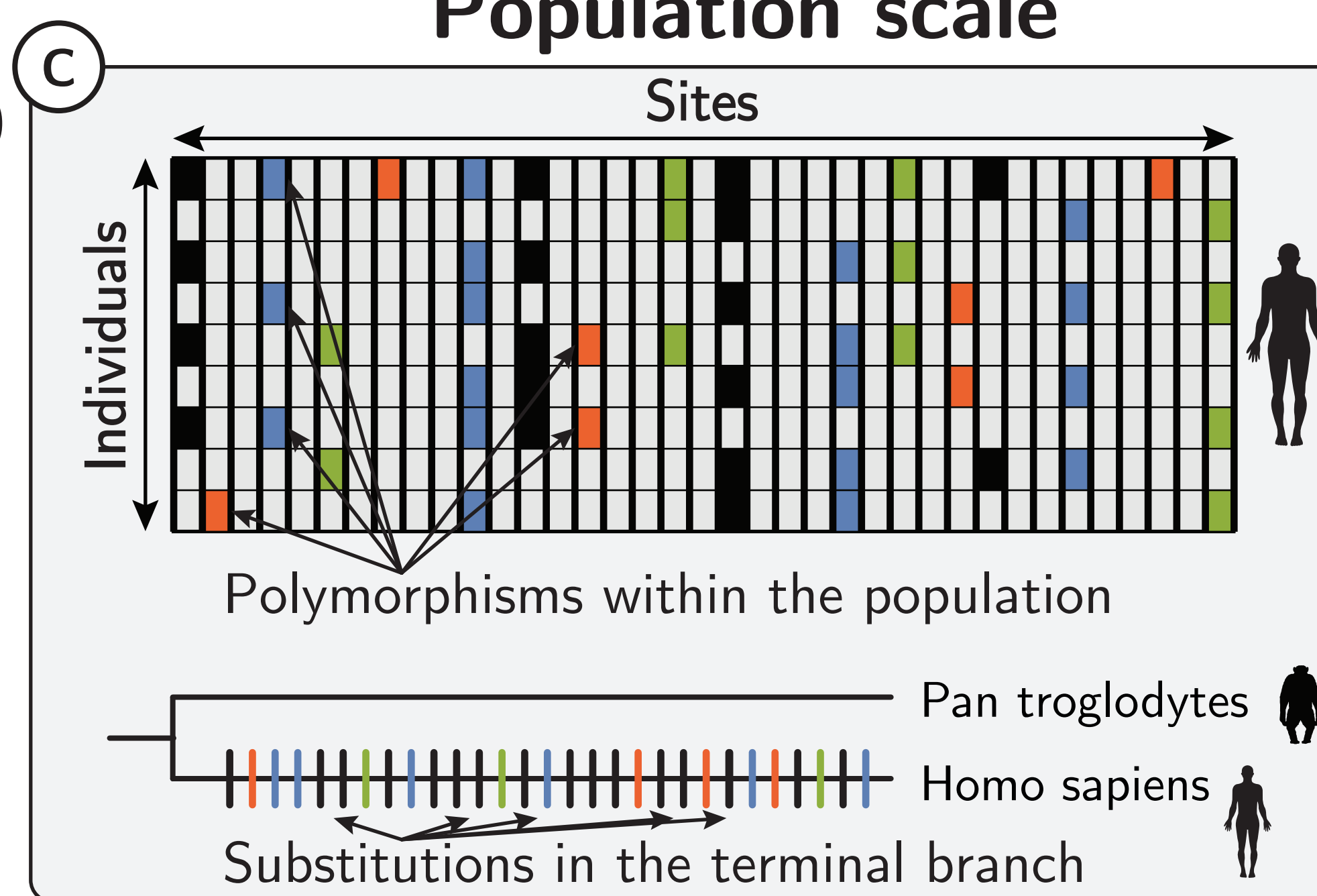


Phylogenetic scale



Population scale



Population scale $\longrightarrow \mathcal{B} := S > 1$

Phylogenetic scale $\rightarrow \mathcal{B}_0 := S_0 > 1$

Precision

F

Among mutations predicted as beneficial back-mutations at the phylogenetic scale, which one are correctly predicted as beneficial.

$$\frac{\mathbb{P}[\mathcal{B} \cap \mathcal{B}_0]}{\mathbb{P}[\mathcal{B}_0]} = \mathbb{P}[\mathcal{B} | \mathcal{B}_0]$$

Recall

G

Among mutations predicted as beneficial at the population scale, which one are correctly predicted as beneficial back-mutations.

$$\frac{\mathbb{P}[\mathcal{B} \cap \mathcal{B}_0]}{\mathbb{P}[\mathcal{B}]} = \mathbb{P}[\mathcal{B}_0 | \mathcal{B}]$$