

UDC 582.949.2:581.9(497.1) = 20  
Original scientific paper

NEW LOCALITIES OF *BALLOTA*  
*ACETABULOSA* (L.) BENTHAM IN  
YUGOSLAVIA

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Received February 15, 1990

*Ballota acetabulosa*, whose distribution includes Greece, Aegean Islands up to Crete and Rhodes, some Ionian Island and the Isle of Dugi, has been found in the central and northern part of the Island of Cres. These are the northernmost known localities for this species.

Introduction

In his taxonomic revisions of the genus *Ballota*, Patzak (1953, 1959, 1960) recognizes 33 species include into 10 sections.

This arrangement, which substantially differs from those proposed by Bentham (1834) and Briquet (1897), has recently been modified by Trinajstić (1983).

The differentiation center of the genus is located in the eastern Mediterranean Region, where 7 species occur (Meusel et al. 1978). From this area the genus radiates into the whole of the Mediterranean Region, Asia Minor and Europe, with some disjunctions in subtropical northern Africa, in eastern Africa and in South Africa. Patzak (1972) recognizes 7 species from Europe, most of which (5) are restricted to Aegean Region. Among them there is also the complex group of *Ballota nigra*, subdivided into 6 subspecies.

From Yugoslavia the following species are known: *Ballota pseudo-dictamnus* (L.) Bentham (Trinajstić 1985), *B. rupestris* (Biv.) Vis., *B. macedonica* Vandas, *B. nigra* L. and *B. acetabulosa* (L.) Bentham.

Furthermore, from the Island of Cres Marchesetti (1930) reports only *B. nigra* L. var. *meridionalis* Beg. (Syn.: *B. nigra* L. subsp. *velutina* (Pospichal) Patzak ?).

The distribution range of *B. acetabulosa* includes Greece (Boissier 1879, Halacsy 1902, 1906, 1908, 1912, Hayek 1929, Rechinger 1943, Patzak 1959, 1960), the Aegean Islands up to Crete and Rhodos (Béguinot & Vaccari 1912—1913; Pampanini 1926, 1927, Rechinger 1929, 1936; Ade & Rechinger 1938; Fiori 1938), some of the Ionian Islands (Korfu, Cephalonia, Zante, Leucades) and western Anatolia (Davis 1982).

In the northern Adriatic Region this species was recorded for the first time by Trinajstić (1983) from the Isle of Dugi, close to the village of Sali, within ruderal vegetation of the alliance *Chenopodion muralis*.

## Results and Discussion

*Ballota acetabulosa* has been found in the central and northern parts of the Island of Cres (Croatia), within the belt of evergreen Mediterranean vegetation (*Orno-Quercetum ilicis* H-ić (56) 58) (Trinajstić 1965, 1967, 1976). The hitherto known localities are as follows (Fig. 1):

A: Cres, eastern outskirts of the village, 10 m (ZA, LJU, TSB).

B: Locality called Pregon, between Cres and the Piskel bog, 30 m.

C: Locality called Batanji (Orlec), 200 m.

In all cases the plants were growing in abandoned cultivations with ruderal vegetation, with scattered occurrence of plants of the Mediterranean maquis. An example of the accompanying species is the following list, taken in station A: *Urtica dioica* L., *Parietaria officinalis* L., *Fallopia convolvulus* (L.) Holub, *Diploaxis tenuifolia* (L.) DC., *Lepidium graminifolium* L., *Sedum sexangulare* L., *Rubus ulmifolius* Schott, *Geranium molle* L., *Rubia peregrina* L., *Convolvus arvensis* L., *Lamium maculatum* L., *Melissa officinalis* L., *Conyza canadensis* (L.) Cronq., *Bidens subalternans* DC.,\* *Chondrilla juncea* L., *Sonchus oleraceus* L., *Dactylis glomerata* L., *Bromus sterilis* L., *Cynodon dactylon* L., *Arum italicum* L.

We could observe neither saplings nor young plants, but the mature, suffruticose individuals appeared to be very well developed.

The localities of Cres are the northernmost known stations for this species; they are located ca. 130 km north from the isle of Dugi. Trinajstić (1983) thinks that the populations of Dugi date back to ancient times, probably to the intense maritime commercial traffic of the Hellenic Period, and considers *B. acetabulosa* as an Hellenopalaeophyte, together with *Pinus halepensis*, *Ceratonia siliqua*, *Arbutus andrachne* and other species (Trinajstić 1975). The origin of the populations of Cres seems to be more recent. According to information obtained by the locals, this species was introduced by soldiers of the Italian Army coming back from Greece during the Second World War.

It is probable that the curious utilization of this plant during the war and in the post-war period derives from information acquired in Greece. Dried calices with their peduncles were turned upside down and immersed in small pots containing olive oil. They were utilized as candles, and were exposed on the windows on particular occasions, such as on November 2, the day dedicated to the dead. I could ascertain that this utilization actually works very well.

\* This is the second station in Croatia after Senj (Melzer 1987).

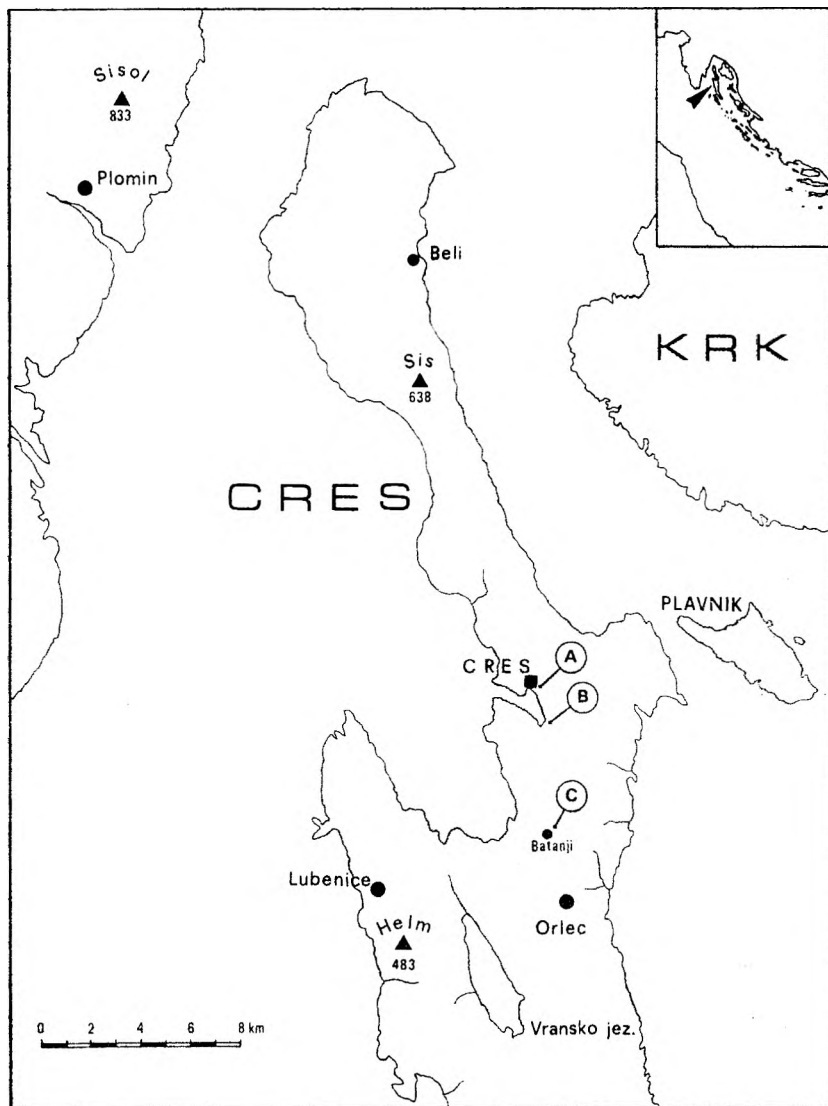


Fig. 1. Localities of *Ballota acetabulosa* (L.) Benth. in the Island of Cres (A, B, C). For further details see text.

Acknowledgements: I am most grateful to Prof. I. Trinajstić (Zagreb) for the useful suggestions and for the literature references that he kindly put at my disposal.

## References

- Ade A., K. H. Rechinger, 1938: Samothrake. Feddes Repert. 100, 106—146.
- Béguinot, A., A. Vaccari, 1912—13: Contribuzione alla Flora di Rodi e di Stampalia. Atti R. Ist. Ven. Sci. Lett. Arti, 72, 309—330.
- Bentham, G., 1834: Labiatarum Genera et Species: 323—644. London.
- Boissier, A., 1879: Flora orientalis 4, 281—1276. Basileae, Genevae & Lugduni.
- Briquet, J., 1896: Ballota L. In: Engler H. G. A. & Prantl K. A. E., Natürl. Pflanzenfam. 4, (3a), 259—260, Leipzig.
- Davis, P. H., 1982: Flora of Turkey and the East Aegean Islands, 7. Edinburgh.
- Fiori, A., 1938: Piante raccolte nelle isole italiane dell'Egeo. Secondo contributo. Nuovo Giorn. Bot. Ital., n. s. 45, CXXXII—CXXXVIII.
- Halacsy, E., 1902: Conspectus Florae graecae 2. Lipsiae.
- Halacsy, E., 1906: Aufzählung der von Herrn Prof. Dr. L. Adamović im Jahre 1905 auf der Balkanhalbinsel gesammelten Pflanzen. Österr. Bot. Z. 56, 277—283.
- Halacsy, E., 1908: Supplementum Conspectus Florae graecae. Lipsiae.
- Halacsy, E., 1912: Supplementum secundum Conspectus Florae graecae. Magyar Bot. Lapok 11, 114—202.
- Hayek, A., 1929: Prodrömus Florae peninsulae Balcanicae 2, 129—408. Berlin—Dahlem.
- Marchesetti, C., 1930: Flora dell'isola di Cherso. Arch. Bot., 6, 113—157. Forli.
- Melzer, H., 1987: Beiträge zur Flora von Friaul—Julisch Venetien (Italien) und Slowenien (Jugoslawien). Linzer biol. Beitr. 19, 377—388.
- Meusel, H., E. Jäger, S. Rauschert, E. Weinert, 1978: Vergleichende Chorologie der zentraleuropäischen Flora 2, Jena.
- Pampanini, R., 1926: L'esplorazione botanica del Dodecaneso dal 1787 al 1924. Nuovo Giorn. Bot. Ital. n.s., 33, 20—38.
- Pampanini, R., 1927: Secondo contributo alla conoscenza della Flora dell'isola di Rodi. Nuovo Giorn. Bot. Ital. n.s. 34, 369—380.
- Patzak, A., 1958: Revision der Gattung Ballota Section Ballota. Ann. Naturh. Mus. Wien 62, 57—86.
- Patzak, A., 1959: Revision der Gattung Ballota Section Acanthoprasium und Section Beringeria. Ann. Naturh. Mus. Wien 63, 33—81.
- Patzak, A., 1960: Zwei neue Ballota-Arten aus der Türkei nebst einem Nachtrag zur Gattung Ballota. Ann. Naturh. Mus. Wien 64, 42—56.
- Patzak, A., 1972: Ballota L. In: Tutin T. G., Heywood V. H. & al. (eds.), Flora Europea 3, 149—151, Cambridge.
- Rechinger, K. H., 1929: Beitrag zur Kenntnis der Flora der Agäischen Inseln und Ostgriechenlands. Ann. Naturh. Mus. Wien, 43, 269—340.
- Rechinger, K. H., 1936: Ergebnisse einer botanischer Sommerreise nach dem Agäischen Archipel und Ostgriechenland. Beih. Bot. Centr. 54b, 577—680.
- Rechinger, K. H., 1943: Flora Aegaea. Denkschr. Akad. Wiss. Math. — Nat. Kl. (Wien) 105, I—XX, 1—294.
- Trinajstić, I., 1965: Istraživanja zimzelene šumske vegetacije sjevernog Cresa. Acta Bot. Croat. 24, 137—142.
- Trinajstić, I., 1967: Über die Grenze der eumediterran und submediterrän Vegetation im quarnerisch-liburnischen Teil des ostadriatischen Küstenlandes. Mitt. Ostalp.-din. pflanzensoz. Arbeitsgem. 7, 63—66.

- Trinajstić, I.*, 1975: Kronološka klasifikacija antropohora s osvrtom na he-lenopaleofite jadranskog primorja Jugoslavije. *Biosistematika*, 1, 79—85.
- Trinajstić, I.*, 1976: Pflanzengeographische Gliederung der Vegetation des Quarnerischen Küstenlandes Kroatiens, Jugoslawien.
- Trinajstić, I.*, 1983: *Ballota acetabulosa* (L.) Benth. — nova vrsta u flori Jugoslavije. *Povremena Izdanja Muzeja Grada Šibenika*, 10, 365—370, Šibenik.
- Trinajstić, I.*, 1985: Flora otočne skupine Korčule. *Acta Bot. Croat.* 44, 107—130.

## SAŽETAK

NOVA NALAZIŠTA VRSTE *BALLOTA ACETABULOSA* (L.) BENTHAM  
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(Biološki odjel Sveučilišta u Trstu)

Vrsta *Ballota acetabulosa* nađena je na tri lokaliteta na otoku Cresu (sl. 1), gdje raste u sastavu ruderalne vegetacije. To su nova i zasad najsjevernija poznata nalazišta ove istočnomediterranske biljke.

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