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Speciation in Mediterranean Mountain Systems: Two Examples from Spain and Morocco

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The Mediterranean Basin is one of the richest and most endangered eco-regions of the Earth. Its complex geological history has shaped a large geographical diversity, with mountains higher than 4,000m and a variety of islands and peninsulas which allow for a wide range of local climates. As a result, 13,000 species are endemic and concentrate in regional hotspots. With endemism rates higher than 20%, the Baetic-Rifan mountains (South-East Spain and Northern Morocco) are outstanding focuses of plant diversity. The *Lavatera olbia* complex is a mainly Western Mediterranean species group that has undergone up to two homoploid speciation processes in the Baetic-Rifan mountain systems. The related *L. oblongifolia* and *L. valdesii* are endemic of the Alpujarras (Eastern Andalucía, Spain), and of the Djebel Mezgout in the Eastern Rif (Morocco), respectively. Both species are morphologically similar and have developed marked morphological traits to protect themselves from environmental aridity. Contrastingly, *L. olbia* thrives in mesic areas near the seashore. Though directly related and despite their morphological affinities, *L. valdesii* and *L. oblongifolia* seem to be subjected to different challenges and differ from the perspective of population dynamics. Although both species are geographically restricted, *L. oblongifolia* is locally copious, appearing in large populations composed by individuals of different ages, and *L. valdesii* is known from a single population of less than 500 adult individuals. This work is a primer on the diversification, character evolution and phylogeography of the *L. olbia* complex in the Western Mediterranean Basin, and the first molecular study of *L. valdesii*.

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ZOBODAT - www.zobodat.at

Zoologisch-Botanische Datenbank/Zoological-Botanical Database

Digitale Literatur/Digital Literature

Zeitschrift/Journal: Sauteria-Schriftenreihe f. systematische Botanik, Floristik u. Geobotanik

Jahr/Year: 2008

Band/Volume: 16

Autor(en)/Author(s): Schönswetter Peter, Schneeweiß Gerald M., Escobar García Pedro

Artikel/Article: Speciation in Mediterranean Mountain Systems: Two Examples from Spain und Marocco 310-311