

Background: It is argued that coastal endemic taxa may evolve in parallel at the periphery of the distributional range of a widespread species.

Aims: We tested this hypothesis for the origins of three peripheral, coastal isolates of *Senecio*, *S. glaucus* ssp. *glaucus* (Israel), *S. g.* ssp. *coronopifolius* p.p. (Sicily), and *S. hesperidium* (Morocco), from widespread *S. glaucus* ssp. *coronopifolius*. We also determined the relative roles of selection vs. genetic drift in shaping phenotypic divergence in ssp. *glaucus* and *S. hesperidium*, using Lande's test of neutral morphological change.

Methods: We surveyed morphological and/or allozyme variation in the three peripheral isolates and mainly inland populations of *S. g.* ssp. *coronopifolius*.

Results: Genetic data supported independent origins of the coastal taxa from nearby populations of ssp. *coronopifolius*. These descendant and ancestral populations showed pronounced morphological but weak genetic differentiation. Phenotypic similarities between ssp. *glaucus* (Israel) and *S. hesperidium* (Morocco) in plant height and floral traits may have resulted from parallel divergent selection from ssp. *coronopifolius*, though drift remains an alternative cause in *S. hesperidium*.

Conclusions: Our results indicate parallel ecotype formation and (sub)speciation in *Senecio* in which primarily selective vs. neutral determinants promoted the recurrent origin of coastal types in, respectively, Israel and Morocco.

