

CONTRIBUTIONS TO THE ROMANIAN VASCULAR FLORA

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Abstract. In the present paper there are presented 2 new species for the spontaneous Romanian flora: *Urtica pilulifera* L. and *Lagurus ovatus* L. For each taxon a short botanical description is presented, general distribution and few general aspects referring to biology, ecology and their utility (where is necessary).

Keywords: flora news, *Lagurus ovatus*, Romania, *Urtica pilulifera*.

Rezumat. Contribuții la flora vasculară a României. În lucrarea de față se prezintă 2 specii noi pentru flora spontană a României: *Urtica pilulifera* L. și *Lagurus ovatus* L. La fiecare taxon se prezintă o scurtă descriere botanică, distribuția generală și câteva aspecte generale referitoare la biologia, ecologia și utilitatea acestora (acolo unde este cazul).

Cuvinte cheie: noutăți floristice, *L. ovatus*, România, *U. pilulifera*.

INTRODUCTION

In the Romanian specialty literature there are not known any data referring to the presence of these two taxa in the Romanian vascular flora. There is no herbarium material to certify the existence of these species in the spontaneous or subsponaneous Romanian flora.

BUIA (in SĂVULESCU, 1952) says that *Urtica pilulifera* represents a southern element, that is present to us only as cultivated plant, and OPREA (2005), mentions that *Lagurus ovatus*, could be subsponaneous in the south part of Romania, but without giving any location.

MATERIAL AND METHODS

The material with the two species was collected by the authors of this paper after a trip in Costinești (Constanța County). It has been identified in ruderalised meadows. Plants are found as herbarium samples and included in the herbarium from the University of Craiova (CRA). Subsequently, *Lagurus ovatus* has been found in "Valea Stanciului" locality (Dolj County).

The identification was made according to Flora Europaea, in the Romanian flora not being included in the dichotomous keys for the identification of these species.

The authors' abbreviations are according to BRUMMITT & POWELL (1992).

RESULTS AND DISCUSSIONS

In Flora Europaea (TUTIN et al., 1964) *Urtica* genus is represented by 8 species. Among these, so far, in Romania were known only *Urtica dioica* L., *U. kioviensis* ROGOW. and *U. urens* L. (CIOCĂRLAN 2000, 2009).

BELDIE (1977) mentions to *Urtica* genus only *U. dioica* as species with two subspecies (*dioica* and *kioviensis* (ROGOW.) BUIA) and *U. urens* L.

Urtica pilulifera has been mentioned by BRÂNDZĂ (1898) from Constanța, along railways lines. Although it was mentioned, there is no herbarium material certifying its presence in the Romanian spontaneous flora (fact mentioned by CIOCĂRLAN (2000, 2009), too).

Because *U. pilulifera* is a new taxon for the Romanian flora, we present the description of these (based on herbarium material), starting from the existing description in the specialty foreign literature.

Urtica pilulifera L., Sp. Pl. 983. (1753).

It is an herbaceous plant, annual or biennial with sparse stinging hairs. Stem is quadrangular, high of 20-100 cm; monoecious. Leaves with 2-10 cm long petiole, lamina to 2-10 cm, ovate, truncate to subcordate at base, serrate or entire, acuminate apex; 4 stipules to each node, free lateral, triangular-ovate to lanceolate, 3-6 mm long, membranous. Racemes unisexual; female long pedunculated with flowers in globose heads, long peduncle head, c. 1 cm in diameter; male flowers spiked. Female lowers with inflated perianth. Achenes broadly ovate, c. 2.5 mm long, c. 2 mm broad, dark brown, enclosed by enlarged dorsal sepals.

Thus, *U. pilulifera* is easily distinguished from the other species of *Urtica*, which are found nowadays in the Romanian flora (CIOCĂRLAN, 2000; 2009).

- 1a. Female flowers in long-pedunculated, globose heads *Urtica pilulifera*
 1b. All flowers in spike-like racemes 2
 2a. Annual plant *Urtica urens*
 2b. Perennial plant 3
 3a. Dioecious plant, with erect stem, pubescent. External tepals from the female flowers shorter than $t \frac{1}{2}$ of the length of the internal ones..... *U. dioica*
 3b. Monoecious plant, with creeping stem in the inferior side, hairless. External tepals from the female flowers longer than $t \frac{1}{2}$ of the length of the internal ones *U. kioviensis*

General distribution. This is a native species in the south of Europe (Fig. 1) or occasionally naturalized in Austria, Belgium, England, Czech, Germany, Hungary, Switzerland (BALL in TUTIN et al., 1964) and Bulgaria, Slovakia and Ukraine (in SÎRBU & OPREA, 2011, according to DAISIE).

Biology and ecology. *U. pilulifera* is a diploid species ($2n = 26$) (LUQUE & DIAZ LIFANTE, 1991) that is vegetating in ruderalised places, garbage area sometimes. It prefers sunny soils. It blooms from June to September, and the seeds ripen from July to October.

Uses. The leaves of this plant can be used as those of *U. dioica* in folk medicine as a tea, because of its tonic and purifying effect on blood.



Figure 1. *U. pilulifera* distribution in Europe (source net).

***Lagurus ovatus* L., Sp. Pl. 81 (1753)**

It is the only species of this genus from Europe Flora (TUTIN in TUTIN et al., 1980). SCHUR (1866) mentioned it from Transylvania, according to KOTSCHY, but with doubts about this fact. Also, SIMONKAI (1886) said that *Lagurus ovatus* is found in Transylvania only in cultivated places.

It is an herbaceous plant, annual, with erect or ascendant stem (Fig. 2), that can reach up to 60 cm. It can be simple or slightly branched at the basal nodes. It grows in small narrow tuft. The leaves are flat, width up to 1 cm. These present an obvious ligula, up to 3 mm, obtuse or truncated, villous and often broken. Vagina and lamina are soft and densely hairy.

The inflorescence is ovoid or subcylindrical to subglobulose (Fig. 3). The spikelets are between 7-10 mm in length and present villous glumes. Lemma is 3 mm in length (excluding awn and apical setae), is lanceolate, with 5 nervures, awn 8-20 mm; apical setae is 2-6 mm in length. Palea is shorter than lemma. Anthers are 1.5 mm.

General distribution. It is a Mediterranean species, met on the marine sands from southern Europe (TUTIN, in TUTIN et al., 1980), rarely in ruderal dry places, (Fig. 5). Adventive (occasional), it is known from Austria, Belgium, Czech Republic, Germany (SÎRBU & OPREA, 2011).

Biology and ecology. *Lagurus ovatus* is a diploid ($2n = 14$) therophyte (TUTIN in TUTIN et al., 1980) flowering from March to May. It prefers sandy soils. It grows in medium to lit places, moderately fertile soil, in a warm, sunny site.



Figure 2. Herbarium material with collected *L. ovatus* (original). Figure 3. Inflorescence detail of *L. ovatus* (original).

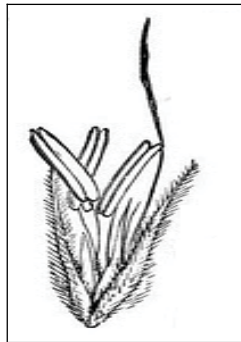


Fig. 4. *L. ovatus* spikelets - scheme (original).



Figure 5. *L. ovatus* distribution in Europe (source net).

CONCLUSIONS

From the presentation of this paper we can draw few conclusions:

- the paper indicates the certain existence of the species *L. ovatus* and *U. pilulifera* in Romania,
- the Romanian floristic inventory becomes richer with two more species,
- the altitude where the two species were found is between 0-10 m.s.m,
- these two species are not affected by the influence of the zooanthropogenic factor, that is why we consider that in the future, the area of these taxa could be larger.

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