



***Bellevalia hyacinthoides* (Bertol.) K. Persson, NEW SPECIES FOR THE ALBANIAN FLORA**

**Lulëzim SHUKA**

Department of Biology, Faculty of Natural Sciences, University of Tirana.  
E-mail: lshuka@yahoo.com

**SYNOPSIS**

**Key words:**

Albanian Flora,  
*Bellevalia*  
*hyacinthoides*,  
new species,  
distribution.

We are presenting and description *Bellevalia hyacinthoides*, as new species for the Albanian flora. The genus *Bellevalia* Lapeyr, in the Flora of Albania is represented by two species *B. romana* and *B. dubia*, whereas *B. hyacinthoides* is a third one. The morphological characters of the new species are compared with that of *B. hyacinthoides* growing in its native place, Greece. Habitus, capsule and main parts of flower of *B. hyacinthoides* are illustrated, too.

**INTRODUCTION**

The flora of Albania is still incompletely studied. That was influenced by a long isolation of the country from the other parts of Balkan Peninsula, during the second part of the last century. The new records on the Albanian flora, presented in the last 10 years, from the Albanian and foreign botanists (Shuka & Jahollari, 2007; Malo & Shuka, 2008; Shuka & Tan, 2009; Barina et al., 2009, Rakaj, 2009) are a clear indicator for the presence of many other unreported plant species in the territory.

The genus *Bellevalia* Lapeyr. is represented in Albania only by two species, *B. romana*, described in the forth book of Albania flora (Vangjeli et al., 2000) and *B. dubia* (Barina et al., 2009), which is recorded by Hungarian botanist, Z. Barina during the year 2009. Both species are recorded in limestone substrates and wet sites. They are restricted mainly in the south of the country, showing their strong Mediterranean elements. However, presence of two *Bellevalia* taxa in Albania still far from the eight taxa, that are reported to growing in the adjacent country, Greece (Bareka et al., 2008).

## MATERIAL AND METHODS

New records of the subendemic species (*Bellevalia hyacinthoides*) given in the present paper was based on plant specimens collected during field trips carried out at the end of 2009 and beginning of 2010 years. Voucher specimens are deposited in national herbarium of Faculty of Natural Sciences, Tirana University and in private herbarium of the author. Morphological and ecological data of the growing locality are recorded. The coordinates were recorded with the aid of GPS Alan Map 500.

The new species were defined based on TUTIN et al. (1980) and TAN & IATROU (2001). Comparison of the data collected in the field was done with that of the existing literature of Albanian flora, like DEMIRI (1983) and VANGJELI et al., (2000). For the new species, high resolution digital photos have been taken and they are deposited at the personal photo sets of the author.

## RESULTS AND DISCUSSION

*Bellevalia hyacinthoides* (Bertol.) K. Persson & Wendelbo in Bot. Not. 132: 65 (1979). Basionym: *Strangweja hyacinthoides* Bertol. is a perennial bulbous plant of the *Liliaceae* family (Fig. 1).

*B. hyacinthoides*, were recorded for the first time on 31 December 2009 in the hills, around Saranda bay, at altitude from 80 up to 140 m a.s.l., in coordinates lat.: 39 52 681<sup>0</sup> N and long.: 020 00 680<sup>0</sup> E. Three days latter, in a trip more in north of Saranda city, it was found and in coastal hills of Kakome bay and Nivica village, on altitudes from 100 m up to 300 m a.s.l.; lat.: 39 55 816<sup>0</sup> N and long.: 019 58 366<sup>0</sup> E.

Morphological data of the Albanian plants are given below and in the brackets are the features noted as deviating from the Greek plants.

Scape 1-2 rare 3, green to reddish-purple at base, 5-20 (2.5-17) cm in the flowering period, rare longer; bulb ovoid 1-2.5 cm diameter (1-3 cm in Greece plants). Leaves 4-6, flat, linear, green, procumbent to erect, much longer than inflorescence (4-8 in Greece plans) (Fig.1). Inflorescence subspicate with 5-15 (5-13) flowers, bluish-violet. Perianth of flowers cylindrical-campanulate, 10-13 mm (7-12 mm to the Greece plants), the lobes longer than tube. Filaments bluish to whitish, connate and adnate to perianth tube for 2/3 of their length; anthers blue to deep violet, 1.5-2 mm. Ovules 4 per loculus, style cylindrical, 2 (2.5) mm. Capsule 3-winged (figure 1), chartaceous, seeds pyriform, black, smooth and shiny (Fig.1). Flowering period: the end of December till beginning of February, often in the same time with *Narcissus tazetta*, which were found in the same places. Seeds ripen at the end of January up to February, depending from the altitude.

Plants of *B. hyacinthoide* are growing in open locations of coastal limestone rocks in south Albania. They occur between remnants of macchia and garrigue

(phrygana) dominated from *Quercus coccifera*, *Q. macrolepis*, *Q. pubescens*, *Paliurus spina-christi*, *Phlomis fruticosa* or *Salvia officinalis*.

The species, so far is known from the coastal regions and Ionian Islands of Greece (Tan & Iatrou, 2001) including and Corfu Isle (Tan, personal comm.) in front of the Saranda bay, South Albania. The new localities, recorded in the Albanian territory, extend more in the north the distribution range of *B. hyacinthoides*.



Figure 1: *Bellevalia hyacinthoides*: A - habit; B - anthers, ovules and style; C - capsules.

## CONCLUSION

New records of *Bellevalia hyacinthoides* within Albanian territory increase the species number of *Bellevalia* genus for Albania, on three. Its distribution in Albania shows continuity with species distribution with that in Greece territory.

Population of this species in hills of Saranda bay is endangered from construction of the new buildings, whereas that of Kakome bay and hills of Nivica village are not endangered.

## REFERENCES:

- BARINA, Z., PIFKO, D. & MESTERHAZY. 2009: Contributions to the flora of Albania. - *Willdenowia*, 39: 293-299.
- BAREKA, P., PHYTOS, D. & KAMARI, G. 2008: A karyosystematic study of the genus *Bellevalia* Lapeyr. (Hyacinthaceae) in Greece. - *Botanical Journal of the Linnean Society*, 157(4): 723-739.
- DEMIRI, M. 1983: Excursionist Flora of Albania. - *Shtëpia Botuese e Librit Shkollor (ShBLSh)*, Tirana, 985 pp.
- TAN, K. & IATROU, G. 2001: Endemic Plants of Greece. The Peloponnese. – *Gad Publishers Ltd.*, Copenhagen, 480 pp.
- MALO, S. & SHUKA, L. 2008: New records on the flora of the Gjirokastra region (South Albania). - *Natura Montenegrina*, Podgorica, 7(3): 369-373.
- RAKAJ, M. 2009: Floristic and chorological news from north Albania. - *Botanica Serbica*, 33(2): 177-183.
- SHUKA, L. & JAHOLLARI, N. 2007: Lloje bimore të rralla dhe të kërcënuara nga Lugina e Gjergjevicës (Korçë). – *Buletini i Shkencave Natyrore, Universiteti i Tiranës*. 4: 116-125.
- SHUKA, L. & TAN, K. 2009: On the distribution of *Cerastium smolikanum* (Caryophyllaceae) and *Centaurea vlachorum* (Asteraceae) in the Balkan Peninsula. – *Phytologia Balcanica*, 15(3): 347-350.
- TUTIN, T.G., HEYWOOD, V.H., BURGESS, N.A., MOORE, D.M., VALENTINE, D.H., WALTERS, S.M. & WEEB, D.A. 1964-1980: Flora Europaea. - *Cambridge University Press, Cambridge*, 5: 506 pp.
- VANGJELI, J., RUCI, B., MULLAJ, A., PAPANISTO, K. & QOSJA, X. 2000: Flora of Albania. – *Akademia e Shkencave të Shqipërisë*, Tirana. 4: 502 pp.

Original research article

Received: 6 August 2010.