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Dobshansky-Muller incompatibilities in parapatry

The accumulation of Dobshansky-Muller incompatibilities is a widely accepted mechanism for speciation in allopatric populations. In this presentation, we analyze the scope and limits of this mechanism if the populations are not fully separated. We use classical migration-selection models to determine the limiting rates of gene-flow that allow i) for the origin and ii) for the maintenance of a single Dobshansky-Muller incompatibility in parapatry. We use our results to discuss the importance of ecological and genetic factors (such as recombination rate, strength of the incompatibility, level of local adaptation) for the speciation process in the presence of gene-flow.