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Autore	Nosil Patrik
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6. Sources of divergent selection: conclusions; 4 A form of reproductive isolation; 4.1. The different forms of reproductive isolation; 4.2. How common are different forms of reproductive isolation during ecological speciation?; 4.3. For a given point in the speciation process, do multiple reproductive barriers act, and what are their relative contributions to total reproductive isolation?; 4.4. Across the ecological speciation process, at what point do different barriers evolve? 4.5. Forms of reproductive isolation: conclusions and future directions5 A genetic mechanism to link selection to reproductive isolation; 5.1. Genetics of ecological speciation: the theory of divergence hitchhiking; 5.2. Linking selection to reproductive isolation via pleiotropy; 5.3. Linking selection to reproductive isolation via linkage disequilibrium; 5.4. Genetic constraints on ecological speciation; 5.5. The individual genetic basis of traits under selection and traits conferring reproductive isolation; 5.6. Ecological speciation genes 5.7. Genetic mechanisms: conclusions and future directionsPart III: Unresolved issues; 6 The geography of ecological speciation; 6.1. Geographic views and definitions of speciation; 6.2. Non-allopatric speciation: geographic contact constrains divergence; 6.3. Non-allopatric speciation: geographic contact promotes divergence; 6.4. The balance between constraining and diversifying effects of gene flow; 6.5. Multiple geographic modes of divergence; 6.6. Two problems with detecting divergence in the face of gene flow 6.7. Detecting divergence in the face of gene flow: comparative geographic approaches

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Sommario/riassunto

The origin of biological diversity, via the formation of new species, can be inextricably linked to adaptation to the ecological environment. Specifically, ecological processes are central to the formation of new species when barriers to gene flow (reproductive isolation) evolve between populations as a result of ecologically-based divergent natural selection. This process of 'ecological speciation' has seen a large body of particularly focused research in the last 10-15 years, and a review and synthesis of the theoretical and empirical literature is now timely. The book begins by clarifying wha

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