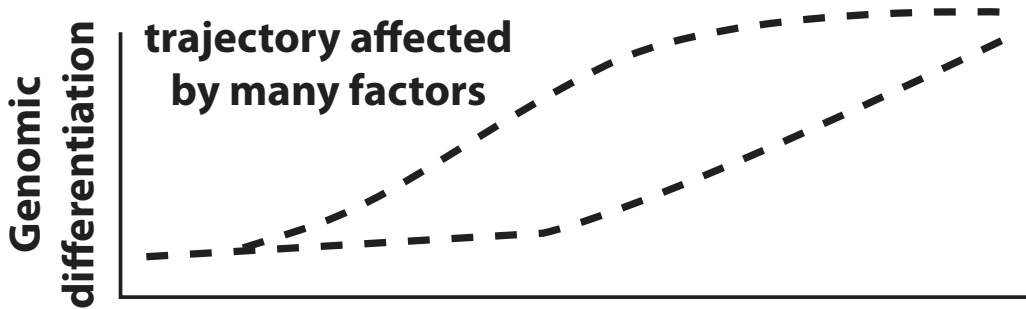
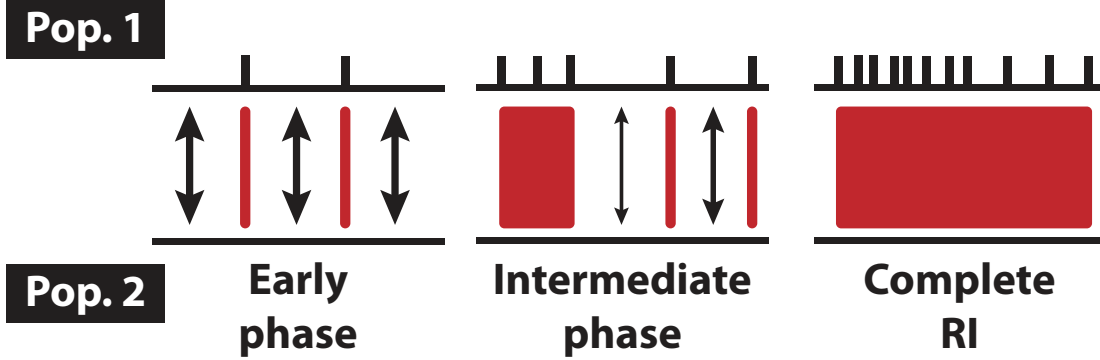
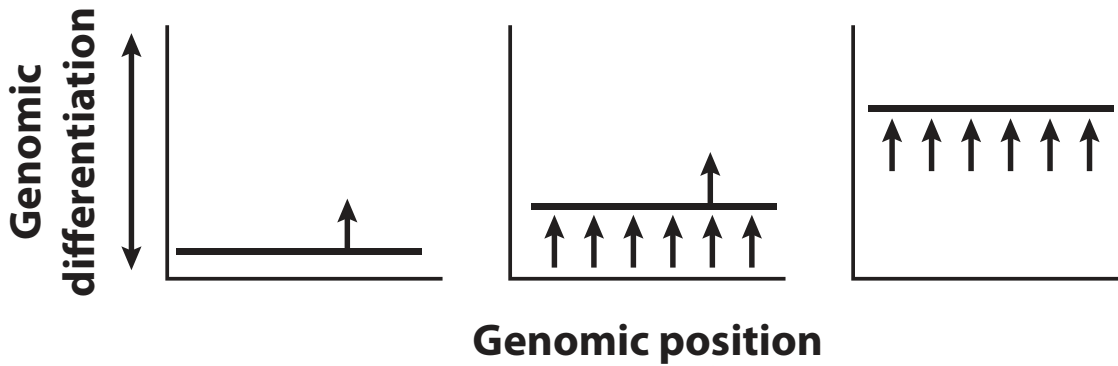


**a Phases of speciation and genomic differentiation**



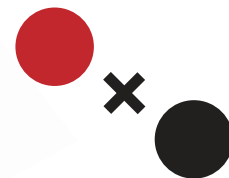
**b Genomic differentiation in *Timema* stick-insects**



**selection on colour-pattern loci**



**differentiation in mate choice / CHCs**

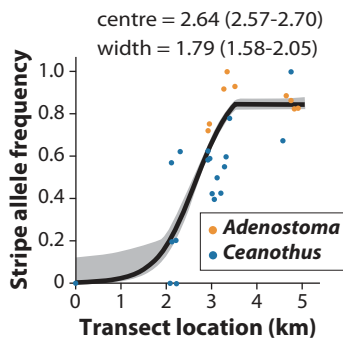
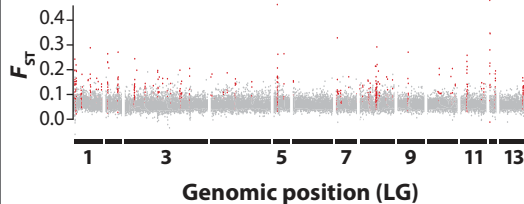
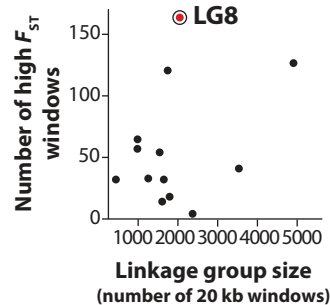


**complete RI / spatial separation**

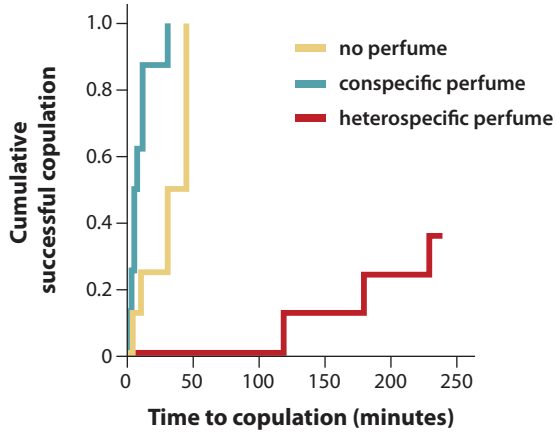
**a** Ecotypes and host plants**Adenostoma****Ceanothus****b** Hidden Markov Model analysis of heterogeneous genetic differentiation**HV *T. cristinae*****R12 *T. cristinae*****MR1 *T. cristinae*****LAPRC *T. cristinae***

Genomic position (LG)

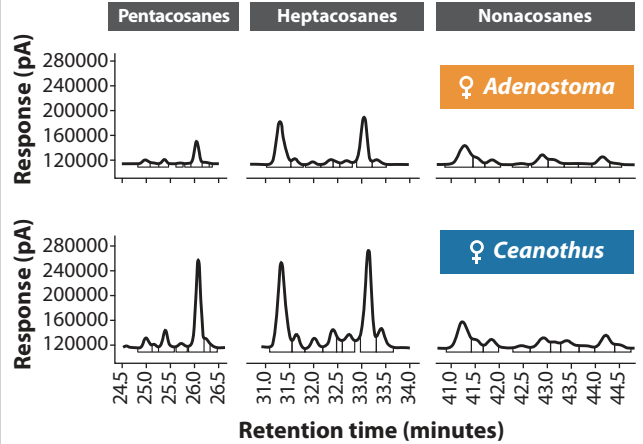
Genomic position (LG)

**c** Allele frequency cline**d** Differentiation between experimental populations on different hosts**e** Number of high  $F_{ST}$  windows and linkage group size

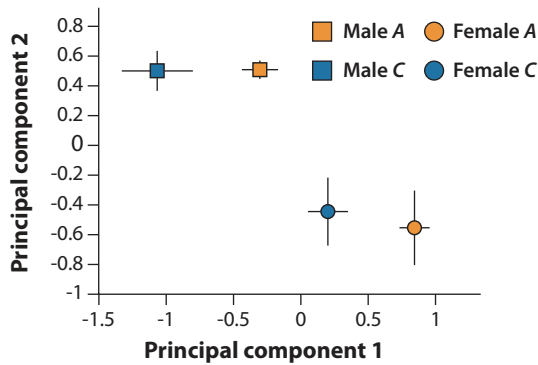
### a Perfuming experiments



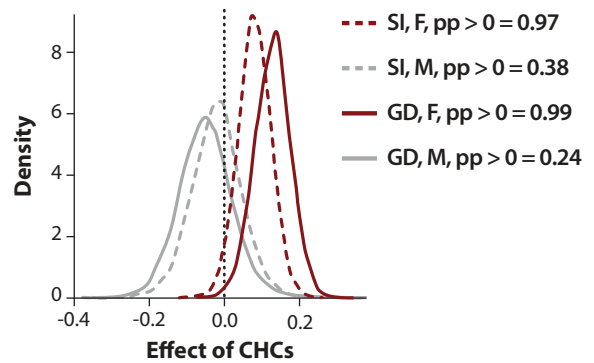
### b Profiles of methylated CHCs



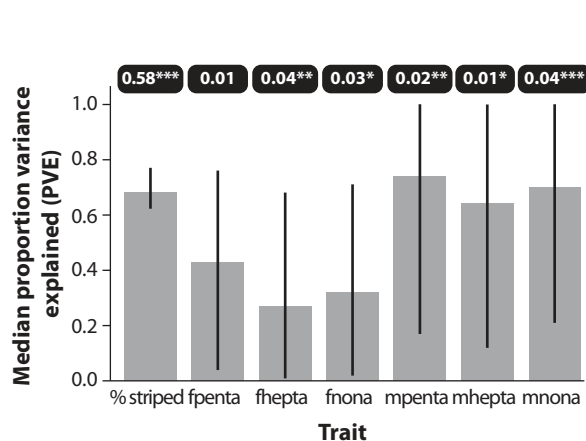
### c CHC differences between ecotypes and sexes



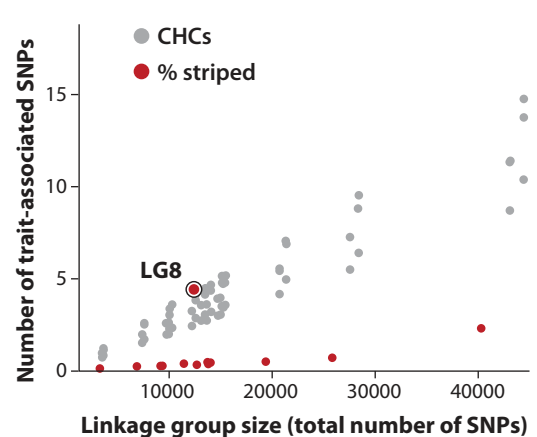
### d CHCs, sexual isolation (SI), and genomic differentiation (GD)



### e Hyper-parameter estimates of genetic architecture

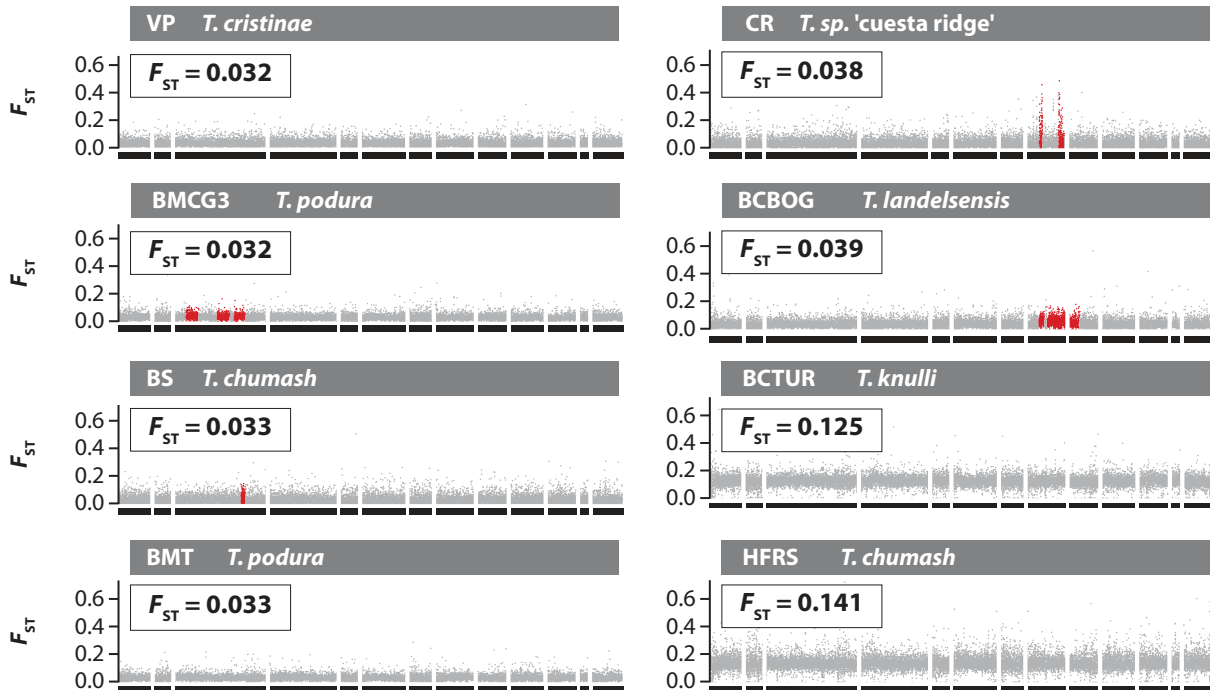


### f Number of trait-associated SNPs and linkage group size

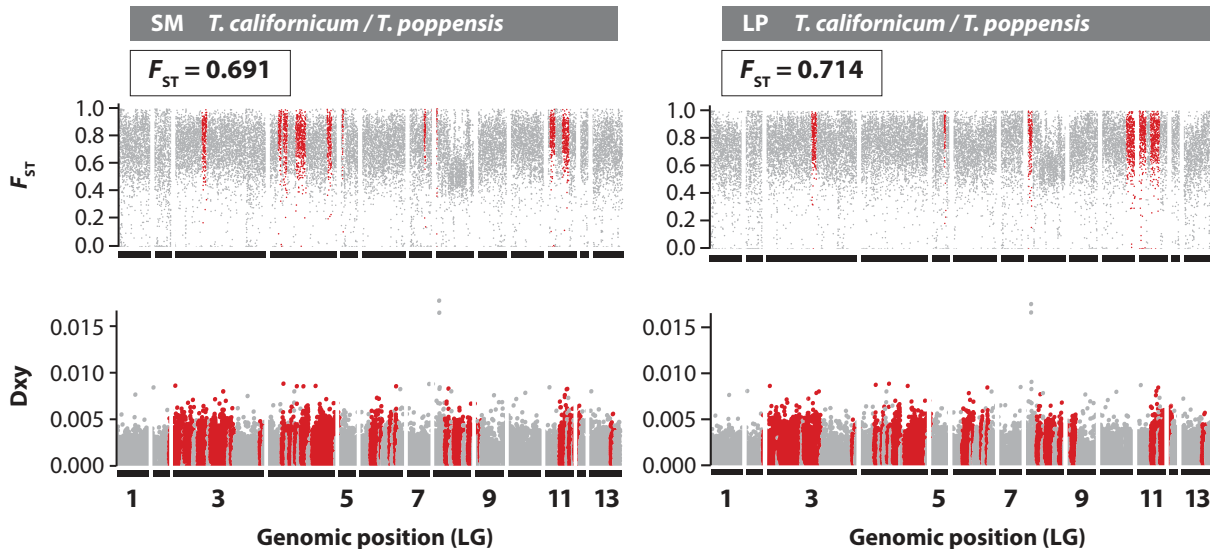


# Hidden Markov Model analysis of heterogeneous genetic differentiation

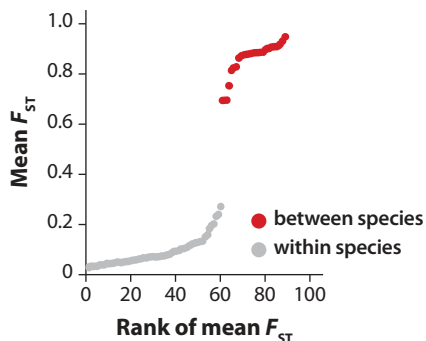
## Ecotypes within species



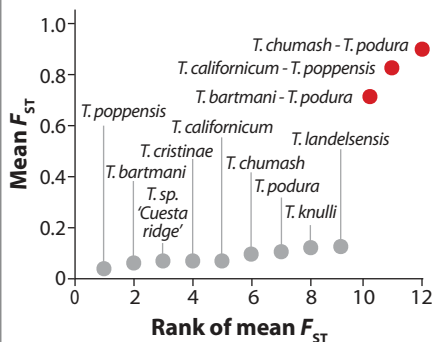
## Species pair



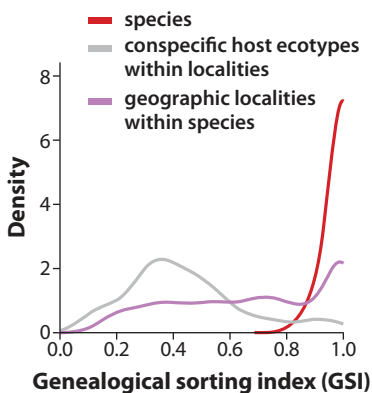
**a** A gap in genomic differentiation in sympatry in *Timema*



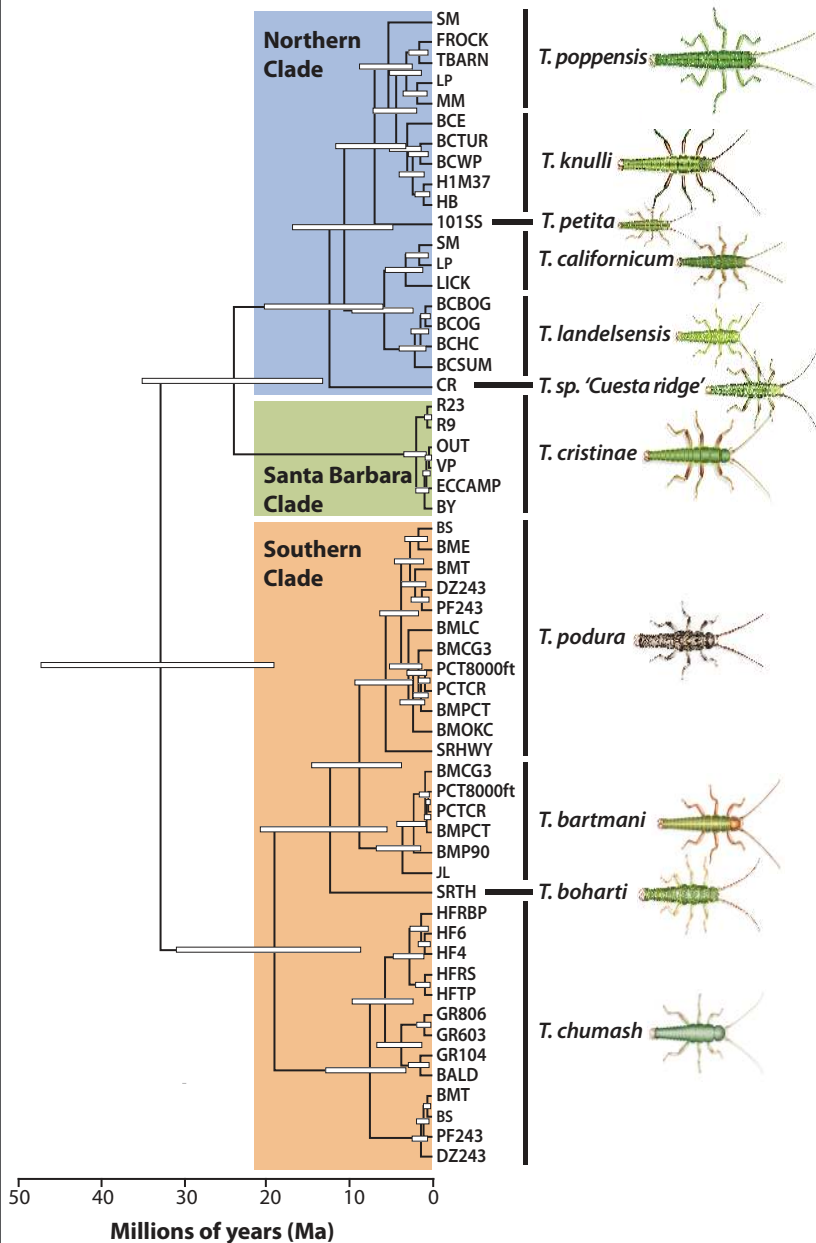
**b** Mean differentiation per species and species pair



**c** Genealogical sorting index

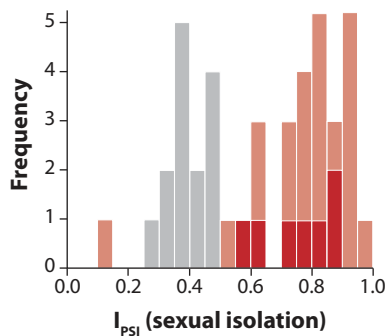
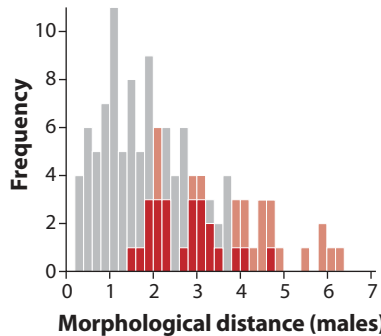
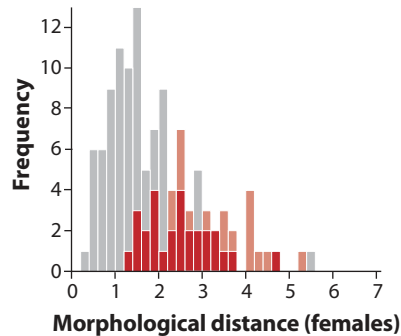
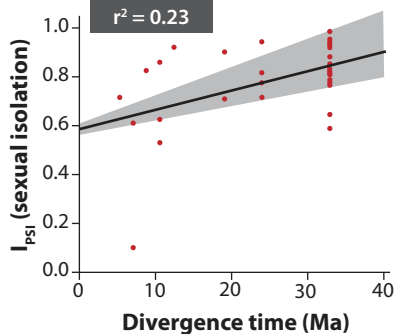
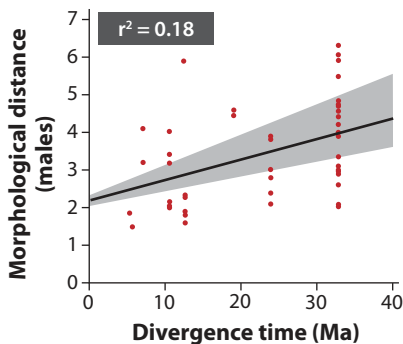


**d** Dated *Timema* phylogeny



**a** Sexual isolation within and between species

■ among populations ■ among species

**b** Morphological differentiation within and between species (males)**c** Morphological differentiation within and between species (females)**d** Sexual isolation against time**e** Morphological differentiation against time (males)**f** Morphological differentiation against time (females)