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Multitype mutation-selection-migration dynamics and a set-valued dual

We consider multitype populations undergoing mutation, selection, migration and resampling. We develop a class of set-valued processes with Boolean dynamics which is used to produce a dual representation of the corresponding system of interacting Fleming-Viot processes. These set-valued processes are used to prove ergodic theorems, and to study the emergence of rare mutants, multilevel selection and multispecies models. This is based on joint work with Andreas Greven.