



Bituminaria kyreniae (Fabaceae), a new species from Northern Cyprus

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Abstract

Bituminaria kyreniae is described and illustrated as a new species to science from northern Cyprus. It is an obligate chasmophyte growing on the south-facing carbonatic cliffs of Kyrenia range. Diagnostic morphological features, micro-morphology of pod and seed testa, ecology, conservation status, and chorology of the new species are provided. Besides, its relationships with the currently recognized species belonging to the genus *Bituminaria* are also examined.

Key words: chasmophyte, endemic flora, fodder grass, Mediterranean Basin, taxonomy

Introduction

Bituminaria Heist. ex Fabricius (1759: 165) is a genus of Fabaceae occurring in the Mediterranean, Black Sea and Canary Islands. Actually, very few species are recognized within it (Stirton 1981a, 1981b, Greuter *et al.* 1989, Feinbrun-Dothan & Danin 1998, Boulou 1999, Minissale *et al.* 2013). This genus was included by Rydberg (1919, 1928) into the tribe Psoraleae (Bentham 1865: 443) Rydberg (1919: 1), which currently groups nine natural genera widely spread in the Old and New World (Grimes 1990, Kirkbride *et al.* 2003, Lewis *et al.* 2005, Egan & Crandall 2008). According to the phylogenetic study by Egan & Crandall (2008), *Bituminaria* has to be considered a distinct genus closely related to *Cullen* Medikus (1787: 381), as also confirmed by Toksoy *et al.* (2015). The species nowadays included in *Bituminaria* were formerly ascribed to *Psoralea* Linnaeus (1753: 762), genus to which a wider circumscription was given in the past. Actually, the species currently recognized within *Bituminosa* are: *B. bituminosa* (Linnaeus 1753: 763) C.H. Stirton (1981a: 318), which is the type of the genus, *B. morisiana* (Pignatti & Metlesics 1976: 53) Greuter (1986: 108), *B. flaccida* (Nábělek 1923: 74) Greuter (1986: 108) and *B. basaltica* Minissale, C. Brullo, Brullo, Giusso & Sciandrello (2013: 2), all belonging to the subgen. *Bituminaria*, and lastly *B. acaulis* (Steven ex M. Bieberstein, 1808: 206) C.H. Stirton (1981a: 318), included in the subgen. *Christevenia* Barneby ex C.H. Stirton (1981a: 318). Basing on literature and personal investigations, *B. bituminosa* has to be treated as a species complex deserving more in-depth taxonomic and phylogenetic studies. In particular, numerous taxa at specific or infraspecific level have been described by several authors (Gouan 1773, Reichenbach 1832, Zohary 1972, Méndez *et al.* 1990, Khokhrjakov 1997) and ascribed to *Psoralea*, such as *P. palaestina* Gouan (1773: 51), *P. plumosa* Reichenbach (1832: 869), *P. pontica* Khokhrjakov (1997: 52), *P. bituminosa* var. *brachycarpa* Feldmann in Zohary (1972: 455), *P. bituminosa* var. *hulensis* Feldmann in Zohary (1972: 455) and *P. bituminosa* var. *prostrata* Zohary, (1972: 455), or to *Bituminaria*, e.g. *B. bituminosa* var. *albomarginata* Méndez, Fernández & Santos (1991: 160) and var. *crassiuscula* Méndez, Fernández & Santos (1991: 162).

In order to improve the knowledge of the genus at issue, the populations of *Bituminaria* occurring in Cyprus, eastern Mediterranean island located off the coast of southern Turkey, were collected and examined. According to Meikle (1977), this genus is represented in Cyprus by *B. bituminosa*, quoted by the author as *Aspalthium bituminosum* (Linnaeus) Fourreau (1868: 365), which is exclusive of the north-central sector of the island (corresponding to the division 7), where it grows on very arid carbonatic rocky environments. During a field trip in northern Cyprus (July 2013), several specimens of this plant were collected, thus verifying that this plant behaves as an obligate chasmophyte exclusively growing on the crevices of the south-facing limestone cliffs. As a result of the taxonomical investigations carried out on the Cypriot populations, they differ very well from the other known species of *Bituminaria*, and