

## NEW LOCALITIES OF THE SPECIES *Datura innoxia* MILLER AND *Solanum elaeagnifolium* CAV. (*Solanaceae*) IN CROATIA

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This paper reports on some known as well as some new localities of the *Datura innoxia* Miller and *Solanum elaeagnifolium* Cav. species. Among the neophytes spreading through Croatia recently, those of both North and South American origin can be found (americanoneophytes), such as *Datura innoxia* and *Solanum elaeagnifolium*. So far, *Datura innoxia* has been found in the following regions: the island of Šipán (M. HEĆIMOVIĆ, 1981), Brač (ŠTAMOL & MARKOVIĆ, 1985; Zi. PAVLETIĆ & TRINAJSTIĆ, 1990), Murter, Lošinj, Hvar (FRANJIĆ, 1993), Vis (FRANJIĆ & TRINAJSTIĆ, 1996), Kornati (PANDŽA & STANČIĆ, 1995), Kaprije (FRANJIĆ & PANDŽA, 1996), Zlarin (PANDŽA, 1998), Požeška valley (FRANJIĆ, 1993), Opatija, Makarska, Zagreb, Čaglin, Šodići and Trsat (FRANJIĆ & TRINAJSTIĆ, 1996). The newly found localities are (north to south): Crikvenica, Rovanijska near Starigrad, Zadar, Sv. Filip i Jakov, Pakoštane, Pirovac, Srma, Tribunj, Vodice, Šibenik, Grebaštica, Bila near Primošten, Primošten, Rogoznica, Trogir, Kaštela, Solin, Split, Stobreč, Baška voda and the island of Žirje and in inland Croatia near Prelog.

*Solanum elaeagnifolium* has been known from the islet of Plavnik – Kvarner littoral region (GAŽI-BASKOVA & ŠEGULJA, 1978) and from the village of Podšpilje on the island of Vis (PAVLETIĆ *et al.*, 1978). New localities have been found in the Šibenik region (Luka and Donje polje).

**Key words:** *Datura innoxia*, *Solanum elaeagnifolium*, neophytes, new localities, Croatia

**Pandža, M. & Z. Stančić: Nova nalazišta vrsta *Datura innoxia* Miller i *Solanum elaeagnifolium* Cav. (*Solanaceae*) u Hrvatskoj. *Nat. Croat.*, Vol. 8, No. 2., 117–124, 1999, Zagreb**

U radu se iznose nova i dosad poznata nalazišta vrsta *Datura innoxia* Miller i *Solanum elaeagnifolium* Cav. Među neofitima koji se u zadnje vrijeme šire Hrvatskom su i oni podrijetlom iz obje Amerike (amerikanoneofiti), kao što su *Datura innoxia* i *Solanum elaeagnifolium*. Dosad je *Datura innoxia* bila poznata s otoka: Šipana (M. HEĆIMOVIĆ, 1981), Brača (ŠTAMOL & MARKOVIĆ, 1985; Zi. PAVLETIĆ & TRINAJSTIĆ, 1990), Murtera, Lošinja, Hvara (FRANJIĆ, 1993), Visa (FRANJIĆ & TRINAJSTIĆ, 1996), Kornata (PANDŽA & STANČIĆ, 1995), Kaprija (FRANJIĆ & PANDŽA, 1996), Zlarina (PANDŽA, 1998) te iz Požeške kotline (FRANJIĆ, 1993), Opatije, Makarske, Zagreba, Čaglina, Šodića i

Trsata (FRANJIC & TRINAJSTIĆ, 1996). Novootkrivena nalazišta su (od sjevera prema jugu): Crikvenica, Rovanjaska u blizini Starigrada, Zadar, Sv, Filip i Jakov, Pakoštane, Pirovac, Srima, Tribunj, Vodice, Šibenik, Grebaštica, Bila pored Primoštena, Primošten, Rogoznica, Trogir, Kaštela, Solin, Split, Stobreč, Baška voda i otok Žirje te iz kontinentalnog dijela Hrvatske – u blizini Preloga.

*Solanum elaeagnifolium* do sada je bio poznat s otočica Plavnika – Kvarnersko primorje (GAŽI-BASKOVA & ŠEGULJA, 1978) i iz komiškog sela Podšpilje na otoku Visu (PAVLETIĆ *et al.*, 1978). Nova nalazišta su u Šibeniku (Luka i Donje polje).

**Ključne riječi:** *Datura innoxia*, *Solanum elaeagnifolium*, neofiti, nova nalazišta, Hrvatska

## INTRODUCTION

Neophytes have been spreading for some time within the Croatian littoral region (ILIJANIĆ *et al.*, 1991; FRANJIC, 1993; TRINAJSTIĆ *et al.*, 1993).

The expansion of the species *Datura innoxia* Miller and *Solanum elaeagnifolium* Cav. was observed from 1994 to 1998, particularly within the east Adriatic littoral.

Apart from its natural habitats in Central America (PIGNATTI, 1982) *Datura innoxia* is also widespread in Europe as naturalized from the culture – ergasiophytophyte in Portugal, Spain, France and Italy (MOORE, 1972). As for Croatian flora, this species was first reported by M. HEĆIMOVIĆ (1981) for the island of Šipan. During the past decade it was discovered not only at a number of locations in the littoral region but within the continental climate area as well (Zagreb surroundings, Požeška valley).

During observation of the neophytes, a perennial violet-flowered plant was noticed near the bus station in Šibenik (Luka). It was defined as *Solanum elaeagnifolium*. This species originates from temperate South America (HAWKES & EDMONDS, 1972). Within European flora, *Solanum elaeagnifolium* is known from Greece (HAWKES & EDMONDS, 1972). It has also been found in central and southern Italy (BIANCO *et al.*, 1991). In June 1976 Z. Devetak found it on the island of Vis, by the Vis-Komiža road, near the village of Podšpilje (PAVLETIĆ *et al.*, 1978). *Solanum elaeagnifolium* was found for the first time within Croatian flora on the islet of Plavnik in the Kvarner littoral region (GAŽI-BASKOVA & ŠEGULJA, 1978).

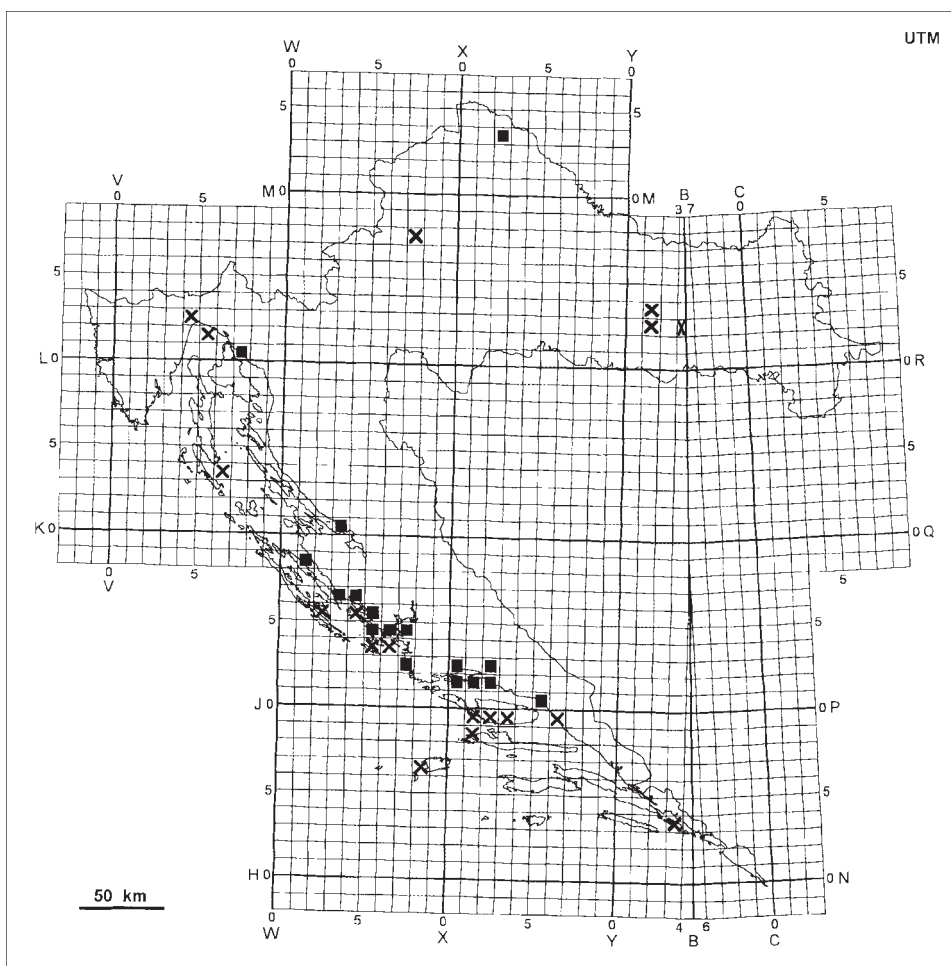
## NEW LOCALITIES IN CROATIA

The map shows earlier localities (Fig. 1) of the *Datura innoxia* Miller species, using the UTM method, and all the new localities are given in the table (Tab. 1).

Registered localities in Croatia (*Datura innoxia*):

- Šipan – Suđurađ (UTM YH33): (M. HEĆIMOVIĆ, 1981)
- Brač – Bobovišće, Milna (UTM XH19): (ŠTAMOL & MARKOVIĆ, 1985)
- Bol (UTM XH39) and Murvica (UTM XH29): (TRINAJSTIĆ & Zi. PAVLETIĆ, 1990)
- Lošinj (UTM VK63): (FRANJIC, 1993)
- Hvar (UTM XH18): (FRANJIC, 1993)
- Požeška valley : – Kaptol and Vetovo (UTM YL13): (FRANJIC, 1993)

- Češljakovci and Kuzmica
- Jakšić and Požega (UTM YL12)
- Murter – Betina (UTM WJ45): (FRANJIC, 1993)
- Velike Vruje (UTM WJ25): (PANDŽA & STANČIĆ, 1995)
- Opatija (UTM VL42): (FRANJIC & TRINAJSTIĆ, 1996)
- Komiža (UTM WH86): (FRANJIC & TRINAJSTIĆ, 1996)
- Zagreb (UTM WL 77) – Staro Brestje: (FRANJIC & TRINAJSTIĆ, 1996)
- Šodići and Čaglin (UTM YL32): (FRANJIC & TRINAJSTIĆ, 1996)
- Trsat (Rijeka) (UTM VL51): (FRANJIC & TRINAJSTIĆ, 1996)
- Kaprije (UTM WJ53): (FRANJIC & PANDŽA, 1996)
- Zlarin (UTM WJ63): (PANDŽA, 1998)



**Fig. 1.** Distribution of *Datura innoxia* Miller in Croatia according to the European UTM method of floristic mapping (x = registered localities, ■ = new localities)

**Table 1.** New localities of the species *Datura innoxia* Miller in Croatia

Locality	UTM Coordinate	Found
Crikvenica	VL70	September 22, 1997
Rovanjska near Starigrad	WK30	September 29, 1998
Zadar	WJ18	September 29, 1998
Sv. Filip and Jakov	WJ36	September 29, 1998
Pakoštane	WJ46	June 23, 1995
Pirovac	WJ55	September 29, 1998
Tribunj	WJ54	August, 1996
Island of Žirje	WJ53	June 21, 1997
Srima near Vodice	WJ64	July, 1996
Vodice	WJ64	July, 1994
Šibenik	WJ74	September, 1995
Grebaštica	WJ72	September 15, 1998
Bila near Primošten	WJ72	July 30, 1997
Primošten	WJ72	July 30, 1997
Rogoznica	WJ72	August, 1995
Trogir	XJ01	July 30, 1997
Kaštel Stari	XJ02	October 13, 1995
Kaštel Lukšić	XJ02	October 13, 1995
Solin	XJ22	July 30, 1997
Split	XJ11	August, 1995
Stobreč	XJ21	September 4, 1998
Baška Voda	XJ50	September 4, 1998
Prelog	XM23	June, 1996

In August 1997 near Šibenik bus station, within the harbour area (80 m east of the bus station) the species *Solanum elaeagnifolium* Cav. was found (Fig. 3 and 4). During 1998, the species was also found in Donje polje (Šibenik County) growing as a weed-plant among the vineyards.

## DISCUSSION AND CONCLUSION

Newly found localities of the *Datura innoxia* Miller species in the East Adriatic littoral show an intensive expansion of the species and a rapid growth of its habitats. On these localities, the species grows by the roads, paths, houses, yards, neglected gardens, around trash heaps and building material waste. Due to its highly decorative quality (Fig. 2) and strong biological potentials (it multiplies by seed and root) this species is turning into a dangerous weed-plant. Consequently, people uproot and throw the plant away, thus enabling it to spread. *Datura innoxia* is highly poisonous. Some drug-addicts claim that the plant, especially its root, contains hallucinogenic substances.



Fig. 2. *Datura innoxia* Miller



Fig. 3. *Solanum elaeagnifolium* Cav.

Within Croatian flora *Solanum elaeagnifolium* Cav. was previously known from the Plavnik islet and the island of Vis (Fig. 4). The appearance of this species and its rapid expansion within the Šibenik region (Donje polje) indicate that the species spreads thanks to the human factor (anthropochorically). Having been an emigra-



Fig. 4. The localities of the species *Solanum elaeagnifolium* Cav. in Croatia  
 ● = localities described previously; ● = new localities

tion area in the past, the seaport of Šibenik and other settlements of this country are abundant in neophytes from both American continents (americanoneophytes, americanoneotophytes; TRINAJSTIĆ, 1975; 1977).

In the region of Šibenik and Donje polje the species grows within the ruderal and weed vegetation in fields, vineyards, by the roads and paths. The vitality of the species is extraordinary in both quality and quantity. With its beautiful violet flowers, the plant is recognizable from afar (Fig. 3). This perennial can grow over 50 cm in height and is in full bloom by late summer. Both species will be represented within the herbarium collection of the Zagreb University Natural Sciences Faculty.

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## SAŽETAK

**Nova nalazišta vrsta *Datura innoxia* Miller i  
*Solanum elaeagnifolium* Cav. (*Solanaceae*) u Hrvatskoj**

M. Pandža & Z. Stančić

*Datura innoxia* Miller do sada je bila poznata s otoka Šipana, Brača, Lošinja, Murtera, Kornata, Kaprija, Zlarina, Hvara i Visa te iz Opatije, Trsata, Zagreba, Čaglina, Šodića, Makarske i Požeške kotline (Kuzmica, Češljakovci, Kaptol, Vetovo, Jakšić i Požega).

U razdoblju 1994.–1998. g. *Datura innoxia* (tab. 1) otkrivena je u Crikvenici, Rovanskoj pokraj Starigrada, Zadru, Sv. Filip i Jakovu, Pakoštanima, Pirovcu, Srimi, Tribunju, Vodicama, Šibeniku, Grebašćici, Bili pokraj Primoštena i u Primoštenu, Rogoznici, Trogiru, Kaštel Starom i Lukšiću, Solinu, Splitu, Stobreču, Baškoj Vodi i na otoku Žirju te iz kontinentalnog dijela Hrvatske u blizini Preloga. U većini novih nalazišta odbjela je iz kulture i širi se uz putove, dvorišta, vrtove i po ruderalnim površinama – ergasiofigofit.

*Solanum elaeagnifolium* Cav. je bio poznat s otočica Plavnika (Kvarnersko primorje) i iz komiškog sela Podšpilje na otoku Visu. U kolovozu 1997. g. pronađen je u Šibeniku uz cestu u ruderalnoj vegetaciji na području Luke (sl. 4), a u 1998. g. i u Donjem polju (okolica Šibenika).

Zbog svoje vitalnosti očekuje se daljnje širenje ovih vrsta u korovno-ruderalnoj vegetaciji.