## Tests of hypotheses/models using ABC



## Model: Glaciated areas barrier



Spatially Explicit Demographic Modeling Past

Current

## Model: Glaciated areas permeable



Spatially Explicit Demographic Modeling Past

Current





5000 simulations closest to empirical data retained for parameter estimation ω 1.5 Density 1.0 4 0.5 ~ 0.0 2.6 3.0 3.4 3.8 -2.0 2.5 3.5 4.5 -1.5 -1.0 -0.5 log10(Kmax) log10(m) log10(Nanc) -12 4 Density 0.1 ŝ 0.5 0.0 3.0 -1.0 4.5 3.4 3.8 -2.0 -1.5 -0.5 2.5 3.5 2.6 log10(Kmax) log<sub>10</sub>(m) log10(Nanc)

	Barrier Model	Permeable Model
Marginal densities: Carex chalciolepis Bayes factor ~3	4.87 × 10 <sup>-5</sup> (0.65)	1.38 × 10⁻⁴ (0.97)
<b>Carex nova</b> Bayes factor ∼23	1.29 × 10 <sup>-4</sup> (0.84)	5.68 × 10 <sup>-6</sup> (0.08)

Is the most probable model capable of generating the observed data ? (compare the L of retained simulated data sets to the L for the empirical data: "*P-value*")

Massatti & Knowles (2016) Mol. Ecol.