

PERSICARIA LAPATHIFOLIA SUBSP. NODOSA (POLYGONACEAE) IS RECORDED FOR THE FLORA OF IRAN

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Persicaria lapathifolia subsp. *nodosa* is recorded for the first time for the flora of Iran. Morphological variation of this taxon in Iran has been studied. This subspecies differs from *P. lapathifolia* subsp. *lapathifolia* by having densely glandular peduncles and leaves with golden glands beneath. The most characteristic features of this subspecies are presence of red spots on the stem and having smaller and lax spikes.

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Key words. *Persicaria lapathifolia* subsp. *nodosa*, Polygonaceae, Flora, Taxonomy, Iran.

زیر گونه جدیدی با نام *Persicaria lapathifolia* subsp. *nodosa* (Polygonaceae) برای فلور ایران

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زیرگونه *Persicaria lapathifolia* subsp. *nodosa* برای اولین بار در فلور ایران گزارش می شود. تنوع ریخت شناسی این زیرگونه مورد بررسی قرار گرفته و تفاوت هایی نیز در بشره پوشاننده گلبرگ در مقایسه با زیرگونه تیپ مشاهده شد. تصویر زیرگونه به همراه تصویر بشره پوشاننده گلبرگ نمایش داده می شود.

Introduction

The genus *Persicaria* comprises 12 annuals and perennials in Iran. *Persicaria lapathifolia* L. is a fairly common and widespread species within Polygonaceae family that is a highly polymorphic taxon especially in habit, presence or absence of red dots on the stem, color of the glands on the leaves and perianth, tomentose to almost glabrous leaves, eglandular to glandular peduncle and length and compactness of raceme. This species is distinguished from other species by having densely flowered inflorescence, tepals with anchor shaped veins, leaves with yellow gland beneath and glandular peduncles.

Rechinger (1968) introduced this taxon in Flora Iranica with 3 subspecies under the names *Polygonum lapathifolium* L. subsp. *lapathifolium*, subsp. *brittingeri* (Opiz) Rech. f. and subsp. *pallidum* (With.) Fries. In Flora Europaea (Webb & Chater 1964), *P. nodosum* Pers. is described as a plant with yellowish foliar glands, red-spotted stems and pink flowers in a rather lax spike.

Timson (1963) stated that due to Britton (1933) observations, the reliable character for distinguishing *P. nodosa* is the fruits which are smaller, less circular and more ovate outline than those of *P. lapathifolium*, but Timson believed that the size of fruits is depended on the environment of progenitors. He also stated that the glands of peduncles and perianths are less in *P. nodosa*. Previous authors as Davey, Moss and Persoon stated that *P. nodosa* has red spots on stems too (Timson 1963). In this research by studying the morphological variation of *Persicaria lapathifolia*, we found a new taxon in subspecific level for the flora of Iran, which is introduced in this paper.

Materials examined

The plant materials were collected during July-September 2008 and 2009 from 15 regions of Iran. *Persicaria lapathifolia* subsp. *nodosa* (No. 305-Herbarium of Alzahra University) was collected from Hamedan province, Heydareh village, Iran (1800 m.).

Voucher specimens are deposited in the Herbarium of Alzahra University.

Results and discussion

Persicaria lapathifolia* (L.) S. F. Gray subsp. *nodosa (Pers.) A. Löve, Fig. 1.

P. lapathifolia subsp. *nodosa* is recorded from Iran for the first time. It differs from its closet relative *P. lapathifolia* subsp. *lapathifolia* by having densely glandular peduncles and leaves with golden glands beneath (fig 2. e & f). The most characteristic features of this subspecies are presence of red spots on the stem (fig 2. a) and having smaller and lax spikes. This taxon grows in humid and high regions. By studying tepal epidermis, we observed that there are some differences between these two subspecies (Fig. 3 a & b). In subsp.

lapathifolia, tepal epidermis consists of irregular cells with sinuate cell walls but in subsp. *nodosa* it has fairly regular cells with smooth cell walls.

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Fig. 1. *Persicaria lapathifolia* subsp. *nodosa*.

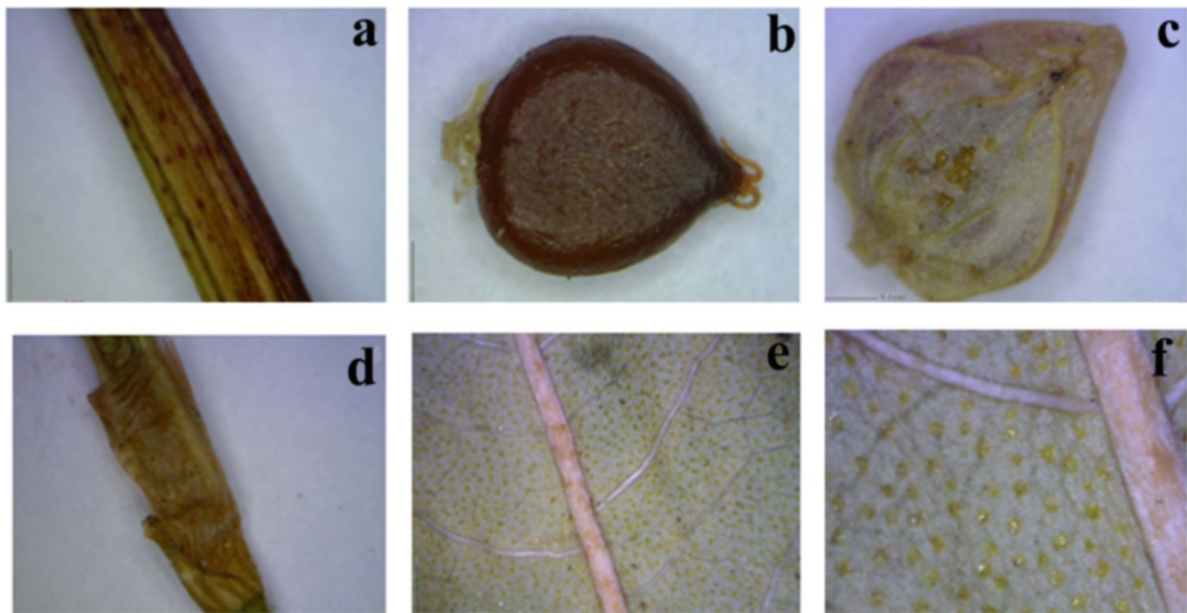


Fig. 2. Different parts of *Persicaria lapathifolia* subsp. *nodosa*. a) Dotted stem, b) Achene, c) Flower bud with some glands on it, d) Ochrea, e and f) Golden glands below leaf surface (a-e $\times 91$, f $\times 273$).

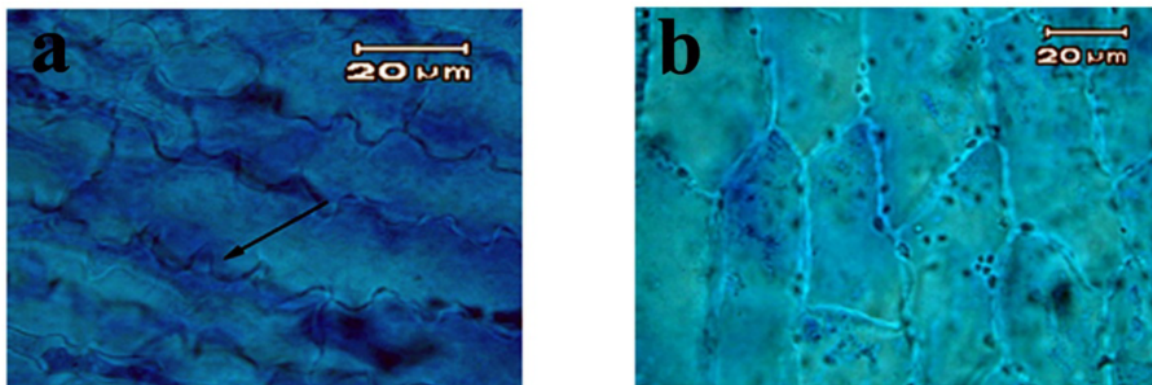


Fig. 3. Difference between tepal epidermis of *Persicaria lapathifolia* subspecies. a) subsp. *lapathifolia*, b) subsp. *nodosa*.