

GEPHE SUMMARY

ROSEA (https://www.gephebase.org/search-criteria?/and+Gene+Gephebase=~ROSEA^#gephebase-summary-title)	Gephebase Gene	GP00000997	GepheID
Published	Entry Status	Martin	Main curator

PHENOTYPIC CHANGE

Morphology (https://www.gephebase.org/search-criteria?/and+Trait+Category=~Morphology^#gephebase-summary-title)	Trait Category		
Coloration (flowers) (https://www.gephebase.org/search-criteria?/and+Trait=~Coloration+flowers^#gephebase-summary-title)	Trait		
Antirrhinum majus pseudomajus	Trait State in Taxon A		
Antirrhinum majus striatum	Trait State in Taxon B		
Data not curated	Ancestral State		
Intraspecific (https://www.gephebase.org/search-criteria?/and+Taxonomic+Status=~Intraspecific^#gephebase-summary-title)	Taxonomic Status		
	Taxon A		Taxon B
Antirrhinum majus (https://www.gephebase.org/search-criteria?/and+Taxon+and+Synonyms=~Antirrhinum+majus^#gephebase-summary-title)	Latin Name	Antirrhinum majus (https://www.gephebase.org/search-criteria?/and+Taxon+and+Synonyms=~Antirrhinum+majus^#gephebase-summary-title)	Latin Name
snapdragon	Common Name	snapdragon	Common Name
snapdragon; garden snapdragon; Antirrhinum majus L.; Anthirrhinum majus	Synonyms	snapdragon; garden snapdragon; Antirrhinum majus L.; Anthirrhinum majus	Synonyms
species	Rank	species	Rank
cellular organisms; Eukaryota; Viridiplantae; Streptophyta; Streptophytina; Embryophyta; Tracheophyta; Euphyllophyta; Spermatophyta; Magnoliophyta; Mesangiospermae; eudicotyledons; Gunneridae; Pentapetalae; asterids; lamiids; Lamiales; Plantaginaceae; Antirrhineae; Antirrhinum	Lineage	cellular organisms; Eukaryota; Viridiplantae; Streptophyta; Streptophytina; Embryophyta; Tracheophyta; Euphyllophyta; Spermatophyta; Magnoliophyta; Mesangiospermae; eudicotyledons; Gunneridae; Pentapetalae; asterids; lamiids; Lamiales; Plantaginaceae; Antirrhineae; Antirrhinum	Lineage
Antirrhinum (snapdragons) - (Rank: genus) (https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id=4150)	Parent	Antirrhinum (snapdragons) - (Rank: genus) (https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id=4150)	Parent
4151 (https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id=4151)	NCBI Taxonomy ID	4151 (https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?id=4151)	NCBI Taxonomy ID
Yes	is Taxon A an Intraspecies?	Yes	is Taxon B an Intraspecies?
Antirrhinum majus pseudomajus	Taxon A Description	Antirrhinum majus striatum	Taxon B Description

GENOTYPIC CHANGE

ROS1	Generic Gene Name	Q2VAZ7 (http://www.uniprot.org/uniprot/Q2VAZ7)	UniProtKB Antirrhinum majus
-	Synonyms	0	GenebankID or UniProtKB
-	String		
-	Sequence Similarities		
GO:0003677 : DNA binding (https://www.ebi.ac.uk/QuickGO/term/GO:0003677)	GO - Molecular Function		
-	GO - Biological Process		
GO:0005634 : nucleus (https://www.ebi.ac.uk/QuickGO/term/GO:0005634)	GO - Cellular Component		
Unknown (https://www.gephebase.org/search-criteria?/and+Presumptive+Null=~Unknown^#gephebase-summary-title)			Presumptive Null

Unknown ([https://www.gephebase.org/search-criteria?/and+Molecular+Type="+Unknown^#gephebase-summary-title](https://www.gephebase.org/search-criteria?/and+Molecular+Type=))

Molecular Type

Unknown ([https://www.gephebase.org/search-criteria?/and+Aberration+Type="+Unknown^#gephebase-summary-title](https://www.gephebase.org/search-criteria?/and+Aberration+Type=))

Aberration Type

Not identified

Molecular Details of the Mutation

Linkage Mapping ([https://www.gephebase.org/search-criteria?/and+Experimental+Evidence="+Linkage+Mapping^#gephebase-summary-title](https://www.gephebase.org/search-criteria?/and+Experimental+Evidence=))

Experimental Evidence

Evolutionary paths underlying flower color variation in *Antirrhinum*. (2006) (<https://pubmed.ncbi.nlm.nih.gov/16917061>)

Main Reference

Whibley AC; Langlade NB; Andalo C; Hanna AI; Bangham A; Thibaud C; Coen E

Authors

To understand evolutionary paths connecting diverse biological forms, we defined a three-dimensional genotypic space separating two flower color morphs of *Antirrhinum*. A hybrid zone between morphs showed a steep cline specifically at genes controlling flower color differences, indicating that these loci are under selection. *Antirrhinum* species with diverse floral phenotypes formed a U-shaped cloud within the genotypic space. We propose that this cloud defines an evolutionary path that allows flower color to evolve while circumventing less-adaptive regions. Hybridization between morphs located in different arms of the U-shaped path yields low-fitness genotypes, accounting for the observed steep clines at hybrid zones.

Abstract

Additional References

RELATED GEPHE

No matches found.

Related Genes

No matches found.

Related Haplotypes

EXTERNAL LINKS

COMMENTS