

## Flora of the island of Žirje and the small islands around it (eastern Adriatic coast, Croatia)

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The existence of 469 vascular plants (433 species, 31 subspecies, four varieties and one form within 296 genera and 77 families), of which 465 taxa have been registered for the first time, were determined on the island of Žirje and on the small islands around it during 1997–2001. Seventy four cultivated species were registered, too. According to plant geography analysis, plants of the Mediterranean floral element (241 species, 51.39%) were determined in the greatest abundance, following by plants of the South European floral elements (92 species, 19.61%) and the widespread plants (80 species, 17.05%). An analysis of life forms showed the domination of therophytes (234 species, 49.89%), followed by hemicryptophytes (119 species, 25.37%), geophytes (39 species, 8.32%), phanerophytes (37 species, 7.89%), chamaephytes (37 species, 7.89%) and hydrophytes (3 species, 0.64%).

**Key words:** Flora, Žirje, islands, taxonomy, Adriatic, Croatia

### Introduction

The island of Žirje is the the most distant populated island in the Šibenik archipelago (eastern, Croatian, Adriatic coast). It is 20.4 km from Šibenik. The island is 12 km long and 1.2 km wide on average, its maximum width (Straža-Muna) being 2.5 km. The area of the island of Žirje is 15.43 km<sup>2</sup>, and with the surrounding small islands and reefs (a total of 17) 15.78 km<sup>2</sup> (FRIGANOVIĆ 1994). In 2001, the island of Žirje was inhabited by 123 people. The small islands around Žirje are not inhabited except the small island of Blitvenica where until a few years ago the lighthouse keeper lived with his family. The highest point on the island in the peak Kapić, 134 m a. s. l. Extending from the northwest to the southeast there are 11 peaks: Požernjak (96 m), Vrsi (111 m), Muna (104 m), Mikuljica (101 m), Kapić (134 m), Veli vrh (94 m), Gušterne (94 m), Zvizdulja (92 m), Smrikovac (79 m), Draževica (79 m) and Borovica (121 m), which gives an undulating relief to the island. The island of Žirje is surrounded by the small islands of Hrbošnjak, Gušteranski, Mažirina, Bakul, Škrvada, Nozdra, Raparašnjak, Mikavica, Koromašna and the reefs Škrvadica and Rasoh, while 2 to 3 nautical miles southwest of Žirje there is a group of reefs and small islands con-

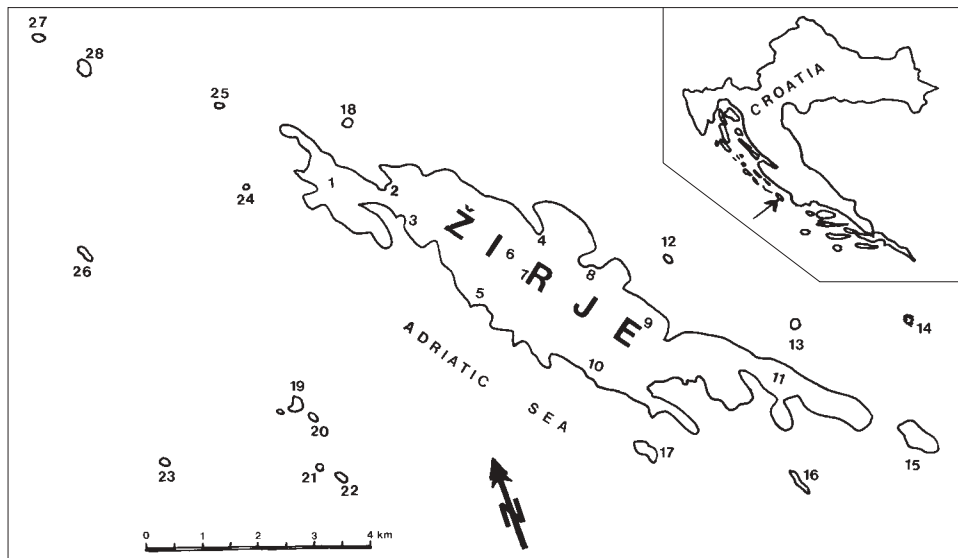
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sisting of: Kosmerka, Balkun, Proklandica, Vrtlac and Babuljak, behind which 1.5 nautical miles to the west a lighthouse is situated on the small island of Blitvenica (Fig. 1).

The geological structure of the island of Žirje and its surrounding archipelago is characterized by the domination of the Upper Cretaceous limestones extending in the direction of the Dinaric Alps. The largest part of the island of Žirje and the small islands of Koromašna, Mikavica, Nozdra, Raparašnjak, Vrtlić and Samograd as well as the Bačvica reef are built of Turonic limestones with rare dolomite interbeds (MAMUŽIĆ et al. 1975).

The rest of the island from Lojača cove to Rasoh cape as well as the other islands is made of Senon bedded limestones and calcareous dolomites. The Quaternary deposits are connected with the valley in the middle of the island, which is covered with a thin layer of red soil overlaid with sediments and turned brown (BOGNAR and SALETO-JANKOVIĆ 1994).



**Fig. 1.** Localities on the islands where the species have been registered

1 -the coves of Velika Nozdra and Mala Nozdra, Jajin vrh, Vela glava (MTB 2359/2), 2 -the Mikavica cove (MTB 2359/2), 3 -the Tratinska, Pečena and Balun caves (MTB 2359/2), 4 -the Muna village and jetty (MTB 2359/2), 5 - Straža (MTB 2359/2), 6 - Selo (MTB 2359/2), 7 - the valley and the pond (MTB 2359/2), 8 - the barracks and settlement of Koromašna (MTB 2360/1), 9 - Kapić and Veli vrh (MTB 2360/3), 10 - Stupica, Gradina, Kamena glava and Grašnjak peninsula (MTB 2360/3), 11 - Gušterne, Draževica, Zvizdulja and Smrikovac (MTB 2360/3).

Island and small islands: 12 - Koromašna (a. k. a. Škojić o Koromašne, MTB 2360/1), 13 - Gušteranski (MTB 2360/3), 14 - Hrbošnjak (Hrbošnjak, MTB 2360/3), 15 - Mažirina (a. k. a. Mažir(i)na, MTB 2360/3), 16 - Bakul (MTB 2360/3), 17 - Škrvada (MTB 2360/3), 18 - Mikavica (a. k. a. Škojić o Mikavice, MTB 2359/2), 19 - Kosmerka (a. k. a. Kosmata, MTB 2359/4), 20 - Proklandica a. k. a. Poklandica, MTB 2359/4), 21 - Vrtlac (a. k. a. Ravna, MTB 2359/4), 22 - Babuljak (a. k. a. Kameni, MTB 2359/4), 23 - Blitvenica (a. k. a. Lanterna, MTB 2359/3), 24 - Nozdra (a. k. a. Sika o Nozdre, MTB 2359/2), 25 - Raparašnjak (a. k. a. Raparašna(k), MTB 2359/2), 26 - Sedlo (MTB 2359/1), 27 - Vrtlić (MTB 2359/1), 28 - Samograd (MTB 2359/1).

Žirje is under the strong influence of the sea. The average annual amplitude for a ten-year period (from 1927 to 1934 and from 1947 to 1950) indicates the maritime character. The island of Žirje and the surrounding small islands are characterized by mild winters and warm summers. The amount of precipitation (753 mm) would be sufficient if it were distributed in such a way as to meet the requirements of vegetation. But the annual distribution of precipitation is unfavorable since most rain falls in winter and the lowest amount in summer. For this reason, in summer these islands suffer from drought, which is additionally aggravated by the karst soil (limestone formations). The absolute maximum and minimum in the observed period was 30.4 and  $-1.3$  °C.

The drought on the island of Žirje is attenuated by moisture. The average annual relative humidity on the Žirje is 78%. Particularly important is the relative humidity in summer, when it is 64% on the average, and this has positive effects on plant life (FRIGANOVIĆ 1994). Thus, during the summer months the relative humidity and dew are substitutes for rain. The rain penetrates fast through the cracks in the limestone, which enable it to sink fast, thus in a very short period of time there are no traces of rain on the island. Only in the valley, in the area the residents call *loka*, does water remain throughout the year.

The vegetation on the island is macchia of the alliance *Quercion ilicis* and the planted Aleppo pine forest which propagates subspontaneously thus superseding the natural vegetation. The arable land is in the valley, where vineyards, fig trees, olive trees, plum trees and vegetables are cultivated.

Due to their small size the islands of the Croatian littoral generally have not been researched very much. This applies to the island of Žirje. No detailed research of the flora on the island of Žirje has ever been done, and so far only four species have been reported for this island. The first data are those by VISIANI (1852) who reported three species: *Corydalis ochroleuca* Koch in Sturm. (TRINAJSTIĆ 1983 – the species *Corydalis acaulis* (Wulfen) Pers), *Alyssum montanum* L. and *Euphorbia pinea* L. while the species *Datura innoxia* Miller has been reported by PANDŽA and STANČIĆ (1999).

In this work the list and the analysis of the flora on the island of Žirje and the small islands around it owned by the residents of Žirje are given. The research was carried out in the period from 1997 to 2001.

## Methods

In the list of flora, the taxa are presented in alphabetical order of families, genera and species. The names of most species have been conformed to the work Flora d'Italia (PIGNATTI 1982) while the names of a small number of species are according to TUTIN et al. (1964–1980) and TRINAJSTIĆ et ZI. PAVLETIĆ (1979). These two references are marked with \* and \*\*, respectively, after the names of the species. The cultivated species are given at the end of the flora list and have not been included in the analyses. The analysis of life forms has been made according to HORVAT (1949). The abbreviations of life forms are given in the flora list before the names of species:

Ch – chamaephyta	G – geophyta
H – hemicryptophyta	Hy – hydrophyta
P – phanerophyta	T – therophyta

In the list, after the names of species their habitats from the small islands marked with numbers are given (see Fig. 1). In the case of a species reported earlier, the name of the species is followed by the name of the author who reported the respective species in the researched area, its habitat and the year.

The names of small islands and reefs are specified according to FINKA and ŠOJAT (1974).

The phytogeographical analysis of flora has been made according to HORVATÍĆ (1963) and HORVATÍĆ et al. (1968). The analysis of endemic species has been made according to TRINAJSTIĆ (1991). The belonging of a species to a certain floral element in the flora list has been indicated by the respective abbreviation (such abbreviations in the flora list are put after the indication of the habitat of the species).

### **1. MEDITERRANEAN FLORAL ELEMENT**

- A. Circum-Mediterranean plants – **CM**
- B. West Mediterranean plants – **ZM**
- C. East Mediterranean plants – **IM**
- D. Illyrian – Mediterranean plants
  - a) Illyrian South European plants – **ILJEU**
  - b) Illyrian Adriatic plants:
    - 1. Illyrian Adriatic endemic plants – **ILJAE**
    - 2. Illyrian Apennine plants – **ILAP**
- E. Mediterranean Atlantic plants – **MA**
- F. European Mediterranean plants – **EUM**
- G. Mediterranean Pontic plants – **MP**

### **2. ILLYRIAN-BALCANIC FLORAL ELEMENT – IBE**

- A. Illyrian-Balcanic endemic plants – **IBE**

### **3. SOUTH EUROPEAN FLORAL ELEMENT**

- A. South European Mediterranean plants – **JEUM**
- B. South European Pontic plants – **JEUP**
- C. South European Atlantic plants – **JUEA**

### **4. EAST EUROPEAN-PONTIC FLORAL ELEMENT – IEPE**

### **5. EUROPEAN FLORAL ELEMENT – EF**

### **6. CENTRAL EUROPEAN FLORAL ELEMENT – CEF**

### **7. EURO-ASIATIC FLORAL ELEMENT – EAF**

### **8. CIRCUM-HOLARCTIC SPREAD PLANTS – CIRCUMH**

### **9. WIDESPREAD PLANTS – ŠR**

### **10. NATURALIZED PLANTS – N**

## Results

The list of flora of the island of Žirje and its surrounding small islands comprises 469 taxa. In the crops, 74 species have been registered. The richest with species are the families Fabaceae (64 species, 13.65%) and Poaceae (47 species, 10.02%), then come the families Asteraceae (31), Cichoriaceae (28) and Lamiaceae (23). Other families are represented with a smaller number of species.

On the island of Žirje, there were 451 taxa in the flora and another 74 species in the crops (fruits, vegetables, decorative plants). Of other 17 small islands, the richest with species is the Mažirina island (131 species), then come the islands of Samograd (71 species), Škrvada (67 species), Koromašna (65 species) and Gušteranski (63 species) (Tab. 2).

### Floristic list

#### POLYPODIOPHYTA

##### ASPLENIACEAE

H *Asplenium ruta-muraria* L. – 8; CIRCUMH

H *A. trichomanes* L. – 1, 2, 4, 5, 7, 8, 9, 11, 12, 15; ŠR

H *Ceterach officinarum* DC. (= *Asplenium ceterach* L.) – 1, 2, 3, 5, 6, 7, 8, 9, 11, 15; JEUM

##### POLYPODIACEAE

H *Polypodium australe* Fée (= *Polypodium cambricum* L.) – 8; CM

#### PINOPHYTA

##### CUPRESSACEAE

P *Juniperus oxycedrus* L. subsp. *macrocarpa* (Sibth. et Sm.) Ball – 1, 2, 3, 4, 5, 7, 8, 9, 10, 11; CM

P *J. oxycedrus* L. subsp. *oxycedrus* – 1, 5, 7, 8, 11; CM

P *J. phoenicea* L. – 1, 2, 3, 4, 5, 7, 8, 9, 10, 11, 15, 18; CM

##### EPHEDRACEAE

Ch *Ephedra fragilis* Desf. (= *E. fragilis* Desf. subsp. *campylopoda* (C. A. Mayer) Asch. et Graebn.) – 1, 5, 9, 10, 13, 28; IM

##### PINACEAE

P *Pinus halepensis* Mill. – 1, 2, 3, 4, 5, 8, 9, 10, 11, 15; CM

#### MAGNOLIOPHYTA – MAGNOLIATAE

##### AMARANTHACEAE

T *Amaranthus albus* L. – 4, 6; N

T *A. deflexus* L. – 4, 6, 7, 10, 11; N

T *A. graecizans* L. – 4, 6, 7; N

T *A. retroflexus* L. – 4, 6; N

ANACARDIACEAE

- P *Pistacia lentiscus* L. – 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 14, 15, 17, 28; CM  
 P *P. terebinthus* L. – 2, 3, 4, 5, 6, 7, 8, 9; CM

APIACEAE

- T *Ammi majus* L. – 6, 10; JEUM  
 T *Ammoides pusilla* (Brot.) Breistr. – 11, 15; CM  
 T *Bupleurum baldense* Turra subsp. *gussonei* (Arcang.) Tutin (= *B. veronense* Turra) – 1, 2, 3, 4, 7, 8, 9, 11; ILJEU  
 Ch *Crithmum maritimum* L. – 1, 2, 3, 4, 8, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28; MA  
 H *Daucus carota* L. subsp. *major* (Vis.) Arcang. – 2, 3, 4, 6, 7, 8, 9, 10, 11; JEUM  
 H *D. gingidium* L. (= *D. gummifer* Lam.) – 12, 13, 14, 17, 18, 25, 28; MA  
 H *Eryngium amethystinum* L. – 7, 28; ILJEU  
 H *E. campestre* L. – 7; JEUM  
 H *Foeniculum vulgare* Mill. – 4, 5, 6, 7, 8, 9, 10; CM  
 T *Scandix australis* L. – 1, 2, 3, 4, 7, 8, 9; CM  
 T *S. pecten-veneris* L. – 2, 7, 8, 9; ŠR  
 H *Smyrniolus olusatrum* L. – 6, 7; MA  
 T *Tordylium apulum* L. – 2, 3, 7, 10; CM  
 T *T. officinale* L. – 2, 3, 4, 5, 6, 7, 8, 9, 10; IM  
 T *Torilis arvensis* (Huds.) Link – 4, 6, 7, 8, 9, 10, 13, 15; JEUM  
 T *T. nodosa* (L.) Gaertn. – 8, 11, 15; MA

ARALIACEAE

- P *Hedera helix* L. – 4, 6, 7; EF

ASCLEPIADACEAE

- G \* *Vincetoxicum hirundinaria* Medicus subsp. *adriaticum* (Beck) Markgr. (= *V. adriaticum* Beck) – 1, 2, 3, 4, 9, 15, 26, 28; ILJAE

ASTERACEAE

- T *Aster squamatus* (Spreng.) Hieron. – 2; N  
 H *Bellis sylvestris* Cirillo – 1, 3, 4, 7, 12; CM  
 T \* *Bidens subalternans* DC. – 4; N  
 T *Calendula arvensis* L. – 4, 7, 8, 9, 10; JEUM  
 H *Carduus micropterus* (Borbás) Teyber – 1, 3, 4, 8, 9, 11, 13, 17; ILJAE  
 H *C. pycnocephalus* L. – 3, 4, 6, 7, 8, 9, 10, 11, 12, 14, 15; CM  
 H *Carlina corymbosa* L. – 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 13, 15, 28; CM  
 T *Carthamus lanatus* L. – 4, 6, 7, 8, 9; CM  
 H *Centaurea spinosociliata* Seenus – 7, 9; ILJAE  
 T *Cirsium arvense* (L.) Scop. – 7; EAF  
 H *C. vulgare* (Savi) Ten. (= *C. lanceolatum* Scop.) – 7, 11; EAF  
 T *Conyza bonariensis* (L.) Cronquist – 4, 6, 7, 8; N  
 T *C. canadensis* (L.) Cronquist – 4, 6; N  
 T *Crupina crupinastrum* (Moris) Vis. – 2, 3, 6, 7; JEUM

- H *Echinops ritro* L. – 11, 12, 13, 14, 15, 17, 18, 25, 28; JEUP  
 T *Evax pygmaea* (L.) Brot. – 1, 2, 3; CM  
 T *Filago pyramidata* L. (= *F. spathulata* C. Presl) – 1, 2, 3, 4, 5, 7, 8, 10, 11, 15; JEUM  
 Ch *Helichrysum italicum* (Roth) G. Don f. – 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 17; CM  
 H *Inula conyza* DC. – 5, 6, 8; JEUP  
 Ch *I. crithmoides* L. – 2, 3, 4, 8, 10; MA  
 T *I. graveolens* (L.) Desf. – 4; JEUM  
 H *I. viscosa* (L.) Aiton – 1, 2, 3, 4, 5, 6, 7, 8, 10, 11, 13, 15; CM  
 T *Matricaria chamomilla* L. (= *Chamomilla recutita* (L.) Rauschert) – 4, 6, 8; ŠR  
 T *Micropus erectus* L. (= *Bombycilaena erecta* (L.) Smolj.) – 4, 7, 8, 10, 11, 15; JEUP  
 H *Onopordum illyricum* L. – 2, 4, 6, 7; CM  
 T *Pallenis spinosa* (L.) Cass. – 4, 5, 6, 7, 8, 11; CM  
 H *Picnomon acarna* (L.) Cass. – 1, 4, 5, 6, 11; CM  
 T *Senecio leucanthemifolius* Poir. var. *reichenbachii* Fiori – 27; CM  
 T *S. vulgaris* L. – 3, 4, 6, 7, 8, 15; ŠR  
 Ch *Tanacetum cinerariifolium* (Trevir.) Sch. Bip. (= *Pyrethrum cinerariifolium* Trevir.) – 2, 3, 4, 5, 7, 8, 11; ILJAE  
 T *Tyrinnus leucographus* (L.) Cass. – 2, 3, 5, 6, 7, 8; EUM

## BORAGINACEAE

- H *Alkanna tinctoria* Tausch – 7, 8; CM  
 H *Anchusa italica* Retz. (= *A. azurea* Mill.) – 7, 8, 13; JEUM  
 T *Borago officinalis* L. – 6; CM  
 T *Buglossoides arvensis* (L.) I. M. Johnst. (= *Lithospermum arvense* L.) – 1, 2, 7; EAF  
 T *Cynoglossum columnae* Ten. – 4, 6, 7; IM  
 H *C. creticum* Mill. – 3, 5, 6, 7, 8, 12; CM  
 H *Echium italicum* L. – 7; CM  
 T *E. plantagineum* L. – 1, 3, 4, 5, 6, 7, 8, 10, 13, 28; MA  
 T *Heliotropium europaeum* L. – 4, 6, 7, 8, 23, 25, 27; MP  
 T *Myosotis ramossissima* Rochel in Schult. (= *M. collina* Ehrh., *M. hispida* Schlecht.) – 4, 5, 7, 8, 9; EAF

## BRASSICACEAE

- Ch *Aethionema saxatile* (L.) R. Br. in Aiton – 1, 2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 13, 15, 17, 18; JEUM  
 T *Alyssum minus* (L.) Rothm. – 3, 4, 5, 6, 7, 8, 9, 10; CM  
 Ch *A. montanum* L. (VISIANI 1852: 117; island of Žirje) – CEF  
 T *Arabidopsis thaliana* (L.) Heynh. in Holl et Heynh. – 7; ŠR  
 H *Arabis hirsuta* (L.) Scop. – 1; ŠR  
 Ch \* *Aurinia sinuata* (L.) Griseb. (= *Alyssanthus sinuatus* (L.) Trinajstić) – 1, 13, 14, 15, 28; ILJAE  
 T *Cakile maritima* Scop. – 10, 17, 19; ŠR  
 T *Capsella rubella* Reut. – 5, 6, 8, 10, 11, 15; CM  
 T *Cardamine hirsuta* L. – 7; ŠR

- H *Cardaria draba* (L.) Desv. – 4, 7, 10; ŠR  
 H *Diplotaxis tenuifolia* (L.) DC. – 4, 6, 7, 8, 28; ŠR  
 T *Erophila verna* (L.) Chevall. subsp. *praecox* (Steven) Walters (= *Draba praecox* Steven) – 7, 8; ŠR  
 T *Eruca sativa* Mill. (= *E. vesicaria* (L.) Cav. subsp. *sativa* (Mill.) Thell.) – 2, 6, 8, 9; JEUM  
 T *Hymenolobus procumbens* (L.) Nutt. (= *Hutchinia procumbens* (L.) Desv.) – 10, 12, 15, 25, 27, 28; ŠR  
 H *Lepidium graminifolium* L. – 4, 6, 7; JEUP  
 T *Sisymbrium officinale* (L.) Scop. – 3, 6, 7, 8; ŠR  
 T *S. orientale* L. – 5, 8, 10; MP  
 T *Thlaspi perfoliatum* L. – 4; EAF  
 H *T. praecox* Wulfen – 11, 15; ILJEU

#### CAMPANULACEAE

- T *Campanula erinus* L. – 4, 7, 8, 9, 11, 15; CM  
 H *C. pyramidalis* L. – 4, 5, 6, 13, 15, 28; ILJAE  
 T *Legousia hybrida* (L.) Delarbre – 6, 7, 8; JUEA

#### CAPPARIDACEAE

- P *Capparis spinosa* L. – 17, 21, 28; CM

#### CAPRIFOLIACEAE

- P *Lonicera implexa* Aiton – 3, 4, 7, 12, 15; CM  
 P *Viburnum tinus* L. – 1, 3, 8; CM

#### CARYOPHYLLACEAE

- T *Arenaria leptoclados* (Rchb.) Guss. – 3, 4, 5, 6, 7, 8, 9, 10, 11, 15, 17, 23, EAF  
 T *A. serpyllifolia* L. – 2, 3, 4, 5, 6, 7, 8, 9, 10, 12; ŠR  
 T *Cerastium ligusticum* Viv. – 3, 5, 7, 8, 9, 10, 11, 12, 15; CM  
 H *Dianthus ciliatus* Guss. – 25; ILJAE  
 T *Herniaria glabra* L. – 10, 12; EAF  
 T *H. hirsuta* L. – 4; EF  
 H *H. incana* Lam. – 1, 3, 4, 5, 7, 8, 9, 10, 11, 28; JEUM  
 T *Minuartia hybrida* (Vill.) Schishkin in Komarov (= *M. tenuifolia* (L.) Hiern) – 8, 10; EAF  
 H *Petrorhagia saxifraga* (Ser. ex DC.) Link (= *Tunica saxifraga* (L.) Scop.) – 1, 2, 3, 4, 5, 6, 7, 8, 9, 11; JEUM  
 T *Polycarpon tetraphyllum* (L.) L. – 3, 4, 5, 6, 7, 8, 10, 11; JEUM  
 T *Sagina maritima* G. Don – 2, 4, 8, 11; MA  
 H \*\* *Silene angustifolia* (Mil.) Guss. subsp. *angustifolia* – 1, 5, 7, 8, 9; JEUM  
 H \*\* *S. angustifolia* (Mill.) Guss. subsp. *reiseri* (K. Maly) Trinajstić – 1, 2, 3, 4, 8, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 21, 22, 23, 25, 26, 27, 28; JEUM  
 T *S. gallica* L. – 2, 7, 10, 15; ŠR  
 H *S. latifolia* Poiret (= *Melandrium divaricatum* (Rchb.) Fenzl) – 2, 3, 4, 5, 6, 7, 8, 9, 12, 14, 25, 28; JEUM



- T *S. sedoides* Poiret – 4, 8; CM  
 T *Spergularia marina* (L.) Griseb. (= *S. salina* J. Presl et C. Presl) – 2, 4; ŠR  
 T *Stellaria media* (L.) Vill. – 2, 4, 8, 9, 10; ŠR  
 T *S. pallida* (Dumort) Piré – 3, 4, 5, 7, 11, 15; ŠR

## CHENOPODIACEAE

- Ch *Arthrocnemum glaucum* (Delile) Ung.-Sternb. (= *A. macrostachyum* (Morici.) C. Koch – 1, 2, 3, 4, 8, 10, 12, 16, 17, 18, 25, 26, 27, 28; JEUM  
 T *Atriplex latifolia* Wohlenb. (= *A. prostrata* Boucher ex DC. in Lam. et DC.; *A. hastata* L.) – 1, 2, 3, 4, 8, 10, 14, 15, 16, 17, 18, 19, 21, 23, 24, 25, 26, 27, 28; ŠR  
 H *Beta vulgaris* L. subsp. *maritima* (L.) Arcang. – 2, 4, 8, 10, 14, 17, 18, 24; MA  
 Ch *Camphorosma monspeliaca* L. – 18, 21, 25; CM  
 T *Chenopodium album* L. – 3, 4, 6, 7, 8, 9, 10, 23; ŠR  
 T *Ch. murale* L. – 4, 6, 7, 8; ŠR  
 T *Ch. vulvaria* L. – 4, 6, 7, 8; JEUM  
 Ch *Halimione portulacoides* (L.) Aellen – 10, 12, 13, 14, 15, 17, 27; ŠR  
 T *Salsola kali* L. – 4, 8; ŠR  
 T *S. soda* L. – 8; JEUP  
 T *Suaeda maritima* (L.) Dumort. – 27; ŠR

## CICHORIACEAE

- G *Aetheorrhiza bulbosa* (L.) Cass. (= *Crepis bulbosa* L.) – 1, 3, 6, 7, 8, 9, 10, 11, 15, 17; CM  
 H *Chondrilla juncea* L. – 4, 5, 6, 7; EAF  
 H *Cichorium intybus* L. – 1, 3, 4, 6, 8, 10, 11, 17; ŠR  
 H *Crepis biennis* L. – 4, 6, 7, 8, 9, 10; CEF  
 T *C. foetida* L. – 2, 3, 4, 6, 7, 9, 10; JEUM  
 T *C. rubra* L. – 2, 3, 4, 5, 6, 7, 8, 10; IM  
 T *C. sancta* (L.) Babc. – 3, 4, 5, 6, 7, 8, 9, 10; IM  
 T *C. zacintha* (L.) Babc. (= *Zacintha verrucosa* Gaertn.) – 2, 3, 4, 7, 8, 9, 10, 11; CM  
 T *Hedypnois cretica* (L.) Dum. Cours. – 1, 2, 3, 5, 8, 11, 12; CM  
 H \* *Hieracium heterogynum* (Froelich) Guterm. (= *H. stupposum* Rchb.) – 1, 5, 8, 9, 10; IBE  
 H \* *H. praealtum* Will. subsp. *bauhinii* (Besser) Petunnikov – 8, 9; EAF  
 T *Hyoseris scabra* L. – 2, 8; CM  
 H *Lactuca serriola* L. – 3, 4, 6, 7, 8, 11; ŠR  
 H *L. viminea* (L.) J. Presl et C. Presl – 1, 3, 4, 5, 6, 7, 8, 9; JEUP  
 H *Leontodon crispus* Vill. – 1, 3, 5, 7, 8, 9, 10, 11, 15; JEUM  
 G *L. tuberosus* L. – 1, 2, 3, 4, 5, 6, 7, 8, 11; CM  
 H *Picris hieracioides* L. – 6, 7, 8, 9; EAF  
 H *Podospermum laciniatum* (L.) DC. (= *Scorzonera laciniata* L.) – 7; ŠR  
 H *Reichardia picroides* (L.) Roth – 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 15, 16, 17, 18, 20, 25, 28; CM  
 T *Rhagadiolus stellatus* (L.) Gaertn. – 7, 8, 9, 10, 15; CM  
 H *Scolymus hispanicus* L. – 1, 3, 6, 7, 11, 13; CM

- H *Scorzonera villosa* Scop. – 8, 11, 12, 13, 14, 17, 18, 28; ILJEU  
T *Sonchus glaucescens* Jord. (= *S. asper* (L.) Hill. subsp. *glaucescens* (Jord.) Ball) – 2, 3, 4, 8, 9, 10, 12, 13, 14, 15, 17, 18, 19, 23, 25, 26, 28; CM  
T *S. oleraceus* L. – 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11; ŠR  
H *Tragopogon dubius* Scop. – 4, 7; JEUP  
H *T. porrifolius* L. – 4, 6; CM  
H *Urospermum dalechampii* (L.) Scop. ex F. W. Schmidt – 7; CM  
T *U. picroides* (L.) Scop. ex F. W. Schmidt – 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 17, 19, 25; CM

#### CISTACEAE

- P *Cistus incanus* L. – 1, 2, 3, 4, 6, 7, 8, 9, 10, 11; CM  
P *C. salviifolius* L. – 1, 3, 7, 8, 9, 10, 11; CM  
Ch *Fumana ericoides* (Cav.) Gand. in Magnier – 1, 3, 5, 7, 8, 9, 10, 11, 13; CM  
Ch *F. thymifolia* (L.) Spach ex Webb. – 3, 4, 7, 8, 9, 10; CM

#### CONVOLVULACEAE

- H *Convolvulus elegantissimus* Mill. (= *C. althaeoides* L. subsp. *tenuissimus* (Sibth. et Sm.) Stace – 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 15; IM  
G *C. arvensis* L. – 2, 3, 4, 5, 6, 7, 8, 10; ŠR  
H *C. cantabrica* L. – 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13; JEUM  
Ch *C. cneorum* L. – 28; ILAP

#### CRASSULACEAE

- Ch *Sedum acre* L. – 8, 10, 12, 13, 15, 17, 25, 28; EAF  
Ch *S. anopetalum* DC. (= *S. ochroleucum* Chaix in Vill.) – 5, 6, 7, 8; JEUM  
T *S. rubens* L. – 12; JEUM

#### CUCURBITACEAE

- Ch *Ecballium elaterium* (L.) A. Rich. – 4, 6, 8; CM

#### DIPSACACEAE

- H *Cephalaria leucantha* (L.) Roem. et Schult. – 12, 13; CM

#### EUPHORBIACEAE

- Ch *Andrachne telephioides* L. – 3, 4; CM  
T *Euphorbia chamaesyce* L. – 4, 6, 8; JEUM  
T *E. exigua* L. – 1, 2, 3, 4, 5, 7, 8, 9, 10, 11; JEUM  
T *E. falcata* L. – 6, 7; JEUM  
Ch *E. fragifera* Jan – 1, 11, 13, 14, 15, 17, 25, 28; ILJAE  
T *E. helioscopia* L. – 2, 3, 4, 5, 6, 7, 8, 9, 10; ŠR  
T *E. maculata* L. – 3; N  
Ch *E. paralias* L. – 10; MA  
T *E. peplis* L. – 10; MA  
T *E. peplus* L. – 3, 7, 8, 9, 10; ŠR

- Ch *E. pinea* L. – 1, 3, 4, 5, 7, 8, 9, 10, 11, 12, 15, 17, 18, 19, 25, 26, 28; (VISIANI 1852: 226–227; island of Žirje) – CM  
 T *E. prostrata* Aiton – 4; N  
 T *E. segetalis* L. – 4, 6, 7, 8, 9; CM  
 Ch *E. spinosa* L. – 1, 2, 3, 4, 5, 6, 11; CM  
 Ch *E. wulfenii* Hoppe – 1, 4, 5, 6, 7, 8, 9, 13; ILJAE  
 T *Mercurialis annua* L. – 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 13, 15, 17; ŠR

## FABACEAE

- H *Anthyllis vulneraria* L. subsp. *prapropera* (Kerner) Bornm. – 1, 2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 13, 17, 28; EUM  
 T *Astragalus hamosus* L. – 2, 3, 5, 6, 7, 8, 9, 10; CM  
 H *A. monspessulanus* L. subsp. *illyricus* (Bernhardt) Chater – 3, 10; ILJAE  
 T *S. sesameus* L. – 1; ZM  
 Ch *Chamaecytisus spinescens* (C. Presl) Rothm. (= *Cytisus spinescens* Presl.) – 1, 3, 4, 8, 11, 13, 14, 17, 18, 25, 28; ILJEU  
 T *Coronilla cretica* L. – 3, 10, 15; IM  
 P *C. emerus* L. subsp. *emeroides* Boiss. et Spruner in Boiss. – 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 17, 18, 28; IM  
 T *C. scorpioides* (L.) Koch – 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 15; CM  
 Ch *Dorycnium hirsutum* (L.) Ser. in DC. – 1, 2, 3, 4, 6, 7, 8, 9, 10, 11, 13, 15, 17; CM  
 Ch *Genista sylvestris* Scop. subsp. *dalmatica* (Bartl.) H. Lindb. – 13, 17; ILJAE  
 T *Hippocrepis ciliata* Willd. – 3, 8; CM  
 H *H. comosa* L. – 8; JEUM  
 T *H. unisiliquosa* L. – 2, 3, 7, 8, 9, 10; CM  
 T *Hymenocarpus circinnatus* (L.) Savi – 8, 9; CM  
 T *Lathyrus aphaca* L. – 7, 8, 9; JEUM  
 T *L. cicera* L. – 1, 2, 3, 4, 5, 6, 7, 8, 9, 10; CM  
 T *L. sphaericus* Retz. – 4, 7; JEUM  
 T *Lens nigricans* (M. Bieb.) Godr. – 3; CM  
 H *Lotus corniculatus* L. – 2, 7, 9; ŠR  
 Ch *L. cytisoides* L. – 1, 3, 4, 10, 12, 13, 14, 15, 16, 17, 18, 19, 21, 23, 25, 26, 28; CM  
 T *L. edulis* L. – 3, 7, 10, 28; CM  
 T *L. ornithopodioides* L. – 1, 2, 3, 4, 5, 6, 7, 8, 9; CM  
 T *Lupinus micranthus* Guss. (= *L. hirsutus* L.) – 7; IM  
 T *Medicago arabica* (L.) Huds. – 5, 6, 7, 8; ŠR  
 T *M. coronata* (L.) Bartal. – 7, 9, 10; CM  
 T *M. disciformis* DC. – 7, 8, 9, 10; CM  
 T *M. hispida* Gaertn. (= *M. polymorpha* L.) – 7; JEUM  
 T *M. litoralis* Loisel. – 3, 4, 9, 10, 12, 17; CM  
 T *M. lupulina* L. – 3, 5, 7, 8, 10, 11, 15; ŠR  
 T *M. minima* (L.) Bartal. – 1, 2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 13, 15, 28; ŠR  
 T *M. orbicularis* (L.) Bartal. – 2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 13, 15; CM  
 H *M. sativa* L. subsp. *falcata* (L.) Arcang. – 5, 7; EAF  
 H *M. sativa* L. subsp. *sativa* – 6, 7; ŠR

- T *M. scutellata* (L.) Mill. – 4; JEUM  
 T *M. truncatula* Gaertn. (= *M. tribuloides* Desr.) – 7, 8; CM  
 T *Melilotus indica* (L.) All. (= *M. parviflora* Desf.) – 15, 17; CM  
 T *Onobrychis caput-galli* Lam. – 2, 5, 7, 8, 9, 10; CM  
 H *Ononis pusilla* L. – 3, 4, 5, 6, 7, 8, 9, 10; JEUM  
 T *O. reclinata* L. – 1, 2, 3, 4, 5, 7, 8, 9, 10, 11, 15, 28; CM  
 T *Pisum sativum* L. subsp. *elatius* (Bieb.) Asch. et Graebn. – 4, 6, 9; JEUM  
 H *Psoralea bituminosa* L. – 1, 2, 3, 4, 5, 6, 7, 8, 11; CM  
 T *Scorpiurus muricatus* L. – 2, 3, 4, 5, 7, 8, 9, 10, 11, 13, 15; CM  
 T *Securigera securidaca* (L.) Degen et Dörfl. – 1, 3; CM  
 P *Spartium junceum* L. – 6; CM  
 T *Trifolium angustifolium* L. – 1, 2, 3, 4, 6, 7, 8, 9, 10, 11; CM  
 T *T. arvense* L. – 7, 8, 9; EAF  
 T *T. campestre* Schreber in Sturm – 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 15; ŠR  
 T *T. cherleri* L. – 7, 10; JEUM  
 T *T. lappaceum* L. – 2, 3, 4, 6, 7, 8, 9, 10; CM  
 T *T. nigrescens* Viv. – 5, 6, 7; CM  
 T *T. scabrum* L. – 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 14, 15, 17, 18; CM  
 T *T. stellatum* L. – 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11; CM  
 T *T. subterraneum* L. – 7; MA  
 T *T. suffocatum* L. – 8; CM  
 T *T. tomentosum* L. – 5, 8; CM  
 T *Trigonella corniculata* (L.) L. – 3, 4, 6, 7, 8, 10; EUM  
 T *T. monspeliaca* L. – 1, 3, 4, 5, 7, 8, 9, 10, 11; MP  
 T *Vicia hirsuta* (L.) Gray – 3, 5, 7, 8, 9, 10, 15; ŠR  
 T *V. hybrida* L. – 1, 2, 3, 4, 6, 7, 8; CM  
 T *V. narbonensis* L. – 7; CM  
 T *V. sativa* L. subsp. *angustifolia* (L.) Gaudin (= *V. angustifolia* L.) – 9, 10, 15; EF  
 T *V. sativa* L. subsp. *sativa* – 1, 2, 3, 4, 5, 6, 7, 8, 9; ŠR  
 T *V. tenuissima* (Bieb.) Schinz. et Thell. (= *V. gracilis* Loisel) – 1, 2, 3, 4, 5, 7, 8, 9, 15; JEUM  
 T *V. villosa* Roth L. subsp. *varia* (Host) Corb. – 1, 4, 6, 7, 8, 9; EAF

## FAGACEAE

- P *Quercus ilex* L. – 1, 2, 3, 5, 7, 8, 9, 10, 11; CM

## FUMARIACEAE

- H *Corydalis acaulis* (Wulfen) Pers. (= *Pseudofumaria alba* (Mill.) Liden subsp. *acaulis* (Wulfen) Liden) – 1, 5, 9, 10, 11, 15, 28; (VISIANI 1852: 97 calls it *Corydalis ochroleuca* Koch; island of Žirje) – ILJAE  
 T *Fumaria flabellata* Gaspar. – 4, 6, 8, 9, 14, 15, 17; CM  
 T *F. officinalis* L. – 6, 7, 8, 10, 15; ŠR  
 T *F. parviflora* Lam. – 2, 4, 6, 7; ŠR

## GENTIANACEA

- T *Blackstonia perfoliata* (L.) Huds. – 1, 2, 3, 4, 7, 8, 9, 10, 11, 15; MA  
 H *Centaureum erithraea* Rafn – 1, 4, 7, 8, 9, 11, 15; ŠR  
 T *C. spicatum* (L.) Fritsch – 10, 15; CM

## GERANIACEAE

- T *Erodium ciconium* (L.) L' Hér. in Aiton – 1; MP  
 T *E. cicutarium* (L.) L' Hér. in Aiton – 2, 5, 6, 7, 8, 10, 11, 15; ŠR  
 T *E. malacoides* (L.) L. Hér. in Aiton – 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15; CM  
 T *Geranium columbinum* L. – 2, 7, 8, 9, 10, 15; EAF  
 T *G. dissectum* L. – 7, 8, 10; ŠR  
 T *G. molle* L. – 2, 3, 4, 8, 9, 10; ŠR  
 T *G. purpureum* Vill. – 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 15, 17, 19, 28; JEUM  
 T *G. rotundifolium* L. – 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 15, 25; EAF

## HALORAGACEAE

- Hy *Myriophyllum spicatum* L. – 7; EAF

## HYPERICACEAE

- H *Hypericum perforatum* L. subsp. *veronense* (Schrank) Frohlich (= *H. veronense* Schrank) – 1, 3, 4, 6, 7, 8, 9, 10, 11, 12, 15; JEUM

## LAMIACEAE

- T *Acinos arvensis* (Lam.) Dandy (= *Calamintha acinos* (L.) Clairv.) – 1, 2, 3, 7, 8, 9, 10, 11, 15 – EF  
 T *Ajuga chamaepytis* (L.) Schreb. – 2, 3, 6, 7, 8, 9, 10, 15; CM  
 Ch *A. iva* (L.) Schreb. – 2; CM  
 H *Ballota nigra* L. subsp. *uncinata* (Fiori et Beguinot) Patzak – 6, 7; CM  
 H *Calamintha nepeta* (L.) Savi – 1, 2, 3, 4, 6, 7, 8, 9, 11, 15; JEUP  
 T *Lamium amplexicaule* L. – 7; EAF  
 H *Marrubium incanum* Desr. – 1, 2, 3, 4, 5, 6, 8, 9, 11; ILAP  
 H *M. vulgare* L. – 4; ŠR  
 Ch *Micromeria juliana* (L.) Rchb. – 1, 2, 3, 4, 5, 6, 7, 8, 9, 11; CM  
 H *Origanum heracleoticum* L. – 7; IM  
 Ch *Prasium majus* L. – 1, 2, 3, 5, 8, 9, 10, 11, 12, 13, 14, 15, 17, 18, 28; CM  
 P *Rosmarinus officinalis* L. – 3, 4, 7, 8, 9, 10, 11, 15; CM  
 Ch *Salvia officinalis* L. – 1, 2, 3, 4, 5, 7, 8, 9, 10, 11, 15; ILJAE  
 H *S. sclarea* L. – 6, 8; JEUM  
 H *S. verbenaca* L. – 2, 3, 5, 6, 7, 8, 10; MA  
 T *S. viridis* L. (= *S. horminum* L.) – 7, 8; JEUM  
 Ch *Satureja montana* L. subsp. *variegata* (Host) P. W. Ball – 1, 2, 3, 4, 5, 6, 7, 8, 9; MP  
 T *Sideritis romana* L. – 1, 2, 3, 4, 5, 7, 8, 9, 10, 11, 13, 28; CM  
 T *Stachys annua* (L.) L. – 1, 6; EF  
 H *S. salviifolia* Ten. (= *S. cretica* L. subsp. *salviifolia* (Ten.) Rchb. fil.) – 2, 3, 4, 5, 6, 7, 8, 9, 10, 11; ILAP

Ch *Teucrium chamaedrys* L. – 1, 3, 4, 5, 8, 9, 10, 11, 15, 28; JEUP

Ch *T. montanum* L. – 1, 3, 4, 5, 8, 9, 10, 11, 15, 17, 28; JEUM

Ch *T. polium* L. – 1, 2, 3, 4, 5, 7, 8, 9, 10, 11, 13, 15; CM

#### LINACEAE

T *Linum strictum* L. subsp. *corymbulosum* (Rchb.) Riony (= *L. liburnicum* Scop.) – 1, 3, 8, 9, 15, 28; MP

T *L. strictum* L. subsp. *strictum* – 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 15, 28; CM

#### MALVACEAE

H *Althaea cannabina* L. – 2; JEUP

T *A. hirsuta* L. – 15; JEUM

T *Hibiscus trionum* L. – 7; JEUP

H *Lavatera arborea* L. – 3, 4, 6, 8, 10, 14, 19, 20, 21, 22, 23, 26, 27, 28; EUM

T *Malva neglecta* Wallr. – 6, 7; ŠR

T *M. nicaeensis* All. – 1, 2, 5, 6; CM

H *M. sylvestris* L. – 6, 8, 9, 19; ŠR

#### MORACEAE

P *Ficus carica* L. – 1, 2, 3, 4, 5, 6, 7, 8, 11, 13, 14, 15, 17, 19, 25, 26, 28; CM

#### MYRTACEAE

P *Myrtus communis* L. – 3, 4, 5, 10, 11, 15; CM

#### OLEACEAE

P *Fraxinus ornus* L. – 1, 6, 9; JEUM

P *Olea europaea* L. var. *europaea* – 1, 2, 3, 4, 5, 6, 7, 8, 9, 11, 12, 15; CM

P *O. europaea* L. var. *sylvestris* Brot. – 9, 11, 13, 14, 17, 25; CM

P *Phillyrea latifolia* L. (= incl. *Ph. media* L.) – 1, 3, 5, 7, 8, 9, 10, 11, 15; CM

#### OROBANCHACEAE

T *Orobanche minor* Sm. – 1, 2, 3, 4, 7, 8, 10, 11, 12, 13, 15, 17, 25; JEUM

#### OXALIDACEAE

H *Oxalis corniculata* L. – 8; ŠR

#### PAPAVERACEAE

H *Glaucium flavum* Crantz – 4; MA

T *Papaver rhoeas* L. – 4, 6, 7, 8, 10; ŠR

#### PHYTOLACCACEAE

G *Phytolacca americana* L. – 6; N

#### PLANTAGINACEAE

T \* *Plantago afra* L. (= *P. psyllium* L.) – 1, 2, 3, 5, 7, 8, 9, 11; CM

H *P. altissima* L. – 2, 4, 5; JEUM

T *P. coronopus* L. subsp. *commutata* (Guss.) Pilger – 8; MP

- H *P. holosteam* Scop. var. *scopulorum* (Degen) Pilger – 4, 8, 9, 10, 12, 17, 18; ILJAE  
 H *P. lanceolata* L. – 3, 5, 7, 8, 11, 14; ŠR

## PLUMBAGINACEAE

- H *Limonium cancellatum* (Bernh. ex Bertol.) O. Kuntze – 1, 3, 4, 8, 10, 11, 12, 15, 16, 17, 18, 19, 23, 25, 27, 28; ILJAE  
 H *L. serotinum* (Rchb.) Pignatti (= *L. vulgare* Mill. subsp. *serotinum* (Rchb.) Gams) – 10, 17; CM  
 Ch *Plumbago europaea* L. – 2,3, 4, 5, 6, 7, 8, 12, 13, 14, 18, 19, 26, 28; CM

## POLYGONACEAE

- T *Fallopia convolvulus* (L.) A. Löve (= *Bilderdykia convolvulus* (L.) Dumort.) – 2, 4, 7, 8; ŠR  
 T *Polygonum aviculare* L. – 4, 6, 7, 8, 9; ŠR  
 H *Rumex acetosella* L. – 7; ŠR  
 H *R. pulcher* L. – 7; JEUM

## PORTULACACEAE

- T *Portulaca oleracea* L. – 4, 6, 7, 8, 9, 25; ŠR

## PRIMULACEAE

- T *Anagallis arvensis* L. – 1, 2, 3, 4, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 17, 18, 23, 25; ŠR  
 T *A. foemina* Mill. (= *A. coerulea* Schreb.) – 1, 2, 3, 4, 5, 6, 7, 8, 10, 15, 17; ŠR  
 T *Asterolinon linum-stellatum* (L.) Duby in DC. – 1, 2, 7, 8, 9, 10; CM  
 G *Cyclamen repandum* Sibth. et Sm. – 7, 8, 9, 10, 11, 13, 15; EUM

## RANUNCULACEAE

- G *Anemone hortensis* L. – 7; CM  
 P *Clematis flammula* L. – 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 15; CM  
 T *Delphinium peregrinum* L. – 4, 6, 7, 9; JEUM  
 T *D. staphysagria* L. – 6, 8; CM  
 T *Nigella damascena* L. – 2, 3, 4, 6, 7, 8, 9; CM  
 T *Ranunculus muricatus* L. – 7; CM

## RESEDACEAE

- T *Reseda phyteuma* L. – 1, 2, 3, 4, 5, 7, 8, 9, 10, 17; JEUM

## RHAMNACEAE

- P *Frangula rupestris* (Scop.) Schur. – 4, 6; ILJAE  
 P *Paliurus spina-christi* Mill. – 1, 3; ILJEU  
 P *Rhamnus alaternus* L. – 2, 3, 4, 5, 6, 7, 8, 9, 28; CM  
 P \* *R. intermedius* Steud. et Hochst. – 28; ILJAE

## ROSACEAE

- H *Agrimonia eupatoria* L. – 6, 7; CIRCUMH  
 T *Aphanes arvensis* L. – 3, 7, 8; ŠR

- H *Potentilla recta* L. – 7, 8; EAF  
 H *P. reptans* L. – 7; ŠR  
 P *Prunus mahaleb* L. – 1, 3, 4, 5, 6, 7, 8, 9, 28; JEUP  
 P *Rosa canina* L. – 2, 7; ŠR  
 P *Rubus ulmifolius* Schott (= *R. ulmifolius* Schott subsp. *dalmatinus* (Tratt.) Focke) – 1, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 15, 28; ILAP  
 H *Sanguisorba minor* Scop. subsp. *muricata* Briq. (= *S. muricata* (Spach) Greml.) – 2, 3, 4, 5, 7, 8, 10; JEUM  
 P *Sorbus domestica* L. – 8; CM

#### RUBIACEAE

- H *Asperula aristata* L. subsp. *scabra* (J. Presl et C. Presl) Nyman (= *A. longiflora* Wadst. et Kit) – 1, 3, 4, 7, 8, 9, 11; JEUM  
 T *Crucianella latifolia* L. – 1, 3, 5, 7, 8, 9, 10, 11; CM  
 T *Galium aparine* L. – 2, 3, 4, 5, 6, 7, 8, 9, 10, 15; ŠR  
 H *G. corrudifolium* Vill. – 1, 3, 4, 5, 7, 8, 9, 10, 11, 12, 13, 14, 15, 17, 18, 25, 28; JEUM  
 T *G. murale* (L.) All. – 1, 7, 9, 10, 11; CM  
 P *Rubia peregrina* L. – 1, 2, 3, 5, 6, 7, 8, 9, 10, 11, 12, 13, 15; CM  
 T *Sherardia arvensis* L. – 1, 2, 3, 5, 6, 7, 8, 9, 10, 11, 15; ŠR  
 T *Valantia muralis* L. – 1, 2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 13, 15, 17, 18; CM

#### RUTACEAE

- Ch *Ruta graveolens* L. (= *R. divaricata* Ten.) – 4, 6, 8, 10; ILAP

#### SANTALACEAE

- P *Osyris alba* L. – 28; CM

#### SAXIFRAGACEAE

- T *Saxifraga tridactylites* L. – 1, 5, 7, 8; ŠR

#### SCROPHULARIACEAE

- T *Chaenorrhinum minus* (L.) Lange subsp. *litorale* (Bernh. ex Willd.) Rouy – 1, 4, 8, 15, 25, 27, 28; ILAP  
 H *Cymbalaria muralis* P. Gaertn., B. Mey. et Scherb. – 8; JEUM  
 H *Kickxia commutata* (Bernh. ex Rchb.) Fritsch – 6, 7, 8; EUM  
 T *K. spuria* (L.) Dumort. – 8, 9; EAF  
 T *Linaria pelisseriana* (L.) Mill. – 7; MA  
 T *L. simplex* (Willd.) DC. – 1, 2, 3, 4, 5, 6, 8, 10; CM  
 T *Misopates orontium* (L.) Raf. – 4, 6, 7, 8; EAF  
 T *Odontites lutea* (L.) Clairv. – 4, 6, 8; JEUM  
 H *Scrophularia canina* L. – 1, 2, 3, 4, 5, 6, 8, 9, 11; JEUM  
 T *S. peregrina* L. – 10; CM  
 H *Verbascum densiflorum* Bertol. (= *V. thapsiforme* Schrad.) – 3, 4, 5, 6, 7, 8, 9, 11; EF  
 H *V. sinuatum* L. – 4, 6; CM  
 T *Veronica arvensis* L. – 1, 3, 4, 6, 7, 8, 9, 10, 11, 15; EAF  
 T *V. cymbalaria* Bodard – 2, 3, 4, 5, 6, 7, 9; JEUM



## SIMAROUBACEAE

P *Ailanthus altissima* (Mill.) Swingle – 2, 4, 6, 8; N

## SOLANACEAE

T *Datura inoxia* Mill. – 3, 4 (PANDŽA and STANČIĆ 1999); N

T *Hyoscyamus albus* L. – 3, 4, 15; CM

T *Solanum luteum* Mill. subsp. *alatum* (Moench) Dostal (= *S. alatum* Moench) – 4, 8, 9; EAF

T *S. nigrum* L. – 3, 7, 10, 19, 26; ŠR

## THELIGONACEAE

T *Theligonum cynocrambe* L. – 2, 4, 5, 6, 7, 8, 15; JEUM

## ULMACEAE

P *Celtis australis* L. – 1, 5, 6, 7, 8, 9; JEUM

## URTICACEAE

H \* *Parietaria judaica* L. – 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 17, 19, 20, 21, 23, 25, 26, 28; JEUM

T *Urtica pilulifera* L. – 10; JEUM

T *U. urens* L. – 7, 10; ŠR

## VALERIANACEAE

T *Valerianella muricata* (Stiren. ex M. Bieb.) J. W. Loudon – 10; IM

T *V. pumila* (L.) DC. – 4, 7, 8, 10; CM

## VERBENACEAE

H *Verbena officinalis* L. – 6, 7; ŠR

P *Vitex agnus-castus* L. – 2, 3, 4, 8, 10; CM

## VIOLACEAE

T *Viola arvensis* Murray – 5, 8; ŠR

## ZYGOPHYLLACEAE

T *Tribulus terrestris* L. – 4, 6, 7, 8, 10; JEUM

## MAGNOLIOPHYTA – LILIATAE

## ARACEAE

G *Arum italicum* Mill. – 4, 5, 6, 7, 8, 9, 15; MA

## ASPARAGACEAE

G *Asparagus acutifolius* L. – 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 17, 18, 19, 21, 25, 26, 27, 28; CM

## CYPERACEAE

G *Carex divisa* Huds. – 1, 2, 3, 7, 8, 9, 10, 15, 17; MA

H *C. divulsa* Stokes – 6, 7, 8; ŠR

G *C. flacca* Schreb. – 9, 15, 18; ŠR

#### DIOSCOREACEAE

G *Tamus communis* L. – 1, 2, 7, 8, 9, 12, 14, 15, 19; JEUM

#### IRIDACEAE

G *Gladiolus illyricus* W. D. J. Koch – 6, 7, 8, 10, 11; JEUM

G *Iris illyrica* Tomm. – 28; ILJAE

#### JUNCACEAE

H *Juncus acutus* L. – 17; MA

#### LILIACEAE

G *Allium commutatum* Guss. – 1, 2, 3, 4, 8, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 25, 26, 27, 28; CM

G *A. flavum* L. – 4, 6, 7, 8, 9, 18; CM

G \* *A. guttatum* Steven subsp. *dalmaticum* (A. Kern. ex Janch.) Stearn – 7; IBE

G *A. roseum* L. – 4, 6, 7; CM

G *A. sphaerocephalon* L. – 4, 6, 7, 8, 28; JEUM

G *A. subhirsutum* L. – 1, 5, 8, 9, 11, 13, 15, 28; CM

H *Asphodelus fistulosus* L. – 1, 3, 4, 5, 6, 7, 8; CM

G *A. microcarpus* Viv. (= *A. aestivus* Brot.) – 14, 25, 28; CM

G *Leopoldia comosa* (L.) Parl. (= *Muscari comosum* (L.) Mill.) – 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 13, 14, 15; JEUM

G *Muscari atlanticum* Boiss et Reuter (= *M. neglectum* Guss. ex Ten.; *M. racemosum* (L.) Lam. et DC.) – 1, 2, 3, 4, 7, 8, 9, 10, 17, 18, 25, 28; CM

G *M. botryoides* (L.) Mill. – 9, 15; JEUM

G *Ornithogalum gussonei* Ten. – 1, 2, 3, 7, 11; CM

G *O. pyramidale* L. – 11; JEUM

G *Scilla autumnalis* L. – 1; MP

#### ORCHIDACEAE

G *Limodorum abortivum* (L.) Sw. – 3, 8, 9; JEUM

G *Ophrys apifera* Huds. – 2, 3; JEUM

G *O. lutea* (Gouan) Cav. – 2, 5; CM

G *O. scolopax* Cav. subsp. *cornuta* (Stev.) Cam. – 1, 2, 3, 5, 7, 8; MP

G \* *Orchis tridentata* Scop. subsp. *commutata* (Tod.) Nyman – 6, 7, 8, 9, 10; IEPE

G *Serapias parviflora* Parl. – 2; CM

#### POACEAE

T *Aegilops geniculata* Roth – 1, 2, 3, 4, 6, 7, 8, 9, 10, 11; CM

T *Ae. triuncialis* L. – 7, 8, 10; CM

G *Agropyron pungens* (Pers.) R. et S. (= *A. littorale* (Host) Dumort.; *Elymus pycnanthus* (Gordon) Melderis) – 1, 2, 3, 4, 8, 10, 12, 14, 15, 17, 18, 19, 25, 26, 28; CM

G *Agropyron repens* (L.) P. Beauv. (= *Elymus repens* (L.) Gould) – 7; ŠR

H *Anthoxanthum odoratum* L. – 7; EAF

- G *Arundo donax* L. – 6; CM  
 T *Avena barbata* Pott ex Link – 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 14, 19, 28; ŠR  
 T *A. sterilis* L. – 7, 9; JEUP  
 H *Bothriochloa ischaemon* (L.) Keng (= *Andropogon ischaemon* L.; *Dichanthium ischaemum* (L.) Roberty) – 4, 6, 7; JEUM  
 T *Brachypodium distachyum* (L.) P. Beauv. – 2, 3, 5, 7, 8, 9, 10, 11, 15; CM  
 H *B. ramosum* (L.) Roem. et Schult. (= *B. retusum* (Pers.) P. Beauv. – 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 17, 25, 28; CM  
 T *Briza maxima* L. – 4, 6, 7; CM  
 H *Bromus condensatus* Hackel (= *B. erectus* Huds. subsp. *condensatus* (Hack.) Asch. et Graebn.) – 1, 3, 4, 5, 7, 9, 10, 11, 12, 13, 14, 15, 17, 18, 28; JEUM  
 T *B. madritensis* L. – 1, 3, 8, 9, 10, 11, 15, 19; MA  
 T *B. molliformis* Lloyd (= *B. hordeaceus* L. subsp. *molliformis* (Lloyd) Maire et Weiller) – 2, 3, 5, 7, 8, 9, 15; JEUM  
 T *B. rigidus* Roth – 2, 3, 4, 6, 7, 8; JUEA  
 T *B. sterilis* L. – 3, 5, 7, 8, 9, 11, 13, 15; ŠR  
 T *Catapodium marinum* (L.) C. E. Hubb. – 1, 2, 3, 4, 8, 10, 12, 14, 15, 17, 25, 27, 28; MA  
 T *C. rigidum* (L.) C. E. Hubb. (= *Scleropoa rigida* Griseb.; *Desmazeria rigida* (L.) Tutin) – 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 13, 15, 17; MA  
 G *Cynodon dactylon* (L.) Pers. – 4, 6, 7, 11, 17, 18, 27; ŠR  
 T *Cynosurus echinatus* L. – 6, 7, 8, 9; JEUM  
 H *Dactylis hispanica* Roth – 1, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 17, 18, 25, 28; CM  
 T *Digitaria sanguinalis* (L.) Scop. – 4, 6, 7, 9; ŠR  
 T *Eragrostis megastachya* (Koeler) Link (= *E. cilianensis* (All.) Hubb.) – 4, 6; ŠR  
 T *Gastridium ventricosum* (Gouan) Schinz et Thell. – 4, 5, 7, 9, 10, 15; MA  
 H *Helictotrichon convolutum* (C. Presl) Henrard (= *Avena convoluta* C. Presl.) – 3, 7; ZM  
 T *Hordeum leporinum* Link – 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 15, 19, 28; CM  
 H *Koeleria splendens* C. Presl – 4, 6, 7, 8, 9, 10, 17; JEUM  
 T *Lagurus ovatus* L. – 2, 3, 4, 6, 8, 9, 10, 28; CM  
 H *Lolium perenne* L. – 1, 3, 4, 6, 7, 8, 9, 10, 15, 17; EF  
 T *Lophochloa cristata* (L.) Hyl. (= *Koeleria phleoides* Pers.) – 1, 2, 3, 4, 5, 7, 8, 9, 10, 11; ŠR  
 H *Melica ciliata* L. – 4, 6, 7, 8, 9, 28; EAF  
 H *Oryzopsis miliacea* (L.) Asch. et Schweinf. (= *Piptatherum miliaceum* (L.) Cosson) – 3, 4, 6, 7, 8; JEUM  
 T *Parapholis incurva* (L.) C. E. Hubb. – 2, 3, 8, 10, 17; MA  
 T *Phleum subulatum* (Savi) Arch. et Graebn. – 3, 4, 6, 7, 8; CM  
 G *Phragmites australis* (Cav.) Trin. ex Steud. – 7; ŠR  
 T *Poa annua* L. – 4, 6, 7, 10, 11; ŠR  
 H *P. bulbosa* L. – 2, 3, 7, 8, 9, 10, 11; EAF  
 H *P. bulbosa* L. f. *vivipara* – 2, 3, 5, 6, 7, 8; EAF  
 H *P. sylvicola* Guss. (= *P. trivialis* L. subsp. *sylvicola* (Guss.) H. Lindb.) – 15; EUM  
 T *Psilurus incurvus* (Gouan) Schinz et Thell. – 2, 3, 7, 8, 10; CM  
 H *Sesleria autumnalis* (Scop.) F. W. Schultz – 4, 6, 7; ILJEU  
 T *Setaria verticillata* (L.) P. Beauv. – 4, 6, 7; ŠR  
 T *S. viridis* (L.) P. Beauv. – 4, 6, 7; EAF

- H *Stipa bromoides* (L.) Dörf. – 4, 7; CM  
 T *Tragus racemosus* (L.) All. – 4, 6; JEUM  
 T *Vulpia ciliata* (Danth.) Link – 1, 3, 4, 5, 6, 7, 8, 9, 11, 15; JEUM

POTAMOGETONACEAE

- Hy *Cymodocea nodosa* (Ucria) Asch. – 10; MA  
 Hy *Posidonia oceanica* (L.) Delile – CM – spread in the sea around islands

RUSCACEAE

- G *Ruscus aculeatus* L. – 3, 5, 7, 9, 12, 14, 15, 17, 28; MP

SMILACACEAE

- P *Smilax aspera* L. – 1, 2, 3, 4, 5, 6, 8, 9, 10, 11, 12, 13, 14, 15, 17, 18, 19, 21, 25, 26, 28; CM

**Cultivated plants (74 species):**

*Agave americana* L. – 2, 3, 4, 8, 9, 15; *Albizia julibrissin* (Willd.) Durazzo – 6, 8; *Allium cepa* L. – 2, 3, 6, 7, 8; *Anethum graveolens* L. – 8; *Antirrhinum majus* L. – 4, 8; *Apium graveolens* L. – 8; *Beta vulgaris* L. subsp. *vulgaris* – 2, 3, 4, 6, 8; *Fallopia aubertii* (L. Henry) Holub (= *Bilderdykia aub.* Moldenke) – 4, 6, 7; *Bougainvillea spectabilis* Willd. – 4; *Brassica oleracea* L. – 6, 7; *Buxus sempervirens* L. – 8; *Calendula officinalis* L. – 4, 8; *Canna indica* L. – 6; *Carpobrotus edulis* (L.) N. E. Br. in Phillips – 3, 8; *Centranthus ruber* (L.) DC. – 4, 8; *Cupressus sempervirens* L. – 6, 7, 8, 11; *Chrysanthemum coronarium* L. – 6, 8; *Cydonia oblonga* Mill. – 6; *Cynara scolymus* (L.) Hayek – 2, 4, 8; *Eryobotria japonica* (Thunb.) Lindl. – 2, 6, 8; *Erysimum cheiri* (L.) Crantz (= *Cheiranthus cheiri* L.) – 3, 4, 6, 8, 9; *Euonymus japonicus* L. fil. – 4, 6, 8; *Helianthus annuus* L. – 7; *H. tuberosus* L. – 4, 6, 8; *Iris germanica* L. – 6, 8, 9; *Juglans regia* L. – 4, 6, 8; *Lactuca sativa* L. – 2, 4; *Lavandula angustifolia* Mill. – 2, 4, 6, 7, 9; *Laurus nobilis* L. – 3, 9; *Ligustrum japonicum* Willd. – 8; *Lilium candidum* L. – 8, 9; *Lycopersicon esculentum* Mill. – 4; *Matthiola incana* (L.) R. Br. in Aiton – 3, 4, 6, 8, 9, 23; *Melissa officinalis* L. – 8; *Mirabilis jalapa* L. – 4, 6, 8, 9, 10; *Nerium oleander* L. – 3, 4, 6, 8, 9; *Ocimum basilicum* L. – 4; *Opuntia compressa* (Salisb.) McBride (= *O. vulgaris* Mill.) – 4, 8, 9; *Oxalis deppei* Loddiges ex Sweet – 4, 8; *Papaver somniferum* L. – 2; *Parthenocissus quinquefolia* (L.) Planchon in A. et C. DC. – 3, 8; *Passiflora coerulea* L. – 2; *Petroselinum sativum* Hoffm. – 8, 23; *Phaseolus vulgaris* L. – 2, 7; *Philadelphus coronarius* L. – 6; *Picea excelsa* (Lam.) Link (= *P. abies* (L.) Karsten) – 3, 8; *Pisum sativum* L. – 2, 6; *Pittosporum tobira* (Thunb.) Aiton fil. – 3, 8; *Poinciana gillesii* Hook. – 3, 4, 8; *Populus nigra* L. – 8; *Prunus domestica* L. – 6, 7; *P. dulcis* (Mill.) D. A. Webb. – 4, 5, 6, 7, 9; *P. persica* (L.) Batsch – 6, 7; *Punica granatum* L. – 2, 3, 8; *Raphanus sativus* L. – 3, 4, 6, 7, 8, 10; *Robinia pseudoacacia* L. – 3, 4, 6, 8; *Santolina marchii* Arrigoni (= *S. chamaecyparissus* L.) – 4; *Saponaria officinalis* L. – 8; *Sedum maximum* (L.) Suter – 4, 8, 9; *Sempervivum tectorum* L. – 4; *Senecio cineraria* DC. – 2, 3, 4, 6; *Solanum tuberosum* L. – 6, 7, 8; *Sophora japonica* L. – 6, 8, 11; *Syringa vulgaris* L. – 2, 4, 6; *Tagetes patula* L. – 4, 6; *Tamarix dalmatica* Baum – 8, 23; *Tecoma radicans* (L.) Juss. – 3, 8; *Teucrium fruticans* L. – 4; *Thuja orientalis* L. – 8; *Vicia faba* L. – 2, 4, 6, 7, 8; *Vinca major* L. – 4, 6, 8; *Vitis vinifera* L. – 2, 4, 5, 6, 7, 8; *Wisteria sinensis* (Sims) Sw. – 3; *Yucca gloriosa* L. – 3, 9.

## Analysis of the flora

### 1. Taxonomic analysis

The taxonomic analysis included the 469 taxa presented in Table 1, and the number of species by small islands and the MTB coordinates are given in Table 2.

**Tab. 1.** Taxonomic analysis

	Family	Genus	Species	Subspecies	Variety et Form
<b>Polypodiophyta</b>	2	3	4		
<b>Pinophyta</b>	3	3	5		
<b>Magnoliophyta:</b>					
- Magnoliatae	60	235	348	28	4
- Liliatae	12	55	76	3	1
	<b>77</b>	<b>296</b>	<b>433</b>	<b>31</b>	<b>5</b>

**Tab. 2.** Number of species found on investigated islands

Islands and MTB coordinates	Number of species	Islands and MTB coordinates	Number of species
Žirje – 2359/2; 2360/1; 2360/3	451	Kosmerka – 2359/4	24
Mažirina – 2360/3	131	Sedlo – 2359/1	17
Samograd – 2359/1	71	Vrtlić – 2359/1	15
Škrvada – 2360/3	67	Blitvenica – 2359/3	12
Koromašna – 2360/1	65	Vrtlac – 2359/4	11
Gušteranski – 2360/3	63	Bakul – 2360/3	8
Hrbošnjak – 2360/3	44	Proklandica – 2359/4	5
Raparašnjak – 2359/2	38	Babuljak – 2359/4	4
Mikavica – 2359/2	35	Nozdra – 2359/2	3

### 2. Ecological analysis

The analysis of life forms is shown in table 3.

**Tab. 3.** Life forms

Life forms	Number of taxa	%
T	234	49.89
H	119	25.37
G	39	8.32
Ch	37	7.89
P	37	7.89
Hy	3	0.64
Total	469	100.00

## Phytogeographical analysis

- 1. MEDITERRANEAN FLORAL ELEMENT – (241 species – 51.39%)**
  - A. Circum-Mediterranean plants – (156 species, 33.26%) – CM
  - B. West Mediterranean plants – (2 species, 0.43%) – ZM
  - C. East Mediterranean plants – (11 species, 2.34%) – IM
  - D. Illyrian – Mediterranean plants
    - a) Illyrian South European plants – (7 species, 1.50%) – ILJEU
    - b) Illyrian Adriatic plants:
      1. Illyrian Adriatic endemic plants – (18 species, 3.84%) – ILJAE
      2. Illyrian Apennine plants – (6 species, 1.28%) – ILAP
  - E. Mediterranean Atlantic plants – (24 species, 5.11%) – MA
  - F. European Mediterranean plants – (7 species, 1.50%) – EUM
  - G. Mediterranean Pontic plants – (10 species, 2.13%) – MP
- 2. ILLYRIAN-BALCANIC FLORAL ELEMENT – (2 species – 0.43%) – IBE**
  - A. Illyrian-Balcanic endemic plants – (0.43%) – IBE
- 3. SOUTH EUROPEAN FLORAL ELEMENT – (92 species – 19.61%)**
  - A. South European Mediterranean plants – (77 species, 16.41%) – JEUM
  - B. South European Pontic plants – (13 species, 2.77%) – JEUP
  - C. South European Atlantic plants – (2 species, 0.43%) – JUEA
- 4. EAST EUROPEAN-PONTIC FLORAL ELEMENT – (1 species – 0.21%) – IEPE**
- 5. EUROPEAN FLORAL ELEMENT – (7 species – 1.50%) – EF**
- 6. CENTRAL EUROPEAN FLORAL ELEMENT (2 species – 0.43%) – CEF**
- 7. EURO-ASIATIC FLORAL ELEMENT – (29 species – 6.18%) – EAF**
- 8. CIRCUM-HOLARCTIC SPREAD PLANTS – (2 species – 0.43%) – CIRCUMH**
- 9. WIDESPREAD PLANTS – (80 species – 17.05%) – ŠR**
- 10. NATURALIZED PLANTS – (13 species – 2.77%) – N**

## Discussion

In the flora of the island of Žirje four species were already known (VISIANI 1852, PANDŽA and STANČIĆ 1999). During this research the species *Alyssum montanum* has not been confirmed, while the species *Corydalis ochroleuca* refers to *Corydalis acaulis* (TRINAJSTIĆ 1983).

The flora on the islands, except on Žirje, is not known from the literature. The small islands are influenced by the strong southern winds. These small islands contain a halophyllous vegetation and some a nitrophyllous one (in spring they serve as habitats for nesting of seagull colonies). The islands of Gušteranski and Samograd are rich with endemic

species such as *Campanula pyramidalis* L., *Euphorbia fragifera* Jan, *Corydalis acaulis* (on Samograd), *Iris illyrica* Tomm.

By the analysis of life forms it has been determined that the largest is the participation of therophytes (234 species, 49.89%) and hemicryptophytes (119 species, 25.37%). The large participation of therophytes in the flora indicates that the island of Žirje has a dry climate, for which no recent data are available, and that the flora of this area belongs to the Mediterranean climate, i. e. »the olive climate« (ŠEGOTA 1963). The neighbouring and some central and southern Adriatic islands have a similar amount of therophytes – Kaprije (132 species – 47.48%; FRANJIĆ and PANDŽA 1996), Zlarin (160 species – 46.65%, PANDŽA 1998), Krpanj and Prvić (175 species – 48.34%, PANDŽA 1998), Biševo (200 species – 51.40%, ZI. PAVLETIĆ 1975), Svetac (170 species – 49.4%, ZI. PAVLETIĆ 1979), Mljet (275 species – 45.53%, REGULA-BEVILACQUA and ILJANIĆ 1984) and Koločep (206 species – 46.40%, S. HEĆIMOVIĆ 1987).

The phytogeographical analysis has shown that most plants of the total number of species registered on these islands belong to the Mediterranean floral element (241 species, 51.39%), indicating that the island of Žirje too belongs to the Mediterranean region. In the Mediterranean floral element the most numerous are circum-Mediterranean plants (156 species, 33.26%). From the phytogeographical analysis of circum-Mediterranean plants it can be seen that most of them are characteristic of the alliance *Quercion ilicis*, while some of them (*Juniperus oxycedrus* L. subsp. *macrocarpa*, *Juniperus phoenicea*, *Ephedra foemina*, *Myrtus communis*, *Pistacia lentiscus*, *Pinus halepensis*) are characteristic of the alliance *Oleo-Ceratonion*. The analysis of the neighbouring islands – Kaprije (FRANJIĆ and PANDŽA 1996), Zlarin (PANDŽA 1998), Krpanj and Prvić (PANDŽA 1998) and of the central and southern Adriatic islands – Biševo (ZI. PAVLETIĆ 1975), Svetac (ZI. PAVLETIĆ 1979), Lokrum, Bobara and Mrkan (HEĆIMOVIĆ S. 1982), Lopud and Koločep (HEĆIMOVIĆ, M. and HEĆIMOVIĆ, S., 1986, 1987), Mljet (REGULA-BEVILACQUA and ILJANIĆ 1984) show that, like the island of Žirje, they belong to the Mediterranean zone proper. Within the Mediterranean floral element, from the vegetation geography point of view, special attention is focused on the 18 Illyrian-Adriatic endemic species and 6 Illyrian-Apennine species. Of the Illyrian-Adriatic endemic plants in the flora on the small islands of Žirje there were registered (18 species): *Astragalus monspessulanus* L. subsp. *illyricus* (Bernh.) Chater, *Aurinia sinuata* (L.) Griseb., *Campanula pyramidalis* L., *Carduus micropterus* (Borbas) Teyber, *Centaurea spinosociliata* Seenus, *Corydalis acaulis* (Wulfen) Pers., *Dianthus ciliatus* Guss., *Euphorbia fragifera* Jan., *E. wulfenii* Hoppe et Koch, *Frangula rupestris* (Scop.) Schur, *Genista sylvestris* Scop. subsp. *dalmatica* (Bartl.) Lindb., *Iris illyrica* Tommasini, *Limonium cancellatum* (Bernh.) O. Kuntze, *Plantago holostium* Scop. var. *scopulorum* (Degen) Pilger, *Rhamnus intermedius* Steudel et Hochst., *Salvia officinalis* L., *Tanacetum cinerariifolium* (Trevir.) Schultz.- Bip, *Vincetoxicum hirundinaria* Medicus subsp. *adriaticum* (G. Beck) Markgraf.

Among endemic species, *Corydalis acaulis* has been reported for Žirje by VISIANI, like *Corydalis ochroleuca*. During this research abundant populations of it were noticed in the cracks on the rocks of Jajin vrha, Straža, Kapića, Grašnjak, Zvizdulja and Smrikovac, and on the rocks of Mažirina and Samograd. On the southern slopes of Samograd the Illyrian-Apennine and relict species of *Convolvulus cneorum* L. and Illyrian-Adriatic iris *Iris illyrica* Tomm were noticed.

The presence of all other plant groups of the Mediterranean floral element in the flora of the island of Žirje as well as the presence of the plants of South European floral element (92 species, 19.61%) and the wide distribution plants (80 species, 17.05%), suggest a diverse and variously influenced flora for this island.

In the flora of the island of Žirje the neophytes that have lately been spreading on the coast and the islands were registered: *Aster squamatus* (Sprengen, *Bidens subalternans* DC., *Euphorbia maculata* L., *E. prostrata* Aiton and *Datura inoxia* Mull.

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