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ADDITION TO THE FLORA OF THE ISLAND OF ZLARIN (CROATIA)

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In the paper, a list of 40 vascular plant taxa new for the flora of the island of Zlarin (Croatia) is published. Among them 26 autochthonous and anthropochorous as well as 14 cultivated taxa are registered. Together with the taxa published so far, this makes 368 autochtonous and anthropochorous, as well as 75 cultivated taxa or in total 444 vascular flora taxa for the island of Zlarin.

Key words: island of Zlarin, Croatian flora, new taxa

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U radu se objavljuje popis od 40 taksona vaskularnih biljaka novih za floru otoka Zlarina. Među njima pribilježeno je 26 autohtonih i antropohornih, te 14 uzgajanih taksona, što zajedno s do sada objavljenim taksonima iznosi 368 autohtonih i antropohornih, te 75 uzgajanih ili ukupno 444 taksona vaskularne flore otoka Zlarina.

Key words: otok Zlarin, Hrvatsko primorje, flora, novi taksoni

INTRODUCTION

Recently, a list of the flora of the island of Zlarin was published (PANDŽA, 1998) in which in total 404 vascular taxa are given. Out of this number, 343 taxa are autochthonous and anthropochorous species, and 61 taxa are cultivated species, although the said division has not been made in a consistent manner.

Having the opportunity to stay on the island of Zlarin over a shorter period of time to analyze the winter aspect of the regional vegetation, we were able to register a certain number of vascular flora taxa, which have not been registered for the

island of Zlarin (cf. PANDŽA, 1998). The list that follows comprises 40 taxa, new for the flora of the island of Zlarin. The cultivated taxa are marked by an asterisk (*).

LIST OF THE NEWLY REGISTERED TAXA

PINOPHYTA

Cupressaceae

**Thuja orientalis* L.

Pinaceae

Pinus nigra Arnold subsp. *dalmatica* (Vis.) Franco

**P. pinea* L.

MAGNOLIOPHYTA – MAGNOLIATAE

Apiaceae

Daucus carota L. var. *major* L.

Eryngium amethystinum L.

Apocynaceae

**Vinca major* L. *'Variegata'*

Asteraceae

**Achillea tomentosa* L.

**Balsamita major* Desf.

Centaurea glaberrima Tausch

**Dendranthema indicum* (L.) Desmoulins

Inula verbascifolia (Willd.) Hausskn.

**Leucanthemum maximum* (Ramond) DC.

Brassicaceae

Arabis hirsuta (L.) Scop.

Erophila verna (L.) Chevall.

Lobularia maritima (L.) Desv.

Campanulaceae

Campanula pyramidalis L.

Cistaceae

Cistus incanus L. subsp. *creticus* (L.) Heywood

C. salvifolius L.

Crassulaceae

Sedum dasyphyllum L.

Fabaceae

Genista dalmatica Bartl.

Ononis reclinata L.

Lamiaceae
**Majorana hortensis* Moench
**Ocimum basilicum* L.
Prasium majus L.

Linaceae
Linum tenuifolium L.

Oleaceae
**Forsythia viridissima* Lindl.

Primulaceae
Asterolinum linum-stellatum (L.) Duby

Ranunculaceae
Ranunculus muricatus L.

Rosaceae
Potentilla australis Krašan
Sanguisorba muricata (Spach) Focke

Violaceae
Viola alba Besser subsp. *denhardtii* (Ten.) W. Becker

MAGNOLIOPHYTA – LILIATAE

Amaryllidaceae
**Narcissus poëticus* L.

Arecaceae
**Phoenix canariensis* hort. ex Chabaud
**Trachycarpus fortunei* (Hooker) H.A. Wendl.

Cyperaceae
Carex halleriana Asso

Iridaceae
Gladiolus italicus Miller

Liliaceae
Scilla autumnalis L.

Poaceae
Heteropogon contortus (L.) Beauv.
Koeleria splendens (L.) C. Presl
Poa annua L.

DISCUSSION

The past floristic research made on the small islands in the Croatian littoral showed, in the case of a more thorough investigation, that their flora is extremely

rich usually exceeding the number of 500 taxa for the overall flora. Thus, for instance, the flora of Murter (9,91 km^2) has 734 taxa (PANDŽA, 1995), that of Unije (16,77 km^2) 629 taxa (TRINAJSTIĆ, 1988), and that on Šipan (15,81 km^2) 559 taxa (M. HEĆIMOVIĆ, 1981).

The flora in the second group of islands comprises about 400 taxa, thus, for instance, that of Koločep (2,35 km^2) has 444 taxa (M. HEĆIMOVIĆ & S. HEĆIMOVIĆ, 1987), of Lopud (4,29 km^2) 427 taxa (M. HEĆIMOVIĆ & S. HEĆIMOVIĆ, 1986), and of Lokrum (0,72 km^2) 400 taxa (S. HEĆIMOVIĆ, 1982).

Finally, there are small islands on which the flora does not exceed the number of 400 taxa, thus that of Biševo (5,84 km^2) has 389 taxa (Zi. PAVLETIĆ, 1975) and of Svetac (4,34 km^2) 383 taxa (Zi. PAVLETIĆ, 1978).

It may be expected that on detailed floristic research the number of taxa on each of the islands the flora of which does not exceed the number of 500 taxa will be increased. Of course, this number will also have to include all cultivated plants surviving in the open air during the unfavorable vegetation period.

Since according to research by PANDŽA (1998) a total of 404 taxa were registered on the island of Zlarin, it could be expected that this is not a full inventory of its flora. This proved to be true even in the winter aspect, which is not propitious for floristic research. As many as 40 taxa or 10% of the total known flora were recorded. These new taxa refer partly to autochthonous and partly to anthropochorous taxa, but to many cultivated species as well.

Naturally, in some cases it is difficult to say whether a certain plant is cultivated or anthropochorous, so the division is not absolutely correct in each example. In this respect, the taxon *Pinus nigra* subsp. *dalmatica*, for instance, should be mentioned, which must have been planted somewhere in the eastern part of the island above Magarna Cove, where today we find a certain number of relatively stunted trees that have developed spontaneously and been included into the Aleppo pine forests growing on the terraces of abandoned vineyards and olive-groves.

The listing of cultivated plants and their introduction in the floristic inventory is justified because it indicates the interest of the local population in cultivating vegetables, fruits, decorative trees, shrubs, perennial and annual flowers, flavouring, medicinal and aromatic herbs in gardens and yards. It also indicates, among other things, certain climatic characteristics of the area under consideration. Logically, in any analysis of the characteristics of the spontaneous flora, cultivated plants should be excluded.

However, it often happens that many cultivated plants evade cultivation at least periodically or on a permanent basis and enter the regional floral composition on anthropogenous biotopes, either as ephemerophytes or ergasiophigophytes. Such spreading is facilitated especially by weed removal from gardens when various forms of cultivated plant diasporas are left on waste piles or along the edges of roads, fences or dry stone walls. It is in this way that cultivation was evaded by the tropical fern *Cyrtomium falcatum* in the town of Rab (cf. TRINAJSTIĆ & ŠPANJOL, 1994), and by *Datura inoxia* which has already spread to a large number of localities (cf. FRANJIĆ, 1993).

CONCLUSION

Our short stay on the island of Zlarin to study the regional vegetation in its winter aspect showed that the flora of this small island is still not known completely. Registration was made of 40 vascular taxa, 26 autochthonous and anthropochorous, as well as 14 cultivated taxa, so the entire known flora of the island of Zlarin has 444 taxa.

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SAŽETAK

Dodatak flori otoka Zlarina

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Nedavno je objavljen popis flore otoka Zlarina (PANDŽA, 1998) u kojem je pobrojeno ukupno 404 taksona vaskularne flore. Od toga broja 343 taksona su autoktone i antropokorne vrste, a 61 taksona uzgajane vrste, iako navedena razdioba nije provedena dosljedno. Kratkotrajni boravak na otoku Zlarinu radi analize područne vegetacije u zimskom aspektu pokazao je da nam flora toga malenog otoka još nije u potpunosti poznata. Zabilježeno je 40 taksona vaskularne flore, 26 autoktonih i antropokornih i 14 uzgajanih taksona, pa kompletna do danas poznata flora otoka Zlarina broji zasada 444 taksona.

Kao što je istaknuto, u popis su uključene i uzgajane biljke. Popisivanje i uključivanje uzgajanih biljaka u floristički inventar ima opravdanje, jer upućuje na interes lokalnoga stanovništva za uzgoj povrća, voća, ukrasnog drveća, grmlja, trajnica i jednogodišnjeg cvijeća, pa začinskog, ljekovitog i aromatičnog bilja u vrtovima i okućnicama. To između ostaloga upućuje i na određene značajke klime dotičnog područja. Potpuno je logično da kod analize značajki spontane flore treba izostaviti uzgajane biljke.

Međutim, često puta se događa da mnoge uzgajane biljke bar povremeno ili trajno odbjegnu uzgoj i ulaze u sastav područne flore na antropogenim biotopima, bilo kao efemerofiti ili ergasiofigofiti. Takav se način širenja naročito pospješuje kod čišćenja vrtova od korova, pa na smetištima ili uz rubove putova, ograda ili gromača završe različiti oblici dijaspora uzgajanih biljaka i tamo se dalje održavaju.