Bituminaria basaltica (Fabaceae), a new species from Italy

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Abstract

Bituminaria basaltica is described and illustrated from Filicudi, an islet of the Aeolian Archipelago (Sicily, Italy). This new species, belonging to a small genus of Fabaceae occurring in the Mediterranean region and the Canary Islands, is morphologically distinct from the other taxa in the following features: leaf shape and size, inflorescence size, petal colour, size and shape of flowers, pods and seeds. Its relationships with the known species of Bituminaria are examined and a key to the genus is provided.

Key words: Aeolian Archipelago, endemic flora, fodder grass, Mediterranean Basin, taxonomy

Introduction

Bituminaria Heist. ex Fabricius (1759: 165) is a small genus of Fabaceae occurring in the Mediterranean (including Black Sea territories) and Canary Islands, currently including four species (Stirton 1981a, 1981b, Boulos 1999, Greuter et al. 1989). Bituminaria was restored by Stirton (1981a), to which he ascribed only two species, previously included in Psoralea Linnaeus (1753: 762), P. bituminosa Linnaeus (1753: 763) [= Bituminaria bituminosa (L.) Stirton (1981a: 318)] and P. acaulis Steven ex Bieberstein (1808: 206) [= Bituminaria acaulis (Steven ex M.Bieb.) Stirton (1981a: 318)]. Afterwards, Greuter (1986) added two more species of Psoralea, P. flaccida Nábělek (1923: 74) and P. morisiana Pignatti & Metlesics (1976: 53) to Bituminaria. Bituminaria bituminosa shows a certain variability mainly in the shape and size of leaves, flowers, pods, as well as the habit and corolla colour (Zohary 1972, Méndez et al. 1991, Jahn & Schönfelder 1995). Such morphological features, that are rather variable within the same population, led to the description of several taxa all referring to this species, e.g. Psoralea palaestina Gouan (1773: 51), P. plumosa Reichenbach (1832: 869), P. pontica Khokhrjakov (1997: 52), P. bituminosa subsp. pontica (A.P. Khokhr.) Zernov (2000: 70), 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), Bituminaria bituminosa var. palaestina (Gouan) R.L. Jahn in Jahn & Schönfelder (1995: 28), B. bituminosa var. albomarginata Méndez et al. (1991: 160) and B. bituminosa var. crassiuscula Méndez et al. (1991: 162). In particular, those varieties described by Zohary (1972) and Méndez et al. (1991) seem to be taxonomically valid, and therefore they could be considered as subspecies of B. bituminosa. However, a proper taxonomic treatment at infra-specific level of this species will require an in-depth analyses in order to verify whether the diacritical characters used for the differentiation of the aforesaid taxa are an expression of the phenotype or are genetically fixed.

During a field trip in the Aeolian Islands, an archipelago of seven volcanic islets off Milazzo (northeastern Sicily), a peculiar plant, whose pods clearly denoted its attribution to the genus Bituminaria, was found at Filicudi. This plant occurs quite frequently in this island, which is the fifth-largest one of the