

1. Record Nr.	UNINA9910790150203321
Autore	Nosil Patrik
Titolo	Ecological Speciation [[electronic resource]]
Pubbl/distr/stampa	Oxford, : OUP Oxford, 2012
ISBN	0-19-162802-6 1-280-59456-X 9786613624390 0-19-162801-8
Descrizione fisica	1 online resource (299 p.)
Collana	Oxford Series in Ecology and Evolution
Disciplina	576.86
Soggetti	Evolution Species Symbiogenesis
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di contenuto	Cover; Contents; Introduction; Abbreviations; Part I: Ecological speciation and its alternatives; 1 What is ecological speciation?; 1.1. The often-continuous nature of the speciation process; 1.2. Ecological speciation via divergent natural selection; 1.3. A brief history of the ecological speciation hypothesis; 1.4. Alternatives to ecological speciation; 1.5. Other roles for ecology in speciation: population persistence and niche conservatism; 1.6. Summary; 2 Predictions and tests of ecological speciation; 2.1. Comparative approaches (ERG); 2.2. Trait-based approaches ("magic traits") 2.3. Fitness-based approaches (selection = RI)2.4. Gene-flow-based approaches (isolation-by-adaptation); 2.5. Phylogenetic shifts method; 2.6. Inferring causality when testing for ecological speciation; 2.7. Tests and predictions of ecological speciation: conclusions and future directions; Part II: Components of ecological speciation; 3 A source of divergent selection; 3.1. Differences between environments; 3.2. Interactions among populations; 3.3. The functional morphology and biomechanics of divergent selection; 3.4. Environmentally dependent sexual selection 3.5. Interactions between the different sources of divergent selection3.

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

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
