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BIDENS VULGATA GREENE IN YUGOSLAVIA

Abstract: Authors discuss the occurrence of *Bidens vulgata* Greene at Sremski Karlovci in the region of Novi Sad. The species is new to the flora of Yugoslavia.

During the floristical excursion to alluvia on Dunabe near the settlement Sremski Karlovci in the region of Novi Sad on September 15, 1970, an abundant stand of *Bidens vulgata* Greene has been found. At the next excursion in September 1973 this plant was still very numerous here which indicates the permanent existence of this stand.

Bidens vulgata Greene grows very abundantly at humid depression nearby Dunabe. The following plants, among others, accompanied this species: *Polygonum hydropiper* L., *Malachium aquaticum* (L.) Fr., *Ranunculus repens* L., *Cardamine pratensis* L., *Potentilla anserina* L., *P. reptans* L., *Verbascum phlomoides* L., *Mentha aquatica* L., *Verbena officinalis* L., *Solidago virga-aurea* L., *Inula britannica* L., *Xanthium strumarium* L., *Bidens tripartita* L., *Tripleurospermum inodorum* (L.) Schultz-Bip., *Artemisia annua* L., *Agropyron repens* (L.) P. B., *Poa pratensis* L.

Bidens vulgata Greene originated from North America. It was recorded from Europe as adventive plant (Sharff 1937). More recently its occurrence was stated on several localities on Dunabe in Rumania (Vicol 1970). The newly discovered stand of *Bidens vulgata* Greene in Yugoslavia, where this species has never been recorded before, indicates the further expansion of this plant. This new locality is situated about 120 km. west of the Rumanian ones. *Bidens vulgata* Greene enters into natural or seminatural plant associations enumerated to the class of *Rudereto-Secalieta* (Br.-Bl. 1936) and *Isoëto-Nanojuncetea* Br.-Bl. et Tx., 1943. Surely, the species will extend its range in a nearest future, mainly in southern regions of Europe, however it is not so expansive closely related species — *Bidens frondosa* L. (Trzcinska-Tacik 1961, 1971, Lhotska 1968 a, 1968 b).

The key the determination of several species of genus *Bidens* L. as well as the diagnosis of *Bidens vulgata* Greene is given to Sharffs (1937) publication:

I. *Achaenia faciebus striata*

A. *Achaenia* marginibus saltem basi 1-paucis setis antrorsum munita
B. connata Mühl.

A. *Achaenia* marginibus totam longitudinem retrorsum hamosa.

1. *Achaenia* apice convexa cartilagineaque.

a. Folia simplicia; achaeniis quadrangulatis quadriaristatis corpore 5—7. 7 mm. longis
B. cernua L.

a. Folia normaliter pinnatim 3—5 partita; achaeniis planis biaristatis corpore 3—3. 5 mm. longis
B. radiata Thuil.

1. *Achaenia* apice nec convexa nec cartilaginea.

B. tripartita L.

I. *Achaenia faciebus non striata*; foliis pinnatim 3—5 partitis.

A. Involucri bractee exteriores 5—8; interiores disco aequales.
B. frondosa L.

A. Involucri bractee exteriores 10—16; interiores quam discus breviores
B. vulgata Greene.

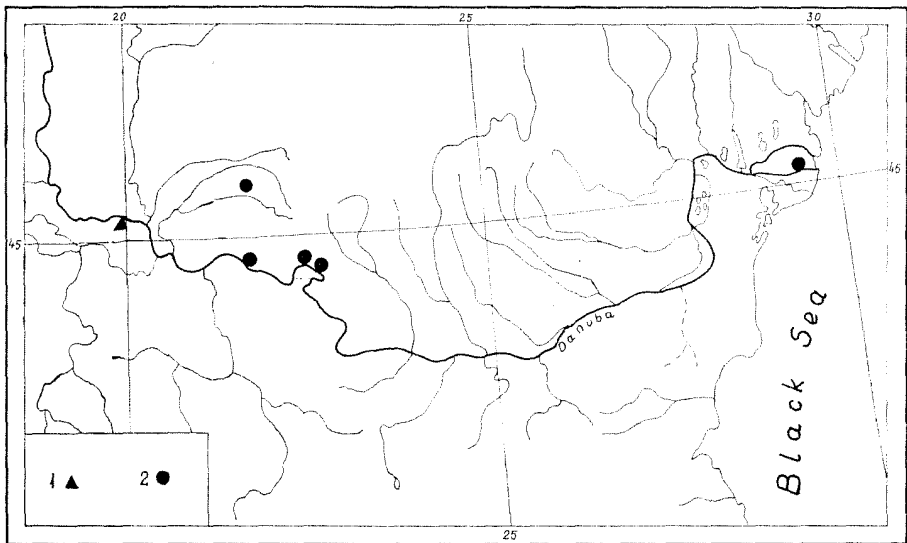


Fig. 1. — The distribution of on Lower Danube 1 — the new stand 2 — stands according to Vicol (1970).

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Bidens vulgata Greene

JUGOSLAVIA - okolice Novog Sada

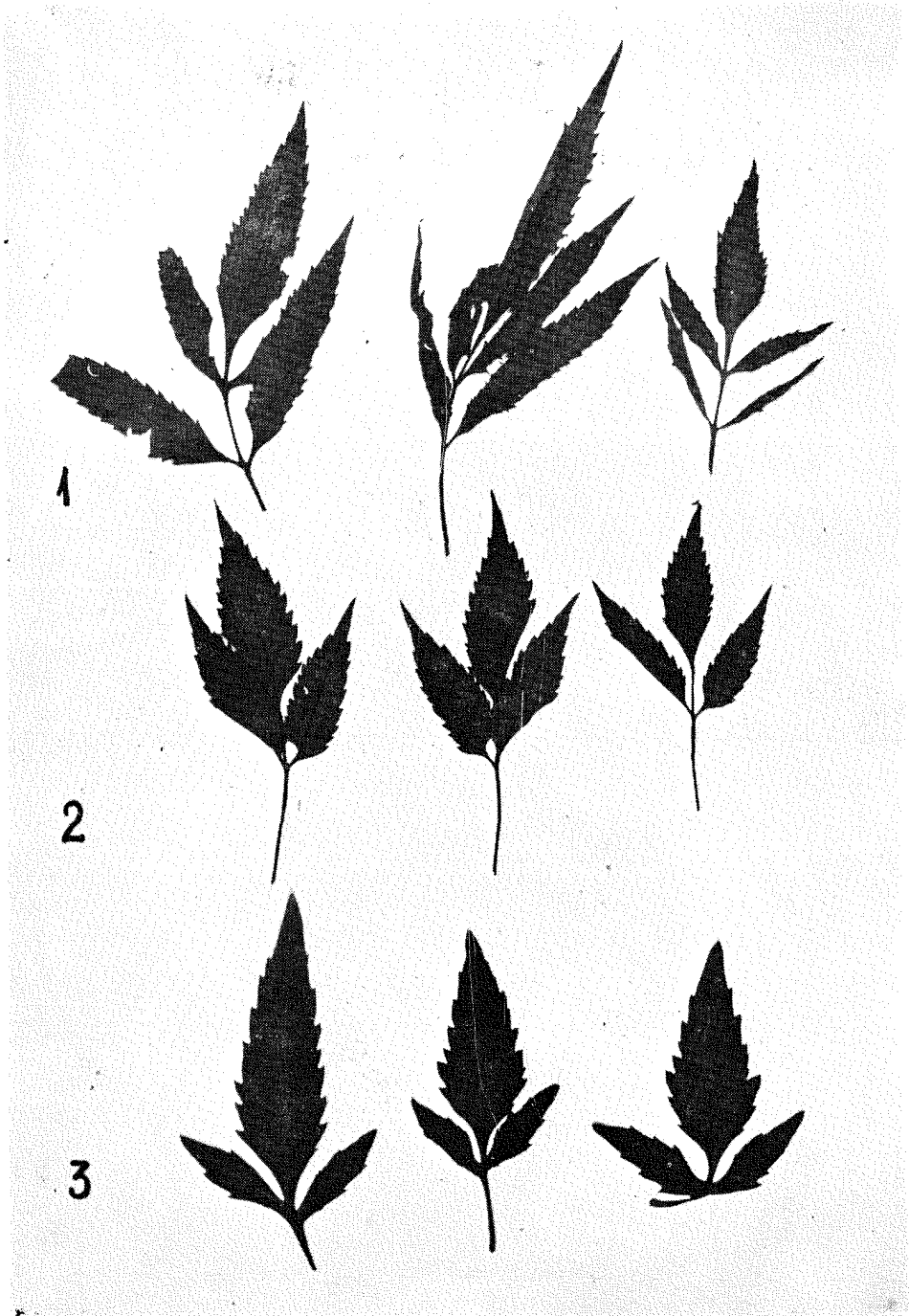
Sremski Karlovci - sluis nad Danubijem

29.IX.1970

W. Żukowski



Tabl. I — *Bidens vulgata* Greene (Yugoslavia, Sremski Karlovci, 1970, lg. W. Żukowski, POZ).



Tabl. II — Leaves 1 — *Bidens vulgata* Greene (Yugoslavia, Sremski Karlovci, 1970, lg. W. Żukowski, POZ), 2 — *Bidens frondosa* L. (Poland, Kraków—Bonarka, 1961, lg. H. Trzcińska—Taciak, POZ), 3 — *Bidens tripartita* L. (Poland, Szczecinek, 1970, lg. W. Żukowski, POZ).

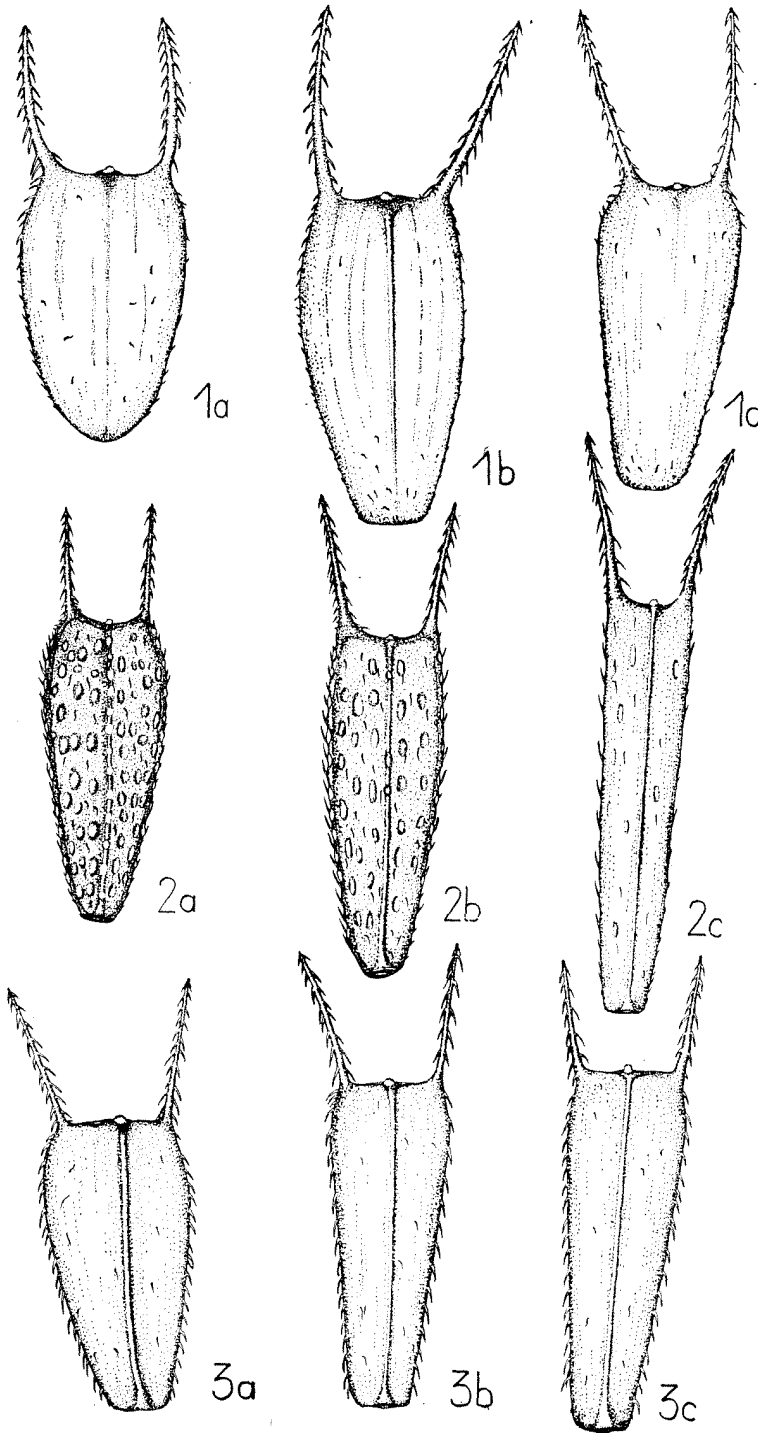


Fig. 2. — *Bidens vulgata* Greene (Jugoslavijska, Sremski Karlovci, 1970, lg. W. Żukowski, POZ) 1a—a fruit from the outskirts of a head, 1b—a fruit from 1/2 of the head radius, 1c—a fruit from the center of a head. *Bidens frondosa* L. (Poland, Kraków—Bonarka, 1961, lg. H. Trzcińska—Taciak, POZ) 2a—a fruit from the outskirts of a head, 2b—a fruit from 1/2 of the head radius, 2c—a fruit from the center of a head. *Bidens tripartita* L. (Poland, Miechów—Raclawice, 1968, lg. B. Pawłowski, M. Sychowa, POZ) 3a—a fruit from the outskirts of a head, 3b—a fruit from 1/2 of the head radius, 3c—a fruit from the center of a head.

Herba annua, 0. 3—1. 5 m. alta; caule obtuse tetragono, saepe purpurascenti, plerumque plus minusve glabrato, ramoso ramis saepius fastigatis. Folia petiolata petiolis tenuibus 1—5 cm. longis, petiolo adjecto 0. 5—1. 5 dm. longa, pinnata, plerumque 3—5 partita, plerumque fere glabra, foliolis lanceolatis, acuminatis, serratis, non perspicue ciliatis. Capitula inconspicue radiata demum (bracteis exterioribus exclusis) 1. 5—2. 8 cm. lata et 1. 2—1. 8 cm. alta, pedunculata pedunculis tenuibus vel subvalidis, 0. 4—2. 3 cm. longis. Involucrum plus minusve hispidum, bracteis exterioribus 10—16, foliaceis, inaequalibus, lineari — spathulatis, hispidaciliatis, demum 1—2 (— 3) cm. longis; interioribus ovato-lanceolatis, demum 7—9 mm. longis. Flores ligulati minimi, flavidi, ligula obovato — lanceolati, infra sparsissime pilosi, 2. 5—3. 5 mm. longi; tubulosi flavi, 4 — vel 5 — lobati. Achaenia plana, obovato-cuneata vel oblongo-cuneata, brunnea vel olivacea, saepe tuberculata, duabus faciebus unicostata et glabra vel interdum breviter hispida, marginibus antrorsum setosa vel supra retrorsum hamosa, corpore 6—12 mm. longa, apice biaristata aristis retrorsum hamosis et 3—4. 2 mm. longis.

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Re z i m e

BUDISLAV TATIC i WALDEMAR ZUKOWSKI

BUDENS VULGATA GREENE U JUGOSLAVIJI

U jesen 1970. godine konstatovana je u prikupljenom materijalu vrsta *Bidens vulgata* Greene. Materijal je sakupljen u okolini Sremskih Karlovaca. Zaključeno je da je ovo značajna prinova za floru Jugoslavije. Pokušali smo da proverimo njeno prisustvo u našoj zemlji i 1973. godine zapazili veliki broj jedinki na obrađenoj površini — okopavani, zajedno sa vrstama navedenim u radu.

Bidens vulgata je poreklom iz severne Amerike i njeno prisustvo u Evropi prvi je zabeležio Sharff 1937. godine da bi je za floru zapadne Rumunije otkrio Vicol 1970. Na priloženim fotografijama, karti i tabeli prikazan je habitus biljke, listovi, lokalitet i plodovi.