NAT. CROAT. | VOL. 6 | No 2 | 285–290 | ZAGREB | June 30, 1997

ISSN 1330-0520
UDK 582.657+581.95(497.5)

note/priopćenje

RUMEX THYRSIFLORUS FINGERH., A NEW SPECIES IN THE FLORA OF CROATIA

NEJC JOGAN

Oddelek za biologijo BF, Večna pot 111, SLO-1000 Ljubljana, Slovenia

Jogan, N.: *Rumex thyrsiflorus* Fingerh., a new species in the flora of Croatia, Nat. Croat., Vol. 6, No 2., 285–290, 1997, Zagreb

Rumex thyrsiflorus has been recorded for the first time in the territory of Croatia. Several localities have been found around Varaždin (N Croatia). Its occurrence in this region can be explained by the expansion of its area of distribution from Central Europe towards the south. Superficially it is quite similar to *R. acetosa* from which it can be easily distinguished by its long tap-root, narrower and longer leaf-blades and denser inflorescence.

Key words: *Rumex thyrsiflorus*, flora, Croatia

Jogan, N.: *Rumex thyrsiflorus* Fingerh., nova biljna vrsta za floru Hrvatske, Nat. Croat., Vol. 6, No 2., 285–290, 1997, Zagreb

Vrsta *Rumex thyrsiflorus* bila je otkrivena na više lokaliteta u okolini Varaždina. Njeno pojavljivanje u tom području Hrvatske vjerojatno je prouzrokovano širenjem areala iz Srednje Europe prema jugu. Iako na prvi pogled podsjeća na veliku kiselicu (*R. acetosa*), novu vrstu možemo lako prepoznati: ima vrlo dug korijen, listovi su uži i duži, cvat vrlo gust, a cvate nekoliko tjedana kasnije od *R. acetosa*. Sa sigurnošću je možemo očekivati i u drugim krajevima Međimurja, a u budućnosti i njeno daljnje širenje prema jugu.

Ključne riječi: *Rumex thyrsiflorus*, flora, Hrvatska

INTRODUCTION

Docks and sorrels (*Rumex* spp.) are not very attractive plants, and are superficially very similar, with ripe fruits being needed for determination. In addition to this, many species can hybridize freely. These are probably important reasons why they are so often neglected and under-recorded. As they frequently occur in disturbed ruderal habitats, their thriving can be relatively ephemeral, which is particularly important for aliens which have not been naturalized yet. But some of these

alien species can occupy also relatively stable habitats such as e.g. road and railway banks; one such is *R. thyrsiflorus*.

R. thyrsiflorus is a representative of the subgenus *Acetosa* (Mill.) Rech. f. superficially similar to the widespread common sorrel (*R. acetosa*). Its original area of distribution are the continental parts of eastern and central Europe (with a disjunction in the southern Balkans, JALAS & SUOMINEN 1979) from where it has been expanding towards the south and west in the last two centuries. Today it is an established and naturalized alien in France, northern Italy (but not in Friuli-Venezia Giulia, POLDINI 1991), Slovenia (Jogan, unpublished data), and most probably in some other Central- and Eastern-European countries where it could also have been a native species, such as e. g. Germany (OBERDORFER 1990), Austria (FISCHER 1994) and Southern Russia (BORODINA 1978). In the territory of ex-Yugoslavia it has also been recorded in Bosnia and Herzegovina and Serbia (TRINAJSTIĆ, 1980).

In Austria, at the beginning of the century *R. thyrsiflorus* was known only in some localities in the extreme east (Burgenland and Niederösterreich, FRITSCH 1922). Later on, several new localities were recorded in other parts (cf. JANCHEN 1956–60; MELZER 1975, 1995; MAURER 1996) and today it has not yet been recorded only in Salzburg and Tirol.

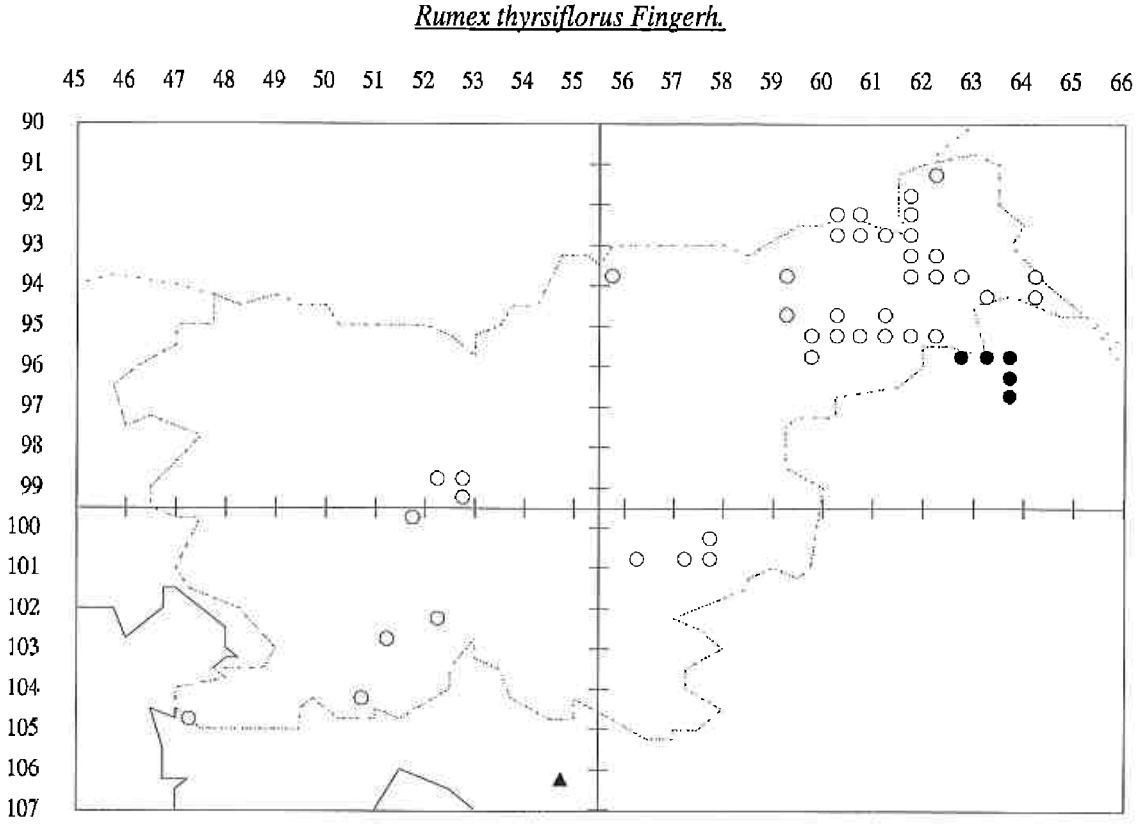

Fig. 1. Actually known distribution of *R. thyrsiflorus* in Croatia and Slovenia: black circles: recently found localities in Međimurje, triangle: dubious locality of L. Rossi (for explanation see text).

Tab. 1. Most important distinguishing characters between *R. thyrsiflorus* and *R. acetosa*

	R. thyrsiflorus	*R. acetosa*
root system	more dm long unbranched ± vertical tap root	some cm long branched ± horizontal root
basal leaves	(3–) 4– to 6– (8–)times longer than wide	2– to 3– (4–)times longer than wide
upper stem leaves	linear terminal lobe	lanceolate to oblong terminal lobe
inflorescence	dense, lateral branches branched	not dense, interrupted, lateral branches not branched
valvae	smaller	bigger
flowering time	(V) VI-IX, about a month later than *R. acetosa*	(IV) V–VI (VII)
habitats	moderately dry to dry grassy places, banks	moderately wet to fresh meadows

In Slovenia the oldest material belonging to this species was collected in 1909 (Notranjska, Palško jezero; leg. R. Justin) but it was misidentified (*R. acetosa*). In 1972 the material was revised by K. H. Rechinger and determined as *R. thyrsiflorus*. But unfortunately, this discovery was overlooked by the authors of the 2nd edition of Mala flora Slovenije (1984). Several new localities have been found in recent years and today this species is known to occur in the Submediterranean (coast), Dinaric (Pivška kotlina), Prealpine (around Ljubljana) and especially Subpannonian (where it is relatively frequent) phytogeographycal regions. (see fig. 1)

From *R. acetosa*, its widespread relative, *R. thyrsiflorus* can be easily distinguished by several characters, the most important being the ramification of inflorescence, leaf-shape, tap root and flowering time (see tab. 1). In its recently colonized part of distribution range *R. thyrsiflorus* can be found mostly in relatively dry grassy places especially on road- and railway banks in lowlands. In such localities it can be very easily detected even from a passing car especially in mid- and late summer when plants of *R. acetosa* have already shrivelled and fallen.

RUMEX THYRSIFLORUS IN CROATIA

After the discovery of several localities of *R. thyrsiflorus* in eastern Slovenia, some of them being almost on the Croatian border, it seemed very probable that this species could also be found beyond the border, in Međimurje. So we have decided to go on a plant-hunting excursion in autumn 1996. We expected to find at least some localities in the region around Varaždin and Čakovec and maybe also in the lowlands around Zagreb.

In the excursion, we recorded *R. thyrsiflorus* only around Varaždin (see below), searching for it along the way Varaždin–Zagreb–Križevci–Varaždin was not fruitful.

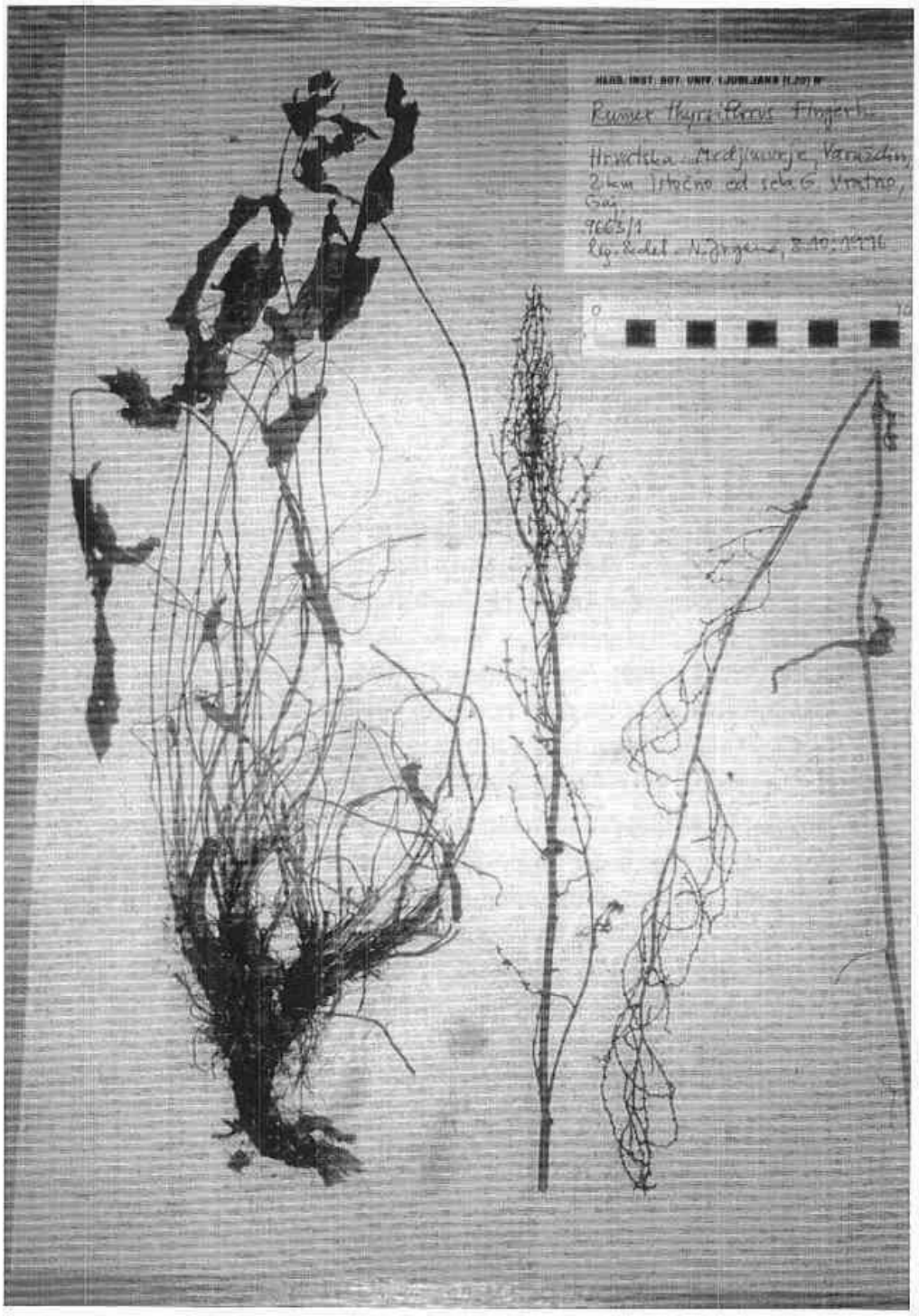

Fig. 2. Herbarium specimen of *R. thyrsiflorus* collected in the Međimurje region (9663/1: vicinity of Varaždin, 2 km E from Gornje Vratno; road bank. Leg. & det. N. Jogan, 8. 10. 1996; deposited in LJU). Foto: B. Trčak.

Here are our records:

9663/1 (UTM: WM83) Hrvatska: okolina Varaždina, 2 km istočno od sela Gornje Vratno; pored puta. Leg. & det. N. Jogan, 8. 10. 1996 (LJU). (Fig 2.)

9663/2 (UTM: XM03) Hrvatska: okolina Varaždina, selo Trnovec; pored puta. Leg. & det. N. Jogan, 6. 10. 1996.

9664/1 (UTM: XM03) Hrvatska: okolina Varaždina, selo Gornji Hraščan; pored puta. Leg. & det. N. Jogan, 6. 10. 1996.

9664/1 (UTM: XM03) Hrvatska: okolina Varaždina, selo Nedelišće; pored puta. Leg. & det. N. Jogan, 6. 10. 1996.

9664/3 (UTM: XM03) Hrvatska: sjeverni dio Varaždina, pored puta. Leg. & det. N. Jogan, 6. 10. 1996.

9764/1 (UTM: XM02) Hrvatska: okolina Varaždina, kod sela Biškupec; pored puta. Leg. & det. N. Jogan, 8. 10. 1996.

After revision of herbarium material in ZA determined to be *R. acetosa*, only one specimen seemed likely to belong to *R. thyrsiflorus* (»In pratis inter Mrkoplje et Begovo Razdolje (Gorski kotar); leg. L. Rossi, 12. 6. 1889«, 0655/3, UTM: VL01) but the material has not been collected properly and so precise determination is still dubious.

As we have already mentioned, *R. thyrsiflorus* is a continental Eastern-European species expanding its area of distribution towards the south and west. As it is superficially somehow similar to *R. acetosa*, it is also possible that its distribution is under-recorded, sometimes being mistaken for the second species, but on the other hand the (almost complete) absence of *R. thyrsiflorus* in older herbarium collections confirms the hypothesis of its recent colonization of the territory discussed.

Most probably, a thorough and systematic search for *R. thyrsiflorus* along the roads in late summer and autumn in other lowland parts of Northern Croatia would lead to the discovery of several additional localities, especially in the Međimurje region. In the future, we can expect further expansion of this species towards the south and from Hungary towards the west.

ACKNOWLEDGMENTS

I would like to express gratitude to the staff of the herbarium ZA, and also to A. Turčin and T. Stropnik for their hospitality and to B. Trčak for her companionship in field excursions.

Received May 9, 1997