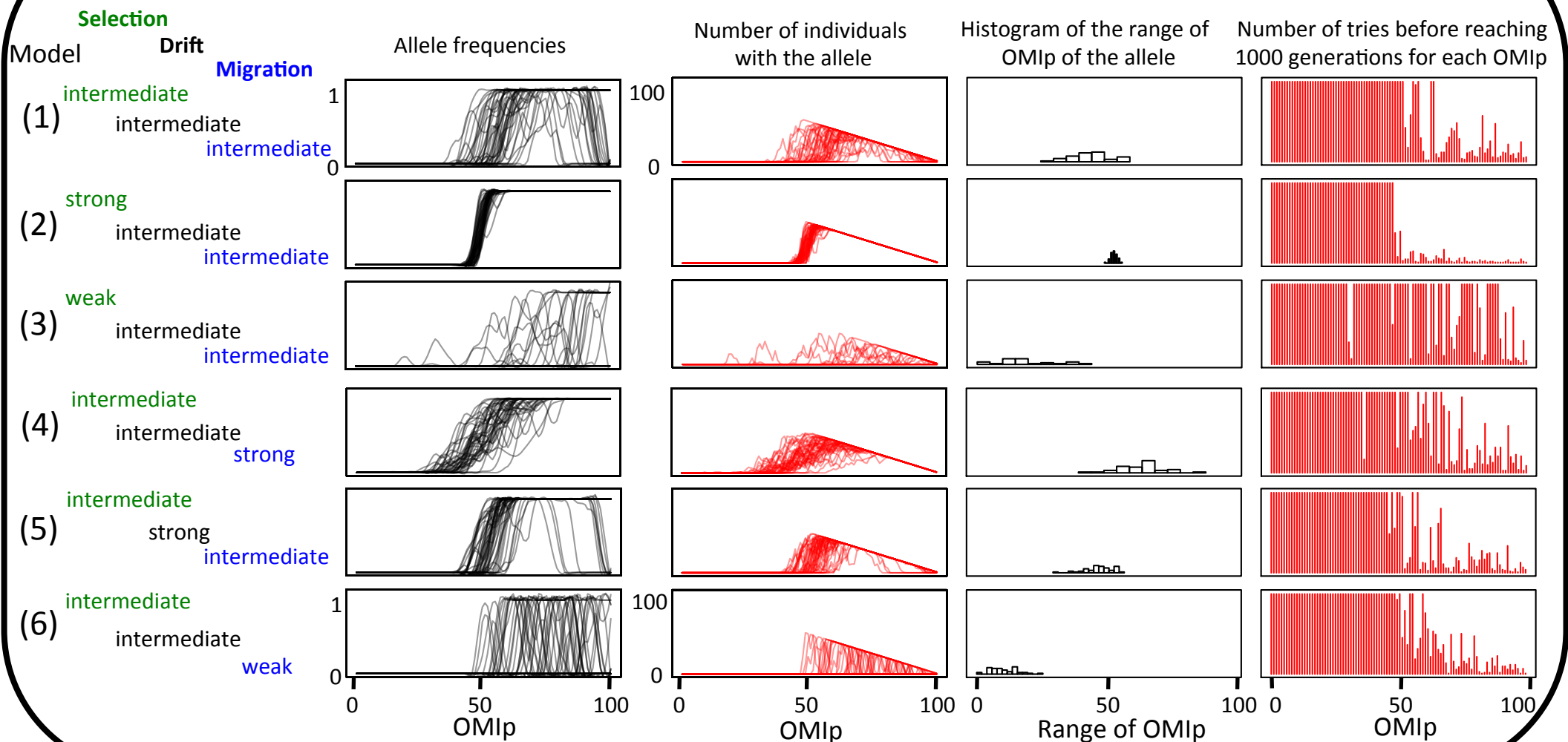
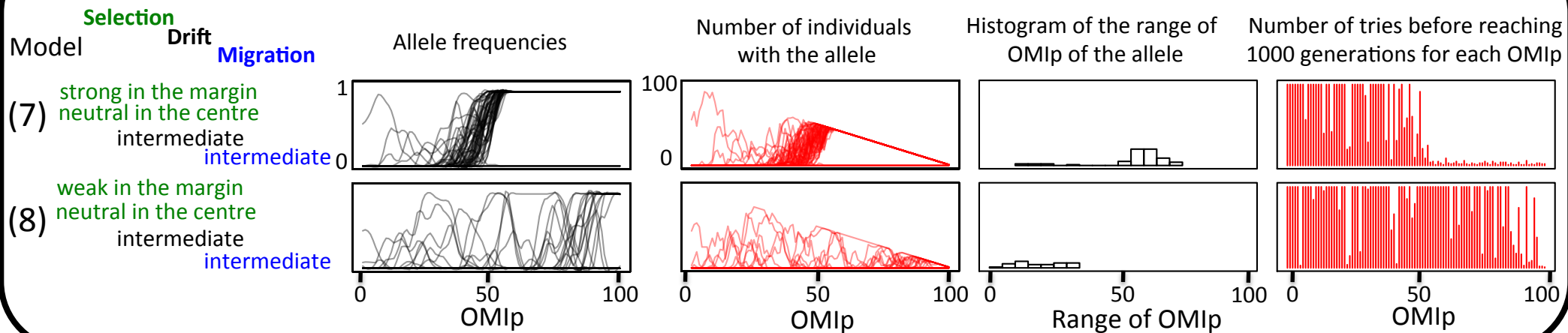


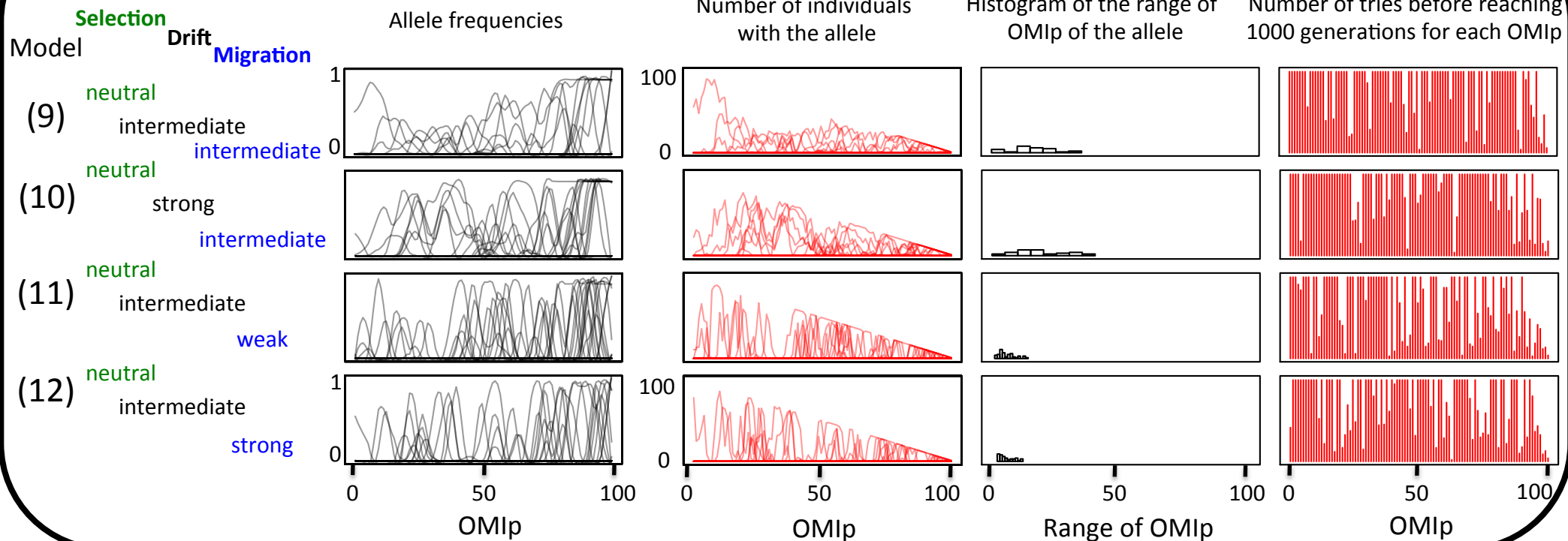
# Case 1: Negative-positive selection gradient



## Case 2: Neutral-positive selection gradient



## Case 3: Neutral selection



**Figure S11. Simulations obtained for the 12 theoretical models with various scenarios of drift, selection and migration.**

The results for the 12 models are given in rows. First column: frequencies of the adaptive alleles in the niche gradient obtained for each possible origin of the adaptive allele in the niche (i.e., all OMIp). Each curve represents the final allele frequencies obtained at equilibrium (at the 1,000th generation). Second column: numbers of individuals at equilibrium in the niche gradient for each possible origin of the adaptive allele in the niche (i.e., all OMIp). Third column: range of allele occurrences at equilibrium in the niche gradient (OMIp) obtained for each possible origin of the adaptive allele in the niche (i.e., all OMIp). Fourth column: Number of tries (maximum 100) before success (emerging allele reaching 1,000 generations) for each OMIp score of populations where the novel allele originates.