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FIRST RECORDS OF THE CITRINE WAGTAIL *MOTACILLA CITREOLA* IN CROATIA

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Four specimens of Citrine Wagtail *Motacilla citreola* were trapped in 1997 at the lake Vransko Jezero, north Dalmatia, three during May and one in September. These represent the first two national records of this Asiatic species in Croatia.

Key words: *Motacilla citreola*, Croatia, first records

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Četiri primjerka limunaste pastirice *Motacilla citreola* ulovljeno je 1997. na Vranskom jezeru, sjeverna Dalmacija, tri u svibnju i jedna u rujnu. To su prva dva nacionalna nalaza ove azijske vrste u Hrvatskoj.

Ključne riječi: *Motacilla citreola*, Hrvatska, prvi nalazi

INTRODUCTION

Citrine Wagtails *Motacilla citreola* Pallas, 1776, a member of western Palearctic Wagtails of the genus *Motacilla* breed from the eastern part of the western Palearctic eastwards to the eastern Palearctic in Asia (central European Russia, north-east and eastern Russia, west Siberia, west and central Asia) and winter mainly in the Indian Subcontinent and south-east Asia (LEWINGTON *et al.*, 1991; CRAMP *et al.*, 1988). It is a polytypic species. So far three subspecies have been recognized (CRAMP *et al.*, 1988; HOWARD & MOORE, 1994):

– *M. c. citreola* Pallas, 1776, northern Russia from Kanin peninsula to central Siberia, and in central Asia east of Tomsk, Kuznetskiy Alatau, Sayan mountains, and Lake Baykal, south to Mongolia;

– *M. c. werae* (Buturlin, 1907), plains of southern Russia, from European Russia east to Tomsk and foot of Altai mountains;
– *M. c. calcarata* Hodgson, 1836, Iran, Afghanistan, and Pamir mountains, east through Himalayas to Ordos (China) and north to western Tien Shan, Tibet, and Koko Nor (China).

In Europe the species is known as an Asian vagrant, which has been recorded more regularly in recent years and has expanded its breeding area westward in European Russia (LEWINGTON *et al.*, 1991; CRAMP *et al.*, 1988). The increase noted during the last two decades is probably linked to signs of an ongoing westward expansion in Russia (LEWINGTON *et al.*, 1991).

The species has not previously been recorded in Croatia (KRALJ, 1997; LUKAČ, 1998), although it has been found recently at an increasing rate throughout Europe. Anyway, considering the increasing number of records in countries around Croatia, e.g. the former Czechoslovakia, Austria, Hungary, Italy and Slovenia (LEWINGTON *et al.*, 1991; CARLOTTO *et al.*, 1994; MARANINI & CRUPI, 1994; POLAK, 1987), the addition of the Citrine Wagtail to the Croatian list has long been expected. And then, in 1997 we had remarkably successful ringing activities on the banks of the lake Vransko Jezero by the side of the Adriatic coast, most rewarding of all being the trapping of four Citrine Wagtails.

METHODS AND STUDY AREA

Our research at lake Vransko Jezero in 1997 lasted 32 days of fieldwork throughout the seasons, including surveys, counts and mist-netting. For visual observation

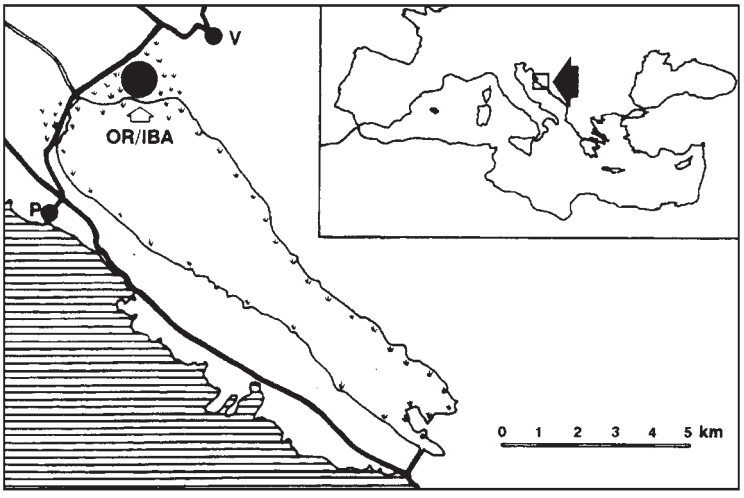

Fig. 1. Situation and map of the lake Vransko Jezero in Dalmatia, Croatia.

we used binoculars 10×40, 10×50, 8×30, and a telescope 20×77. For bird trapping we used 10 Japanese mist-nets for small song-birds (mesh size 36 mm, 12 m length, 2.4m height, four shelves).

The brackish lake Vransko Jezero is a Mediterranean wetland situated in a cryptodepression lying parallel to the coast line of the Adriatic sea in northern Dalmatia (Fig. 1). It is the largest natural lake in Croatia, 13,6 km long and 1,4–3,5 km wide, fringed by a belt of reedbeds *Phragmites communis* and surrounded with agricultural land of reclaimed wetlands and dry terrain covered with typical Mediterranean vegetation. The remaining marsh with extensive reedbeds and wet meadows at the north-western corner (»JUŽNE BARE«) are formally protected as a special ornithological reserve and designated as an Important Bird Area (IBA). Our ringing activities were concentrated in the north-western part of the lake (Fig. 2), between the border of the ornithological reserve and the auto-camp »CRKVINE«, where all four specimens of Citrine Wagtail have been caught and ringed.

RESULTS

Circumstances of the records

In the course of our spring ringing activities on the lake Vransko Jezero in 1997, on May 1, I.P. came back to base camp at 4:00 p.m. after the regular check of the

Fig. 2. North-western banks of the lake Vransko Jezero at the edge of the ornithological reserve. Citrine Wagtails appeared and stayed in this typical habitat; all four birds were trapped at the site or at nearby reedbeds.

mist-nets. I.P. reported that he had found an »adult male Citrine Wagtail« walking beneath the mist-nets placed on the muddy banks. M.S. was doubtful this identification, explaining to I.P. that he may have confused it with the Yellow Wagtail *Motacilla flava*, thousands of which could be seen at the lake on their migration. A few hours later (6:40 p.m.) M.S. realized that I.P. was right! An adult male Citrine Wagtail alighted and walked alongside the row of five nets erected at the bank of the lake overgrown with the sedge *Carex* sp., rush *Juncus* sp. and the tamarisk *Tamarix* sp. The bird was unusually tame. Without hesitation it freely walked 1–3 m in front of us, so we enjoyed an excellent view of the first Croatian Citrine Wagtail, which was also a new bird for all of us. The identification was easy, since adult males Citrine Wagtails are unmistakable.

In the early morning next day (2nd May), the male remained in the same place, but we were surprised at 10:30 a.m. by the presence of a female Citrine Wagtail, which accompanied the male. Our experience with other species of Wagtails, especially with hundreds of Yellow Wagtails *Motacilla flava* processed for ringing, allowed us to eliminate quickly all possible confusion of species or races of *Motacilla flava*. Both birds stayed away from conspecific Yellow Wagtails, searching for food in the dense vegetation on the muddy banks just in front of the nets. We managed to force both birds to fly into the nets several times, but moderate winds threw them out of the inflated shelves. However, they remained throughout the day in

Tab. 1. Biometric data of four Citrine Wagtails *Motacilla citreola* caught in 1997 at the lake Vransko Jezero, Dalmatia, Croatia. Abbrevations (**P** primary; **PP** primaries; **MC** median coverts; **GC** greater coverts), numbered primaries (ascending) and measuring method as in SVENSSON (1992).

Ring number Sex Age Ringing date	BA 134234 female 5(2Y) 2nd May	BA 134236 male 5(2Y) 2nd May	BA 134260 female 5(2Y) 3rd May	BA 134379 juvenile 3(1Y) 9th August	*Motacilla citreola* (SVENSSON, 1992)	*Motacilla flava* (SVENSSON, 1992)
Wing length (mm)	76	82	79	84	76–92,5	74–86
Wing point (No. of longest PP)	2,3,4	2,3,4	2,3,4	2,3,4	2,3,4	2,3,4
Emargination of P3 from tip	8/10	8/10	8/10	8/10	8/10 (8)	6/8
Emargination of P5	distinct	distinct	distinct	distinct	distinct	sometimes less distinct
Length of notch on the inner web of the P2 (mm)	21	23	21	22	(18) 19–24	16–18 (15–19)
Distance between P4 and P5 (mm)	1	2	2	1	1–4 (5)	(2) 3–7
Width of light tips to MC and GC (mm)	3–4	4	3–4	4	3–4	1,5–2,5 (3)

the same place and finally, at 2:30 p.m., I.P.& T.M chased the female directly in the net and caught it. We checked the female in the hand, and after processing it was released with the ring **BA 134234**. The same day at dusk around 8:00 p.m., we were delighted to find a brightly coloured male entangled in the second row of the nets erected in the reedbeds, where thousands of Yellow Wagtails and Swallows roost for night. The male was processed (ring **BA 134236;** Figs. 3 & 4) and we decided to put the bird into a bag and wait until the next day to find a camera in the nearby village for documentation. We were happy about the catch of two Citrine Wagtails and expected nothing more, but something happened next morning!

In the morning of 3rd May at 8:00 a.m. we were astonished to catch another (unringed) female Citrine Wagtail entangled in the nets settled in the reedbeds. The bird was ringed (ring **BA 134260**; Figs. 3, 5 & 6) and M. S. departed with both the male and female to the village of Pakoštane to find a camera. Both birds were photographed and soon after released at the lake where they had been trapped.

In late summer 1997 we continued ringing at the same locality, and it proved to be rewarding. On 9th August at 7:15 p.m., we trapped in the reedbeds a juvenile Citrine Wagtail. This was the fourth bird found and ringed in Croatia (ring **BA 134379**) in the same year.

Fig. 3. First-summer male (ringed 2nd May) and first-summer female (ringed 3rd May) **Citrine Wagtail** ***Motacilla citreola*** caught at the lake Vransko Jezero, Dalmatia, Croatia. The head and wing patterns of the female are obvious. Note the white undertail coverts of both birds.

Fig. 4. First-summer male (ringed 2nd May, same bird as in Fig. 3) **Citrine Wagtail** *Motacilla citreola*. The small patch of grey-green feathers on the hindcrown above the black hindneck collar is a remnant of first-winter plumage. The black of the lower nape does not extend to the upper mantle, as in the subspecies *Motacilla citreola werae* from SE Russia and SW Siberia.

Fig. 5. First-summer female (ringed 3rd May; same bird as in Figs. 3 & 6) **Citrine Wagtail** *Motacilla citreola*, side view. Note complete brown-grey gorget of spots on breast toward throat, as described in JONSSON (1992). The identically conspicuous gorget was also obvious on the first female caught on 2nd May, 1997.

Fig. 6. First-summer female (ringed 3rd May; same bird as in Figs. 3 & 5) **Citrine Wagtail** *Motacilla citreola*, back view. Note typical head and wing pattern, grey mantle and back.

We announced our findings as a short note which appeared in regular reports of the recording of rarities in the main European birdwatching magazines (ANONYMOUS, 1997, 1998; GANTLETT, 1998).

Identification, ageing, sexing

The identification of all four observed and trapped specimens of Citrine Wagtails was straightforward. Recognizing the birds at first sight, we firstly eliminated all possibilities of misidentification with any age, sex or sub-specific categories of the conspecific Yellow Wagtail *Motacilla flava*, White Wagtail *Motacilla alba* or Grey Wagtail *Motacilla cinerea*. To exclude confusion, all birds were checked for biometric data against the description given in SVENSSON (1992), LEWINGTON *et al*. (1991), JONSSON (1992) and CRAMP (1988). We used all identification criteria to check two females and a juvenile, but the same process seemed not to be necessary for an obvious male. Females of the Yellow Wagtail *Motacilla flava* and juveniles of both Yellow *Motacilla flava* and White Wagtail *Motacilla alba* could be eliminated due to differences in plumage (head and wing) pattern, bill and plumage colouration, biometric data as well as differences in behaviour and call.

Motacilla citreola, ring BA 134236, male, 5(2Y) – 1st/2nd May 1997 (Figs. 3 & 4)

Description

First bird observed on 1st May, a male, had a bright lemon-yellow head and underparts, black neck-shawl, black bill, two broad white wingbars, slate-grey mantle, grey back, grey rump, white fringed tertials and white undertail. The spring male is unmistakable (JONSSON, 1992; CRAMP, 1988) and, although this is the first national record, it is not necessary to give too detailed a description of such an obvious bird. However, some features of male plumage can offer clues for subspecific identification (CRAMP, 1988; SVENSSON, 1992). In the two races occurring in the Western Palearctic only breeding males scarcely are distinguishable (CRAMP, 1988). On our male, the black plumage of lower nape does not extend to the grey of the upper mantle (Figs. 3 & 4), so the bird ought to belong to the west-central Russian race *werae* (Tab. 2).

Wing length of male (82 mm) falls right within the mean values given for males *M. c. werae* (82,4 mm) from southern European Russia, but at least 2 mm outside the range of values given for two longer-winged races, called the north Siberian race *M. c. citreola* (85–90 mm) and the central Asiatic race *M. c. calcarata* (84–87 mm) (CRAMP, 1988). According to SVENSSON (1992), the wing length of slightly smaller males *M. c. werae* is often shorter than 85 mm, while males of *M. c. citreola* have a wing length usually longer than 84 mm (Tab. 2).

Tab. 2. Subspecific differences of wing length (mm) and male upperparts of Citrine Wagtail races.

subspecies	*Motacilla c. citreola* N Russia, NW and NC Siberia		*Motacilla c. calcarata* Iran, Transcaspia, C Asia east to China		*Motacilla c. werae* SE Russia, SW Siberia	
sex	male	female	male	female	male	female
Mean (range) wing length (CRAMP, 1988)	87,9 (85–90)	82,3 (80–85)	85,2 (84–87)	80,7 (77–82)	82,4 (80–84)	78,5 (76–82)
Wing length (SVENSSON, 1992)	usually >84				often <85	
Pattern of male's upper part (CRAMP, 1988; SVENSON, 1992)	lower nape/ upper mantle black but rest of mantle, back and rump grey		upperparts extensively black		black of lower nape does not extend to upper mantle more than just a little	

Ageing

We noted a small patch of grey-green feathers on the hind crown visible above black hind neck collar (Fig. 4), which must be a remnant of the 1st winter plumage (CRAMP, 1988; LEWINGTON *et al.*, 1991; SVENSSON, 1992). The adult plumage is not acquired in the 1st spring (CRAMP, 1988) and we aged the male as a first summer (or 2Y) from this characteristic. After the male had been trapped we checked it in the hand. Dirty-brown bleached remiges, especially primaries, were heavily worn, supporting our ageing as a first summer male (LEWINGTON *et al.*, 1991). The outer greater coverts looked typical for unmoulted juvenile coverts in spring (SVENSSON, 1992; JENNI & WINKLER, 1994; CRAMP, 1988), they were heavily worn and contrasted with newer inner greater coverts.

Motacilla citreola, ring BA 134234, female, 5(2Y) – 2nd May 1997

Behaviour

The first bird trapped in the mist-nets, a female (**BA 134234)**, was initially identified very easily as it stayed close to the male and both kept some distance from Yellow Wagtails. The female, like the male, showed the typical plumage and jizz of Citrine Wagtails already described in the literature (CRAMP, 1988; JONSSON, 1992; LEWINGTON *et al.*, 1991; SVENSSON, 1992). Flight silhouettes of both birds recalled the Yellow Wagtail with a longer tail and heavier body. Their gait was less active, more sedate. The birds bobbed their heads and wagged tails obviously less frequently than other conspecific wagtails. Both birds spent most of the time foraging on the ground among the dense vegetation on the lake banks, alighting occasionally on the lower tamarisk trees.

Ageing

The very worn flight feathers, worn primary coverts and outer greater coverts, revealed that the female was in first summer plumage (or 2Y) (CRAMP, 1988; LEWINGTON *et al.*, 1991).

Description

The main points for identification of the female include: Broad yellow supercilium, tinted brownish-buff in front of eye toward forehead (lore) and paler and wider behind the eye, continuing in a border around darker ear-coverts; all-black bill; pale lore, meeting at the forehead above the black bill, lacks the distinct dark stripe; grey mantle, back and rump; wide white tips and broad outer edges of median and greater coverts forming two broad white wing bars; wide white fringe on black tertials; blackish upper tail coverts without any yellowish-green; grey flanks, breast sides and under wings; yellow throat and ventral area from belly to breast; pure white undertail coverts. The breast shows an almost complete brown-grey gorget of spots about 2–3 mm wide toward the throat as described in JONSSON (1992).

The wing length of the female (76 mm), although outside the range of values given in CRAMP (1988) for females of the races *M. c. citreola* (80–85 mm) and *M. c.*

calcarata (77–82 mm), is at the lower end of the range given for *M. c. werae* (76–82 mm) (Tab. 2). Female and juvenile Citrine Wagtails are difficult to label subspecifically, but size and structure are sometimes helpful (SVENSSON, 1992).

Call

The female and male were heard calling occasionally. Their flight call was a sharp »*srreep*«, reminiscent of a mixture of Yellow and Pied Wagtail calls.

Motacilla citreola, ring BA 134260, female, 5(2Y) – 3rd May 1997 (Figs. 3, 5 & 6)

Although the second female (**BA 134260)** nearly escaped our attention, we had a good opportunity to examine it in the hand and to check all identification criteria after we had caught it.

Ageing

Flight feathers, primary coverts and outer greater coverts were heavily abraded, so we aged the female as a first summer bird (or 2Y) (CRAMP, 1988; LEWINGTON *et al.*, 1991).

Description

The bird shows the same features as the first (watched and trapped) female, with some minor difference in the extent of yellow on the ventral area. The yellow was confined to the supercilium framing the ear-coverts and throat. The belly and ventral area were mainly whitish lacking any yellow, although some yellow tinge appeared between the legs, this being the only discernible difference between both females. In female Citrine Wagtails, the extent and intensity of yellow on under parts vary (JONSSON, 1992). The breast shows an almost complete brown-grey gorget of spots, as in the first female.

The wing length of this female (79 mm) falls near the mean (78,5 mm) and right in the range (76–82 mm) of values measured in *M. c. werae*, but outside the range for females of *M. c. citreola* (CRAMP, 1988) (Tab. 2).

Motacilla citreola, ring BA 134379, juvenile 3(1Y) – 9th August 1997

The fourth bird, a juvenile captured in August (**BA 134379**) had not been observed in the field, it was checked only in the hand. We recognized the juvenile instantly, since at first glimpse it was so different from the thousands of juvenile Yellow Wagtails present on the banks of the lake, mostly for its typical head pattern, wing pattern and bill colour (CRAMP, 1988).

Ageing

Except for some buff on the fore-supercilium, breast and belly, it lacked any of the pure yellow colour of older birds. Head patterns and wing-bars of the bird were typical of 1Y Citrine Wagtails. Being distinctive as in older birds (SVENSSON, 1992), the head pattern was basically the same as in the females. In addition, it had

a distinctive blackish brow above the broad supercilium and throat bordered from the breast by an indistinct gorget of dark spots. We realized that the bird was in juvenile plumage as described in LEWINGTON *et al.* (1991) and CRAMP (1988).

There was no sign for moult in the flight feathers; the primaries and secondaries looked completely fresh without any signs of abrasion or bleaching. Adult Citrine Wagtails have, like the adults of all other Western Palearctic wagtails, a complete post-breeding moult in the breeding area. So they should be in full primary moult in August (GINN & MELVILLE, 1983; JENNI & WINKLER, 1994; SVENSSON, 1992) The broad pale tips of the median and greater coverts were pure white and in distinct contrast to the dark grey bases of the feathers. This pattern of coverts corresponds to the Citrine Wagtail in its first autumn (SVENSSON, 1992), so we aged the bird as 1Y.

The Citrine Wagtail is a species which performs a partial post-juvenile moult in its first-summer/autumn (JENNI & WINKLER, 1994). So the juvenile plumage is moulted before migration (LEWINGTON *et al.*, 1991) and fledglings remain at the breeding ground until September (HAGEMEIJER & BLAIR, 1997). Since our bird was still in typical juvenile plumage in August, we wondered where it had been reared before reaching northern Dalmatia?

Description

Mantle and back brownish-grey, and plumage above browner than in females ringed in spring. Belly and ventral area whitish, sides of the breasts and flanks tinged brown-grey, but throat and undertail pure white. Other important features which we noted were: All-dark black bill; pale lore lacking distinct dark stripe; buffish forehead and fore-supercilium; white rear supercilium widest above ear-coverts, clearly bordering darker ear-coverts; grey sides of the breast and flanks; grey rump; blackish uppertail coverts lacking any yellowish-green; longest uppertail coverts uniformly dark lacking darker centres; edges of secondaries whitish, not yellowish; broad white tips and outer edges of median and greater coverts forming two broad white wing-bars.

The wing-bars were much more prominent than in any Yellow Wagtails seen and processed during ringing activities in the area.

The high value of wing length (84 mm) indicates that our juvenile could be a male if it belongs to *M. c. werae*, but we cannot exclude on a rational basis the longer winged females of *M. c. citreola* (Tab. 2). In all subspecies of the Citrine Wagtail the differences in wing measurements between sexes are significant (CRAMP, 1988).

Call

After the juvenile had been released it gave a specific flight-call, a sharp »*srreep*«, very different from the calls of Yellow or White Wagtails.

DISCUSSION

There is good possibility that such a »small invasion« of Citrine Wagtails could be the first sign of the breeding of the species in Croatia, especially when we consider the typical breeding habitat and the presence of an autumn juvenile in the same place where a male and two females were caught in the spring. Unfortunately we were unable to check the area during the breeding season. So the seasonal status of the Citrine Wagtail in Croatia is categorised as a »rare visitor« (**RV** – rare species in Croatia recorded 10 times or less), and it should be in category »**c**« as a scarce species observed in the last century and since 1950 (LUKAČ, 1998). However, precisely the Citrine Wagtail must be put in category »**D«** as a species that has been observed since 1950, while not observed in the last century (some expansive species).

Wing measurements of both female birds and the male, as well as plumage patterns of the upper part of the male ringed in the spring correspond well to the subspecific features of *M. c. werae*. According to its distribution area which extends from south-eastern European Russia to south-western Siberia, this subspecies is the most likely to be found in Croatia.

Both females and the male caught in spring were first summer birds (or 2Y). This is not unusual, since the vagrancy patterns of experienced older and inexperienced first-year migratory birds are often very different (LEWINGTON *et al.*, 1991).

There are some other records of rare birds of eastern origin at the lake Vransko Jezero e.g. Pied Weather *Oenanthe pleschanka* (SIEGNER, 1982/83), Black-winged Pratincole *Glareola nordmanni* (STIPČEVIĆ, 1992) and Great Black-headed Gull *Larus ichthyaetus* (ANONYMOUS, 1996; GANTLETT, 1997). There are two main terminal borders for westward vagrancy of eastern Palearctic/Asian birds in Europe – the Atlantic and Mediterranean coasts. The Mediterranean islands act as magnets for more southerly or eastern vagrant species (LEWINGTON *et al.*, 1991). The Mediterranean climate and geographical position of the eastern Adriatic coast are suitable for drifting vagrants from the east. The dry, hot, steppe-like coasts of the Mediterranean wetlands like the lake Vransko Jezero traditionally attract huge numbers of migrants. So there is a good chance to find more rare species of birds in a habitat like this.

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SAŽETAK

Prvi nalazi limunaste pastirice *Motacilla citreola* u Hrvatskoj

M. Stičpević, I. Perović & T. Matešić

Četiri limunaste pastirice *Motacilla citreola* ulovljene su i prstenovane 1997. godine na plićacima mediteranske močvare Vranskog jezera. Prvoljetni mužjak, otkriven 1. svibnja, ulovljen je zajedno s prvoljetnom ženkom 2. svibnja. Treća ptica,

prvoljetna ženka, ulovljena je 3. svibnja. Četvrta, juvenilna ptica ulovljena je 9. kolovoza. Kod svih ptica ustanovili smo tipičnu boju i obrazac perja odgovarajuće starosne kategorije i spola limunaste pastirice. Ostali pokazatelji na kojima je prepoznavanje temeljeno su boja kljuna, biometrija, ponašanje i glasanje. Perje i dužina krila mužjaka i ženki ulovljenih u proljeće odgovaraju manjoj podvrsti *Motacilla citreola werae* s jugoistoka Rusije i jugozapadnog Sibira. Ovo su prva dva nacionalna nalaza limunaste pastirice i vrsta je dodana službenoj hrvatskoj listi.