Karlin-McGregor mutational occupancy problem revisited.

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Some population is made of n individuals that can be of p possible species (or types). The update of the species abundance occupancies is from a Moran mutational model designed by Karlin and McGregor in 1967. We will first study the equilibrium species counts as a function of n, p and the total mutation probability ν before considering various asymptotic regimes on n, p and ν. Relation to the Ewens sampling formulae will be highlighted.