



Taxonomic notes on *Onobrychis* sect. *Onobrychis* subsect. *Macropterae* (Fabaceae) from Iran

MASSOUD RANJBAR¹, ROYA KARAMIAN¹, ANAHITA HADADI¹ & MOHAMMADREZA JOHARCHI²

¹ Department of Biology, Herbarium division, Bu-Ali Sina University, PO Box 65175/4161, Hamedan, Iran.

E-mails: ranjbar@basu.ac.ir, R_karamian@basu.ac.ir, anahitahadadi@yahoo.com

² Herbarium FUMH, Research Center for Plant Sciences, Ferdowsi University of Mashhad, Azadi sq., Mashhad, Iran.

E-mail: joharchimr@yahoo.com

Abstract

A key, descriptions and new findings are given for *Onobrychis* sect. *Onobrychis* subsect. *Macropterae*, which occurs in the area covered by the flora of northeastern Iran (Khorasan Province). *Onobrychis patula* and *O. mucronifolia* are described as new species and are illustrated. These are perennial herbs, becoming woody at base and have long wings, the standard as long as the keel, and pods densely covered with gray appressed hairs or rarely glabrous. The relationships between the new species and their closest relatives are discussed. *Onobrychis patula* represents a spreading hairy habit, while the plants of the other species have appressed hairs. *Onobrychis mucronifolia* has large leaflets distinctly mucronulate at the apex, which can thus easily be distinguished from the other species of the subsection. It differs from *O. verae* by its height, bract length, number of flowers and leaflet indumentum.

Introduction

The genus *Onobrychis* Miller belongs to the tribe Hedysareae (Fabaceae) and has nearly 170 species. It is mainly distributed in the north temperate regions, with the most important diversity centers in the eastern Mediterranean and West Asia, and is especially species rich in Iran. It includes annual or perennial, mostly caulescent herbs (rarely spiny shrubs) with an indumentum of simple hairs, or the species are glabrous (Lock & Simpson 1991, Yakovlev *et al.* 1996, Mabberley 1997). In the Flora Iranica, *O.* sect. *Onobrychis* is represented by 14 species, a few of them such as *O. viciifolia* are cultivated as fodder or for ornamental uses (Rechinger 1984). The taxonomy of the genus *Onobrychis* continues to be subject of much confusion, mainly because of the different approaches to species delimitation, resulting in varying numbers of recognized species (Boissier 1872, Širjaev 1925, Hedge 1970, Rechinger 1984, Ball 1978, Duman & Vural 1990, Aktoklu 2001). The flora of Iran is rich in *Onobrychis* species with 80 species of which 40 are endemic (Rechinger 1984, Ranjbar *et al.* 2004, 2006, 2007a, 2007b, 2008, 2009b, Ranjbar 2009a).

In order to solve the problems regarding the morphological heterogeneity of the section and the doubtful specimens, a detailed morphological study has been conducted on the species attributed to *O.* subsect. *Macropterae* Hand.-Mazz. and other related groups by the first author. Field study is much needed to determine the range of character variation within taxa, as we conducted in the framework of the present paper. Particular attention has been paid to indumentum, leaflet size and shape, peduncle length, corolla size and colour, proportions of standards of petals to wings and keels, pod size and shape, as well as the degree of dentation on crest and disc of pods.

In this paper two new species are described from Iran. They are compared with their closest relatives. The material of the new species was collected during recent botanical collections by the staffs of the herbarium of the Ferdowsi University in Mashhad (FUMH).