



Phenotypic evolution of dispersal-enhancing traits in insular voles.

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Abstract: Evolutionary theory predicts that in metapopulations subject to rapid extinction-recolonization dynamics, natural selection should favour evolution of traits that enhance dispersal and recolonization ability. Metapopulations of field voles (*Microtus agrestis*) on islands in the Stockholm archipelago, Sweden, are characterized by frequent local extinction and recolonization of subpopulations. Here, we show that voles on the islands were larger and had longer feet than expected for their body size, compared with voles from the mainland; that body size and size-specific foot length increased with increasing geographical isolation and distance from mainland; and that the differences in body size and size-specific foot length were genetically based. These findings provide rare evidence for relatively recent (less than 1000 years) and rapid (corresponding to 100-250 darwins) evolution of traits facilitating dispersal and recolonization in island metapopulations.

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