



Gene Surfing and Survival of the Luckiest

It is widely appreciated that population waves have played a crucial role in the evolutionary history of many species. In parallel with Fokker-Planck descriptions of stochastic processes in physics, population geneticists have developed methods for understanding mutations, genetic drift and selective advantage in such situations. Provided number fluctuations at the frontier are taken into account, neutral genetic markers can be used to infer information about growth, ancestral population size and colonization pathways. Mutations optimally positioned at the front of a growing population wave can increase their abundance via a "surfing" phenomenon. Experimental and theoretical studies of this effect will be presented, including recent work on bacteria and on mutualistic strains of yeast.

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February 14, 2012 (Tuesday) at 3:30pm (Refreshments at 3:15pm)

SCI 109, Metcalf Science Center, Boston University

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