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Checklist updating and analysis of the flora of Symi island and of the nearby island of Seskli (Dodecanese, Greece)

Abstract

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A contribution to the knowledge of the vascular flora of Symi and the nearby island of Seskli is presented, being an update of the vascular flora of Symi and Seskli islands, 32 years after the first checklist published by Carlström. The occurrence of *Limonium hirsuticalyx* is reported on Symi for the first time; for Seskli, 41 new floristic records are provided, in addition to a species inquirenda: *Limonium* cfr. *hirsuticalyx* / *meyeri*. The strong floristic affinity between Symi and SW Anatolia, to which Symi was linked until the upper Pleistocene, is confirmed by the large number of range-restricted and rare taxa occurring on Symi and for the most part shared with the Muğla province in SW Anatolia. Despite its relatively recent insular isolation, Symi hosts a fair rate of endemics, including three single-island endemics: *Allium symiacum*, *A. panormitisi* and *Origanum symes*.

Key words: floristic investigation, endemism, active speciation, ruderal species.

Introduction

Symi island belongs to the Dodecanese. It is located between Rhodes and the Turkish coast (Datça Peninsula, Muğla Province) from which it is only 5 km (Fig. 1). Symi has a surface area of 58 km² and a coastline of 85 km, with numerous bays, capes and steep cliffs. Symi is surrounded by smaller, uninhabited rocky islands, the largest of which are Nimos (N) and Seskli (S). Symi is chiefly hilly and culminates in Mt. Vigla at 620 m a.s.l. The island together with the peninsulas Daraçya and Reşadiye is made up mainly of Mesozoic limestone (Carlström 1987), which makes up the high costal cliffs and the deep inlet of Dhysalonas, Nanou, Lapathos and Ladhi. There are also some areas of flysch (Desio 1924a, 1924b). Due to the island's rocky nature, cultivated land is very scarce, except in the Pedi and Niborios valleys. Symi lacks surface water courses; there are only wells and cisterns. The climate is semi-arid Mediterranean with short, mild, wet winters followed by long, hot dry summers (Galanos & Tzanoudakis 2017). The island's eastern part and the surrounding uninhabited islands are included in the Natura 2000 network of protected areas (GR4210025), as they host to rare bird species as well as old conifer wood-

Fig. 1. Geographical position of Symi and Seskli Islands in the Aegean Sea.

land of *Cupressus sempervirens* L. with stands of *Pinus brutia* Ten., covering the island's SE part (www.ypeka.gr).

The island of Seskli was completely uninhabited until the 1980s. It is property of the Panormitis Monastery and lies about 1 km south of the island of Symi (Broggi 2002). Its surface area is 1,826 Km² with a maximum altitude of 117 m. The island is fairly flat with several cultivated and terraced areas with olive groves. Most of the island is characterized by low evergreen sclerophyllous maquis organized around arborescent junipers. It is a primary maquis whose most representative elements are *Pistacia lentiscus* L. (pulvinate) and *Juniperus turbinata* Guss.

Th. Orphanides was the first to collect plants on Symi, in 1856, and his data have been reported in Heldreich (1877), Pampanini (1926), Rechinger (1944), Ciferri (1944), and Davis (1965-1985). Subsequently Desio during his travels in the SE Aegean area, gathered several specimens on Symi, which were reported by Pampanini (1926), Rechinger (1944), Ciferri (1944), and Davis (1965-1985). Rechinger visited Symi on 28-29 June 1935, including its highest peak Mt. Vigla, and later published his records (Rechinger 1944). The material collected in 1961 by Gathorne-Hardy was reported by Davis (1965-1985). Davis himself carried out botanical research on Symi in 1981 (Davis 1965-1985). Finally, the most substantial contribution to the knowledge of the island's flora was provided by Carlström (1987). She visited Symi in different times between July 1981 and October 1982. Keitel & Remm (1991) studied the orchid flora of the island. In 2001, Jahn collected several taxa on Symi: his records have been published by Strid (2016). Later Chilton (2010) compiled a plant list of Symi. The most recent contributions to the flora of Symi have been provided by Galanos (2016), Galanos & Tzanoudakis (2017; 2019), Burton & Tan (2017), and Cattaneo

& Grano (2017; 2018a). The floristic data relating to Symi have been excerpted from all these published sources and from Strid (2016). Carlström investigated Seskli on 11.06.1982 and recorded 70 species. Formerly, on 31.05.1966 Bothmer visited the island, where he collected 7 species, and the small island of Trambeto (W of Seskli).

The first inventory of the vascular flora of Seskli was drawn up by Carlström (1987). An unpublished checklist of the plants collected on Seskli by Carlström and Bothmer has been kindly provided by Strid. The present authors add here their own data on the flora of Seskli.

Materials and methods

Symi has been investigated by the authors on three occasions: from 30 July to 11 August 2017, from 26 to 30 April 2018 and on 26 and 27 April 2019. On 7 August 2017 and 29 April 2018, two excursions were made to the island of Seskli, south of Symi. All specimens are kept in the first author's personal herbarium. Plant identifications are mainly based on Rechinger (1944, 1949), Rechinger & Rechinger, (1951), Davis (1965-1985), Davis & al. (1988), Tutin & al. (1964-1980, 1993), Greuter & al. (1984-1989), Pignatti (1982), Strid & Tan (1997, 2002), Brullo & Erben (2016), and Strid (2016). Species nomenclature mostly follow Greuter & al. (1984-1989), Greuter & Raab-Straube (2008) and Euro+Med (2006-). Regarding the distribution of the genus *Limonium*, Brullo & Erben's (2016) innovative treatment has been followed. The definition and naming of families comply with Strid (2016), and information regarding the presence of species on Symi has been extractated from the database "Flora of Greece Web" (Dimopoulos & al. 2018). The status of endemic taxa recorded for Symi is based on Dimopoulos & al. (2018). With regard to the status of alien taxa, Arianoutsou & al. (2010) and Dimopoulos & al. (2018) have been followed. The life-form and chorological categories follow Dimopoulos & al. (2018). For recording altitudes and geographical coordinates, the Android application AlpineQuest GPS was used. Place names mentioned in the text follow the map of Symi produced by Terrain Cartography Group in 2009. The authors established an updated checklist of the flora of Symi and Seskli, in which all taxa recorded from either island from 1987 to date is included. The database of Lund (LD) Herbarium (https://www.biomus.lu.se/en/botanical-collections) was consulted for compiling the checklists and for the correct identification of several specimens (last access 01/10/2019). Unless otherwise specified, the term "endemic" is used to denote taxa with a distribution area confined to Greece plus SW Turkey and the term "range-restricted" refers to taxa with a limited area of distribution not exceeding a distance of 500 km (sensu Dimopoulos & al. 2018). SW Turkey refers to the area between the provinces of Aydin, Muğla, Denizli, Burdur, Isparta and Adalia.

Results

Features of Symi's flora

This paper brings an updated inventory of the vascular flora of Symi and Seskli, 32 years after Carlström's (1987) checklist. It also highlights Symi's endemism rate, which is substantial when one considers Symi's recent origin as an island (Sfenthourakis & Triantis

2017). Symi has a varied landscape. The northern part of the island is covered with low xeric scrub vegetation (phrygana) that results from protracted and reiterated anthropic impact (land cultivation and overgrazing). The most representative species of this plant community are *Thymbra capitata* (L.) Cav., *Origanum onites* L., *Sarcopoterium spinosum* (L.) Spach, and *Salvia fruticosa* Mill. The southern part of the island hosts pre-anthropic conifer woodland of great scientific value, dominated by *Cupressus sempervirens* f. *horizontalis* (Mill.) Loudon with stands of *Pinus brutia*. Two woodland communities have been recognised: species-poor *Quercus coccifera-Cupressus sempervirens* woods, and *Pistacia lentiscus-Cupressus sempervirens* woodland, which pertains mainly to the thermo-Mediterranean vegetation belt (Brofas & al. 2006). In addition, Symi, in the crevices of hard limestone cliffs, hosts a very interesting chasmophytic flora, characterized by many rare and endemic species (Phitos & al. 2009) such as *Hirtellina fruticosa* (L.) Dittrich, *Lomelosia variifolia* (Boiss.) Greuter & Burdet, *Teucrium montbretii* subsp. *heliotropiifolium* (Barbey) P. H. Davis, and *Linum arboreum* L. It occurs along the SE coast (Dhysalonas, Nanou, Faneromeni) and the SW coast (Lapathos and Ladhi).

Analysis of the flora

To date, the vascular flora of Symi, including cultivated and naturalized taxa, comprises 679 taxa (678 species and one additional subspecies), belonging to 364 genera and 93 families. Alien taxa not well established in Greece, such as *Schinus molle* L., *Senecio angulatus* L., and *Euphorbia hypericifolia* L., are disregarded. The most species-rich families are *Asteraceae* (90 taxa), *Fabaceae* (72 taxa), and *Poaceae* (67 taxa). *Apiaceae* (31 taxa) and *Lamiaceae* (30 taxa) are also well represented. As for life-forms, therophytes predominate, followed by hemicryptophytes, geophytes, chamaephytes, phanerophytes, and halophytes (Table. 1). The high proportion of therophytes combined with the high number of Mediterranean elements (Table. 2) underpins the strongly Mediterranean character of Symi's flora (Christodoulakis 1996). As compared to the island of Tilos, Symi hosts a higher number of chamaephytes due to its rocky nature and the noticeable presence of cliffs. The alien flora on Symi represents 4.12% with 28 taxa (Table. 2), belonging to 22 genera and 18 families. So far, none seem to have an invasive character. This percentage is fairly high compared with that of Tilos 2.04% (Cattaneo & Grano 2018b) and Chalki 1.73% (Tsakiri & al. 2016), and this is probably due to the closeness of Symi to the Anatolian mainland. Analysing the phytogeographical connections of the island within the Aegean area, Symi falls in the phytogeographical region of the East Aegean Islands (EAe) and shares the highest number of taxa with the phytogeographical region of Kriti and Karpathos (KK) with 607 taxa, followed by the phytogeographical region of Kiklades (Kik) with 581 taxa, and Peloponnisos (Pe) with 574 taxa. Along with Tilos (Cattaneo & Grano 2018b), Rhodes and Chalki (Tsakiri & al. 2016), Symi seems to have closer phytogeographical affinities with the South Aegean islands (KK) than with Kiklades (Kik). From a chorological point of view, the Mediterranean group predominates constituting 72.45% of the flora of the island. More specifically, species with a circum-Mediterranean distribution constitute about 33.72% of the flora (229 taxa), followed by species restricted to E Mediterranean with 21.79% (148 taxa) (Table. 2). About 8.83% of the species (60 taxa) belong to the Mediterranean-SW Asian group and this substantial number is due to the phytogeographical position of Symi (Table. 2). The high percentage of the E

Table. 1. Life-form spectrum of Symi's flora (life-forms are as defined by Dimopoulos & al. 2018).

Life-forms	Number of species	%
Therophytes	354	52.13
Phanerophytes	50	7.36
Hemicryptophytes	127	18.70
Geophytes	94	13.84
Chamaephytes	50	7.36
Aquatic	3	0.44
Total	679	100.00

Mediterranean taxa is due to the migration of eastern floristic elements during paleogeographic events that occurred when Symi was linked to the Anatolian mainland (Dermitzakis & Papanikolaou 1981; Sfenthourakis & Triantis 2017), and in particular with the peninsular areas of Daraçya Yarimadasi and Reşadiye Yarimadasi (Marmaris district), with which it constituted a biogeographical unit.

Update of the flora of Symi

An update of the flora of Symi has been performed comparing the data obtained from Carlström's checklist (Symi plant list 1987) with those of the checklist drawn up by the authors (Symi plant list 2019), which groups all the published floristic data from 1987 to 2019. As it has already been said, the vascular flora of Symi to date amounts to 679 taxa, 422 of which have been recorded in Symi plant list 1987 and 257 in Symi plant list 2019. From the analysis of both checklists, a considerable enrichment of the flora over 32 years is highlighted. Due to the lack of adequate data available, a turnover of the flora of Symi could not be outlined. It was not possible to evaluate any extinction, as the island was visited in the past and by the authors only in rather short sessions. However, with the data at our disposal it was possible to make a comparison between the biological and chorological spectra of both checklists. From a biological point of view, comparing Symi plant list 2019 with the previous one, no significant percentage variations of each biological form have been detected (Table. 3), except for a good percentage of therophytes and the notable increase of the geophytes especially with regard to the family of *Orchidaceae* with 15 taxa more than the previous list. Normally the increase in therophytes and geophytes is related to a decrease / cessation of grazing (Snogerup & Snogerup 1987; Bergmeier & Dimopoulos 2003; Panitsa & al. 2008). However, grazing is currently very present on Symi, and the development of agricultural-pastoral activities on the island has led to a marked increase of the *Fabaceae*, with 29 taxa more than the previous list. For this reason, it is more plausible that behind these data there was a lack of research performed on Symi in the past. Even the entry of 10 endemics in the flora of Symi underlines a lack of previous research. Indeed, Rechinger carried out research on Symi only in June 1935, Davis in October 1981 and Carlström only for a few days during the months of May, June and July of 1981 and October of 1982. Subsequent visits to the island by several botanists have been able to fill some gaps. From a chorological point of view an increase in alien taxa and

Table. 2. Chorological spectrum of the native flora of Symi (chorological groups are as defined by Dimopoulos & al. 2018).

Chorological groups	Number of taxa	%	Total number of taxa	%
Widely distributed taxa			132	19.44
European	2	0.29		
European-SW Asian	65	9.57		
Euro-Siberian	5	0.73		
Palaeotemperate	22	3.24		
Circumtemperate	5	0.73		
Saharo-Sindian	1	0.14		
Subtropical-Tropical	9	1.32		
Cosmopolitan	23	3.38		
Mediterranean Taxa			492	72.45
E Mediterranean	148	21.79		
Mediterranean	229	33.72		
Mediterranean-Atlantic	14	2.06		
Mediterranean-European	41	6.03		
Mediterranean-SW Asian	60	8.83		
Balkan Taxa			8	1.17
Balkan	0	0		
Balkan-Italian	0	0		
Balkan-Anatolian	8	1.17		
Endemic Taxa			19	2.79
Endemic	19	2.79		
Alien taxa			28	4.12
Am.	1	0.14		
N-Am.	6	0.88		
S-Am.	6	0.88		
S-Afr.	3	0.44		
Neotrop.	6	0.88		
C-As.	1	0.14		
S-As.	1	0.14		
SW-As.	2	0.29		
SW-Eur.	1	0.14		
W-Med.	1	0.14		
Total	679	100.00	679	100.00

wide-ranging plants has been observed. In more detail, with regard to the Mediterranean taxa, an increase of elements with Mediterranean-European distribution (+7.39%) and with Mediterranean-SW Asian distribution (+10.89%) has been detected. As concerns the widely distributed taxa, the major contribution came from European-SW Asia elements

Table. 3. Comparison between the biological spectra obtained from Symi plant list 1987 and Symi plant list 2019.

Life-forms	Symi plant list 1987		Symi plant list 2019	
	Number of taxa	%	Number of taxa	%
Therophytes	224	53.08	130	50.58
Phanerophytes	31	7.34	19	7.39
Hemicryptophytes	81	19.19	47	18.28
Geophytes	48	11.37	46	17.89
Chamaephytes	37	8.76	13	5.05
Aquatic	1	0.23	2	0.77
Total	422	100.00	257	100.00

(+10.89%) following Circumtemperate, Subtropical/Tropical and Cosmopolitan taxa (Table. 4). Regarding the alien taxa, most of the new entries are nitrophilous, ruderal plants, typical of fallow or cultivated fields, suburban areas and gardens such as *Agave Americana* L., *Austrocylindropuntia subulata* (Muehlenpf.) Backeb, *Opuntia ficus-indica* (L.) Mill., *Oxalis pes-caprae* L., *Amaranthus cruentus* L., *Anethum graveolens* L., *Chenopodium album* L., *Chenopodiastrum murale* (L.) S. Fuentes & al., *Euphorbia nutans* Lag., *E. prostrata* Aiton, *Malva neglecta* Wallr., *Datura innoxia* Mill., *Nicotiana glauca* Graham, *Solanum nigrum* L. and *S. villosum* Mill. Undoubtedly the extreme closeness to the Turkish mainland and the frequent commercial and tourism exchanges between Symi, Rhodes and Marmaris, are to be regarded as main factors for the propagation of these new species. This is the expression of the advent of man, who has wiped out the insular isolating effect of the sea. A large number of alien propagules have always been introduced by man into suitable or degraded habitats. In this way the flora has been enriched in its variety, but sometimes has been trivialized (Greuter 2001).

Biogeographical considerations

Greek endemics

Symi hosts 19 Greek endemics (at a percentage of 2.79%), five of which are also present in SW Anatolia. This percentage is interesting given the very short distance from the Anatolian mainland as well as the rather recent origin of the island and the fact that Symi hosts three single-island endemics: *Allium panormitisi* Galanos & Tzanoud. (Galanos & Tzanoudakis 2019), *A. symiacum* Galanos & Tzanoud., and *Origanum symes* Carlström. The endemics belong to 11 families and 16 genera. The *Asteraceae* shows the highest rate of endemism, followed by *Lamiaceae*. Symi shares the most endemics (10 taxa) with the phytogeographical region of Kriti and Karpathos (KK) compared to that of Kiklades (Kik) (7 taxa), despite the fact that the phytogeographical region of the East Aegean Islands (EAe) is chorologically closer to Kik than to KK (Georghiou & Delipetrou 2010). Furthermore, the presence of biregional endemics on Symi, like *Lomelosia variifolia*,

Table. 4. Comparison between the chorological spectra obtained from Symi plant list 1987 and Symi plant list 2019.

Chorological group	Symi plant list 1987				Symi plant list 2019			
	Number of taxa	%	Total number of taxa	%	Number of taxa	%	Total number of taxa	%
Widely distributed taxa			75	17.77			57	22.17
European	1	0.23			1	0.39		
European-SW Asian	37	8.76			28	10.89		
Euro-Siberian	3	0.71			2	0.77		
Paleotemperate	17	4.02			5	1.94		
Circumtemperate	1	0.23			4	1.55		
Saharo-Sindian	0	0.00			1	0.39		
Subtropical-Tropical	5	1.18			4	1.55		
Cosmopolitan	11	2.60			12	4.66		
Mediterranean Taxa			327	77.48			165	64.20
E Mediterranean	104	24.64			44	17.12		
Mediterranean	158	37.44			71	27.62		
Mediterranean-Atlantic	11	2.60			3	1.16		
Mediterranean-European	22	5.21			19	7.39		
Mediterranean-SW Asian	32	7.58			28	10.89		
Balkan Taxa			7	1.65			1	0.39
Balkan	0	0.00			0	0.00		
Balkan-Italian	0	0.00			0	0.00		
Balkan-Anatolian	7	1.65			1	0.39		
Endemic Taxa			9	2.13			10	3.89
Endemic	9	2.13			10	3.89		
Alien taxa			4	0.94			24	9.33
Am.	0	0.00			1	0.39		
N-Am.	1	0.23			5	1.94		
S-Am.	1	0.23			5	1.94		
S-Afr.	0	0.00			3	1.16		
Neotrop.	1	0.23			5	1.94		
C-As.	1	0.23			0	0.00		
S-As.	0	0.00			1	0.39		
SW-As.	0	0.00			2	0.77		
SW-Eur.	0	0.00			1	0.39		
W-Med.	0	0.00			1	0.39		
Total	422	100.00	422	100.00	257	100.00	257	100.00

Phlomis cretica C. Presl and *Teucrium montbretii* subsp. *heliotropiifolium* that occur exclusively in KK and EAe, shows the good phytogeographical connection between these two floristic regions. This may be attributable to the land bridge between Kriti, Karpathos and

the East Aegean Islands that occurred during the Messinian salinity crisis and the early Pliocene (Sfenthourakis & Triantis 2017). Reported on Symi for the first time, is the presence of *Limonium hirsuticalyx* Pignatti. This taxon is also present on Naxos (Kik), Kos, Patmos and Rhodes (EAe). The occurrence on Symi of endemic allopatric taxa like *Nigella arvensis* subsp. *brevifolia* Strid (belonging to the *Nigella arvensis* complex represented by six species (12 taxa) in the Aegean Archipelago), *Campanula rhodensis* A. DC, (included with *Campanula simulans*, also present on Symi, in the *Campanula drabifolia* Sm. complex), *Dianthus fruticosus* subsp. *rhodius* (Rech. f.) Runemark and *Erysimum rhodium* Snogerup may be the outcome of a differentiation promoted by genetic drift that occurred in the Aegean area and in particular in the S-SE Aegean during periods of climatic fluctuation and edaphic changes in the Pleistocene (Carlström 1986a). Repeated bottlenecks due to seasonal fluctuations in population size would led to genetic drift (Runemark 1970) and favorable conditions in several Aegean Islands would have promoted allopatric speciation. This is easily recognizable within the *Nigella arvensis* complex (Bittkau & Comes 2009; Comes & al. 2008; Cattaneo & Grano 2018b) as well as in other angiosperm groups like in the *Campanula drabifolia* complex (Carlström 1986b). *Nigella arvensis* subsp. *brevifolia* that occurs in Peloponnisos, Kriti, Rhodes and Symi, shows a connection between the floristic regions Pe, KK and EAe (Georghiou & Delipetrou 2010) and seems to follow the S Aegean island arc, connecting the Balkans to Anatolia. Probably *N. arvensis* subsp. *brevifolia* occurring on Symi and Chalki (Tsakiri & al. 2016), belongs to the same lineage of *N. a. brevifolia* that occurs on Rhodes. Recent studies regarding re-colonization events and genetic exchange between divergent populations through the formation of land bridges during the Pleistocene within the *Nigella arvensis* complex, show that *N. a.* subsp. *brevifolia* together with subsp. *aristata*/*arvensis* from Crete belong to a Western Aegean (WAe) lineage, while *N. a.* subs. *brevifolia* from Rhodes and *N. carpatha* Strid from Karpathos/Kasos are members of an Eastern Aegean (EAe) lineage, along with *N. a.* subsp. *glauca* (Boiss.) N. Terracc. (Jaros & al. 2017). The single-island endemic *Origanum symes*, closely related to *Origanum calcaratum* Juss., seems to be an extremely specialized and rare taxon in that Carlström found this species on only one site: in Dhysalonas Bay on N-exposed cliffs of hard limestone, close to the sea (Carlström 1984), and the authors found this taxon in the same place between two shaded limestone cliffs. *Origanum symes* belongs to the section *Amaracus* (Gleditsch) Bentham and this section comprises eight species of *Origanum*: *O. ayliniae* Dirmenci & Yazici (Dilek Peninsula/Kuşadasi, SW Turkey) (Dirmenci & al. 2018), *O. boissieri* Ietswaart (Mersin, S Turkey), *O. calcaratum* Juss. (Kiklades, Crete and Chalki, Greece), *O. cordifolium* (Benth.) Vogel (Cyprus), *O. dictamnus* L. (Crete, Greece), *O. saccatum* P.H. Davis (Antalya, S Turkey), *O. solymicum* P.H. Davis (Antalya, S Turkey) and *O. symes* (Symi, Greece). These taxa are endemic of islands or mountain groups, all restricted to the east Mediterranean region with only *Origanum calcaratum* extending to some Cycladic islands (Ietswaart 1980; Carlström 1984; Kintzios 2003). These species are all subshrubs that grow in crevices on limestone rocks, often in shady places. It's plausible that these taxa originated from a common center of radiation, SW Anatolia, which is considered a biodiversity hotspot or a reservoir of genetic diversity favourable to the evolutionary processes of Mediterranean plant species (Médail & Diadema 2009). For this reason, these species belonging to the section *Amaracus* could all be considered allopatric taxa that show a differentiation that probably occurred in the east

Mediterranean area during the Pleistocene. Particularly the Aegean taxa *Origanum calcaratum*, *O. dictamnus*, *O. symes*, would seem to be the result of active speciation processes that resulted from genetic drift on small populations in suitable insular environmental conditions. The others two single-island endemics are *Allium panormitisi* and *A. symiacum*. Both these taxa belong to *Allium* section *Codonoprasum* and are autumn-flowering. They are the only species in the section *Codonoprasum* that have exserted stamens and are the only species with this characteristic in the autumn-flowering subgroup of this section. Furthermore, leaf sheats are more than 3/4 of the stem in *A. symiacum* and 3/4 - 4/4 in *A. panormitisi* (Galanos & Tzanoudakis 2017; 2019). These features, as well as their morphology and life cycle, lead to the determination of these taxa as floristic relics. Finally, Symi constitutes the easternmost distributional border of *Hirtellina fruticosa* (L.) Dittrich (Fig. 2), a distinctive paleoendemic of the S and SE Aegean area and the easternmost distributional border of the Greek endemic *Filago aegaea* Wagenitz subsp. *aegaea*.

Range-restricted and interesting taxa

Symi hosts 48 range-restricted taxa, 16 of which are Greek endemics. It is a chersogenous island (Greuter 2001) and its Anatolian origin is very clear in that its flora includes 148 East Mediterranean elements (21.79% of the total flora) (Table. 2), 28 of which are range-restricted and are shared with SW-Anatolia, in particular with the Muğla Province. During ancient times, many species migrated through land bridges that formed due to climatic and geological changes. In this regard, the S Aegean island arc (Miocene to early Pliocene) constituted an important migratory route for species between the Balkans and Anatolia (Carlström 1987), and the influence of the Anatolian element on the Balkan flora

Fig. 2. *Hirtellina fruticosa* (L.) Dittrich, Nanou Bay (Symi).

was of even greater importance. The relevance of the role of the land bridge between the Anatolian mainland and the south eastern Aegean islands as a biogeographical link is also confirmed by the great number of Aegean endemics and range-restricted taxa shared between these two regions. In fact, on Symi, we see many taxa with distributions that are very restricted to only a few E-SE Aegean Islands and to SW Turkey, such as: *Biarum marmarisense* (P.C. Boyce) P.C. Boyce, *Fritillaria sibthorpiana* (Sm.), *Anthemis macrotis* (Rech. f.) Oberpr. & Vogt., *Erysimum rhodium*, *Silene echinospermoides* Hub.-Mor., *Quercus aucheri* Jaub. & Spach, *Phlomis bourgaei* Boiss., *Sideritis albiflora* Hub.-Mor., *Teucrium montbretii* subsp. *heliotropiifolium*, *Ophrys speculum* subsp. *regis-ferdinandii* (Renz) Soó, *Rhamnus pichleri* Bornm., *Asperula brevifolia* Vent., *Campanula simulans*, *Verbascum propontideum* Murb. and *Verbascum symes* Murb. & Rech. f. There may be good reason to define Symi as part of SW-Anatolia and, more specifically, the Marmaris district. Lastly, an interesting taxon, *Prunus graeca* (Lindl.) Steud (Fig. 3), recorded by the authors in the locality of Nanou Bay (Cattaneo & Grano 2017) further underlines the linkage between SW Anatolia and Symi, since this species has only been reported for Kalymnos and Rhodes in the Aegean area, and its range primarily consists of SW-Anatolia and SW-Syria (Boratynska & Dolatowski 1986).

Seskli Island

From an edaphic and floristic point of view, Seskli seems to be an extension of the southern part of Symi (Panormitis). The island is affected by heavy overgrazing that does not allow the normal growth of vascular flora. Only on the northeast coast of Seskli, on

Fig. 3. *Prunus discolor* (Spach) C. K. Schneid., Nanou Bay (Symi).

restricted limestone cliffs away from the goats, has a well-developed chasmophytic flora been observed, with taxa such as *Ptilostemon chamaepeuce* (L.) Less., *Inula verbascifolia* subsp. *heterolepis* (Boiss.) Tutin, *Achillea cretica* L., *Matthiola incana* subsp. *glandulosa* (Vis.) Vierh., *Crithmum maritimum* L., *Capparis spinosa* L. and a new species of *Limonium* (Fig. 4). It is a diploid species with $2n = 18$ chromosomes and belongs to *L. hirsuticalyx* or *L. meyeri* group (Erben pers. comm.). One of the peculiarities of genus *Limonium* is its ability to segregate into many small species, especially in insular and peninsular areas, and this is evident in critical habitats like rocky coasts and salt marshes. The plants that grow in this kind of habitat are characterized by hybridization, polyploidy, chromosome rearrangement, backcrosses and apomictic reproduction. Environmental conditions and reproductive mechanisms may have contributed to the evolutionary process, leading to the rapid speciation of plants (Brullo & Erben 2016). It can be assumed that in the past, Seskli and Symi constituted a single land mass and that the geographical separation that occurred during ancient times interrupted the gene flow in the population of *L. hirsuticalyx*, and lead to allopatric speciation. The new taxon found on Seskli, is an example of how genetic drift acts on small populations that are confined to restricted environments and characterized by rather critical ecological conditions.

Update of the florula of Seskli

In this contribution, 41 new floristic records are provided by the authors. The vascular flora of Seskli (although incomplete), amount to 118 taxa to date. Logistical difficulties in reaching the island, restricted the exploration of Seskli to only a few hours, on two days: 7 August 2017 and 29 April 2018. The life-form spectrum of the florula of Seskli highlights the prevalence of therophytes (44.91%) followed by hemicryptophytes, (18.64%) and chamaephytes (17.79) (Table. 5). With regards to the chorological spectrum of Seskli, the

Fig. 4. *Limonium* cfr. *hirsuticalyx* / *meyeri*, Seskli.

Mediterranean element is the most represented (45.76%) (Table. 6). The remarkable lack of biological and chorological data at our disposal did not allow an exhaustive analysis of the flora. Only a slight increase in therophytes and geophytes and increases in the east Mediterranean element and the widely distributed taxa, were detected. The new species recorded on Seskli are most likely the outcome of anemochorous and thalassochorous dispersion of propagules coming from the nearby mother island Symi (species source pools). However, even the extremely scarce human presence has allowed the entry of new taxa. These species are mainly related to cultivated, fallow fields and ruderal environments, such as *Hirschfeldia incana* (L.) Lagr.-Foss., *Rumex pulcher* L., *Papaver rhoeas* L., *Notobasis syriaca* (L.) Cass., *Silybum marianum* (L.) Gaertn., *Chenopodiastrum murale*. Indeed, these species have been observed in cultivated or near cultivated areas.

Discussion

The updated inventory of the flora of Symi and Seskli has highlighted the increase in the nitrophilous and ruderal species typical of fallow and cultivated fields, suburban areas and gardens. This is mainly due to the closeness of Symi to the Turkish mainland and the frequent commercial and tourist exchanges between Symi, Rhodes and Marmaris. Symi is located in the southeastern Aegean area, one of the richest Aegean regions in terms of Greek endemics. This is probably due to the fact that islands like Symi, Tilos, Nisyros, etc. remained isolated through the Pleistocene. Symi is a very particular island in that, despite its closeness to the Anatolian mainland, it shows a good rate of endemics. Its good environmental heterogeneity and the presence of vertical limestone cliffs with good exposure, has allowed the development of very interesting chasmophytic endemic flora. Most likely, the existence of this kind of suitable habitat allowed the subsistence of paleoendemics that may date back to the Tertiary, such as *Hirtellina fruticosa* and *Allium symiacum* and the formation of neoendemics during the Quaternary such as *Origanum symes*, *Erysimum rhodium*, and *Dianthus fruticosus* subsp. *rhodius*. During the intervals between the great glaciations in the Pleistocene, the Mediterranean region constituted both a global refuge for relic plants and an area of active speciation. The Mediterranean refugia, which were less affected by past environmental changes than European refugia thanks to a milder climate, constitute key areas for the long-term conservation of genetic and species diversity.

Table. 5. Life-form spectrum of the florula of Seskli.

Life-forms	Number of taxa	%
Therophytes	53	44.91
Phanerophytes	13	11.01
Hemicryptophytes	22	18.64
Geophytes	9	7.62
Chamaephytes	21	17.79
Aquatic	0	0.00
Total	118	100.00

Table. 6. Chorological spectrum of the florula of Seskli.

Chorological groups	Number of species	%	Total number of species	%
Widely distributed taxa			17	14.40
European	0	0.00		
European-SW Asian	8	6.77		
Euro-Siberian	2	1.69		
Paleotemperate	3	2.54		
Circumtemperate	1	0.84		
Saharo-Sindian	0	0.00		
Subtropical-Tropical	1	0.84		
Cosmopolitan	2	1.69		
Mediterranean Taxa			97	82.20
E Mediterranean	20	16.94		
Mediterranean	54	45.76		
Mediterranean-Atlantic	4	3.38		
Mediterranean-European	9	7.62		
Mediterranean-SW Asian	10	8.47		
Balkan Taxa			2	1.69
Balkan	0	0.00		
Balkan-Italian	0	0.00		
Balkan-Anatolian	2	1.69		
Endemic Taxa			2	1.69
Endemic	2	1.69		
Alien taxa			0	0.00
Am.; N-Am.; S-Am.; S-Afr.; Neotrop; C-As.; S-As.; SW-As.; SW-Eur.; W-Med.	0	0.00		
Total	118	100.00	118	100.00

This has enabled the co-existence of distinct lineages, high plant richness, and local persistence of endemic plants (Médail & Diadema 2009). Symi, like the other southeastern islands, is located across from SW Anatolia, considered one of the most interesting refugia, in that it is a biodiversity hotspot and a source of genetic diversity favorable to the evolutionary processes of Mediterranean plant species. The high rate of endemics in terms of paleoendemics and neoendemics occurring in the southeastern Aegean islands could be explained as the result of an active speciation promoted by a common center of radiation: the SW Anatolia. The discovery on Seskli of a new species of *Limonium* sp. demonstrates that the Aegean region as a whole, and in particular the SE Aegean area, is, to date, a center of active speciation thanks to the presence of suitable conditions that should be preserved.

Updated inventory of the flora of Symi and Seskli

Abbreviations and symbols used:

Life forms:

P = Phanerophyte
C = Chamaephyte
H = Hemicryptophyte
G = Geophyte
T = Therophyte
A= Aquatic

Chorological groups:

Widely distributed taxa:

Eu = European
EA = European-SW Asian
ES = Euro-Siberian
Pt = Paleotemperate
Ct = Circumtemperate
ST = Subtropical-Tropical
SS = Saharo-Sindian
Co = Cosmopolitan

Mediterranean taxa:

EM = Eastern Mediterranean
Me = Mediterranean
MA = Mediterranean-Atlantic
ME = Mediterranean-European
MS = Mediterranean-SW Asian

Balkan taxa:

Bk = Balkan
BI = Balkan-Italian
BA = Balkan-Anatolian

Endemic taxa

Endemic

Alien taxa:

Am. = American
N-Am. = North American
S-Am. = South American

S-Afr. = South African
Neotrop. = Neotropical
C-As. = Central Asian
S-As. = South-Asian
SW-As. = South West Asian
SW-Eur. = South West European
W-Med. = West Mediterranean

Record information:
AC = Annette Carlström's thesis
AS = Arne Strid's Atlas
Both = Bothmer
BR = Burton
C! = observed by the authors
C!* = first observation substantiated by a photograph
Cattaneo's = own findings
CH = Chilton's list
Fae = Rechinger's Flora aegaea
FT = Davis's Flora of Turkey
LD = Lund Herbarium (with catalogue number)
Si = Symi
Sk = Seskli
(!) = names placed between parentheses refer to literature records not confirmed.

Aspleniaceae
Asplenium bourgaei Milde - H - EM; **Si**: AC, CH, AS.
Asplenium ceterach L. - H - EA; **Si**: AC, CH, AS, *C!*.

Dryopteridaceae
Dryopteris pallida (Bory) Maire & Petitm. subsp. *pallida* - G - Me; **Si**: AC, CH, AS, as *Dryopteris villarii* subsp. *pallida* (Bory) Heywood, *Cattaneo's*.

Polypodiaceae
Polypodium cambricum L. - G - MA; **Si**: AC, CH, as *Polypodium cambricum* subsp. *australe* (Fée) Greuter & Burdet, AS.

Pteridaceae
Adiantum capillus-veneris L. - G - ST; **Si**: *C*!*; **Sk**: *Both* (LD 1247542), *Cattaneo's*.
Anogramma leptophylla (L.) Link - T - Co; **Si**: AC, CH, AS, *C!*.
Cheilanthes acrostica (Balb.) Tod. - G - Me; **Si**: AC, CH, AS, *C!*.
Allosurus persicus (Bory) Christenh. - G - Me; **Si**: AC, CH, both as *Cheilanthes persica* (Bory) Kuhn, AS.

Selaginellaceae
Selaginella denticulata (L.) Spring. - H - Me; **Si**: AC, CH, AS, *C!*.

Cupressaceae
Cupressus sempervirens L. - P - EM; **Si**: Pampanini 1926; AC, CH, AS, *C!*.
Juniperus turbinata Guss. - P - MA; **Si**: AC, CH, AS, all as "*Juniperus phoenicea*"; *C!*; **Sk**: AC, as

"*Juniperus phoenicea*", *C!*.
According to Adams (2014), the genuine *J. phoenicea* L. is a species confined to SE Spain and S France; whereas the species widespread in the Mediterranean area that has been so named generally must be known as *Juniperus turbinata.*

Ephedraceae
Ephedra foeminea Forssk. - P - Me; **Si**: AC, CH, both as *Ephedra campylopoda* C.A. Mey., AS.

Pinaceae
Pinus brutia Ten. - P - Me; **Si**: Ciferri 1944; AC, CH, AS, *C!*; **Sk**: *C*!*.
(*Pinus halepensis* Mill.)
On Symi, Desio (Pampanini 1926) collected a specimen classified as *P. halepensis* Mill., which is preserved at the Herbarium of Florence (FI 055512). The record needs confirmation though, and for biogeographical reasons, the specimen is most likely attributable to *P. brutia* Ten.

Acanthaceae
Acanthus spinosus L. - H - Me; **Si**: AC, AS.

Agavaceae
Agave americana L. - P - N-Am; **Si**: AS.

Aizoaceae
Mesembryanthemum cordifolium L. f. - C - S-Afr; **Si**: CH, as *Aptenia cordifolia* (L. f.) Schwantes.

Alliaceae
Allium amethystinum Tausch - G - EM; **Si**: AC, AS.
Allium ampeloprasum L. - G - Me; **Si**: AC, AS.
Allium archeotrichon Brullo & al. - G - Endemic; **Si**: Galanos 2016.
Allium guttatum Steven subsp. *guttatum* - G - Me; **Si**: Fae; AC, as *Allium guttatum* subsp. *sardoum* (Moris) Stearn, AS.
Allium junceum Sm. - G - EM; **Si**: AC, AS; **Sk**: AC.
Allium neapolitanum Cirillo - G - Me; **Si**: AC, AS, *C!*.
Allium paniculatum L. - G - ME; **Si**: AC, AS.
Allium panormitisi Galanos & Tzanoudakis - G - Endemic; **Si**: Galanos & Tzanoudakis 2019.
Allium sandrasicum Kollmann,Özhatay & Bothmer - G - EM; **Si**: AC, AS.
(*Allium stamineum* Boiss. - G - EM; AC.)
This species shows an eastern Mediterranean range. According to Brullo & al. (2007) this taxon was erroneously reported for Greece, since it should have a strictly Anatolian distribution. The specimen was collected by Carlström in Nanou Bay in 1982, (LD 1251969) and its classification as *Allium stamineum* Boiss., needs confirmation.
Allium subhirsutum L. - G - Me; **Si**: AC, AS, *Cattaneo's*.
Allium symiacum Galanos & Tzanoudakis - G - Endemic; **Si**: Galanos & Tzanoudakis 2017.
Allium trifoliatum Cirillo - G - Me; **Si**: AS.

Amaranthaceae
Amaranthus albus L. - T - N-Am.; **Si**: AC, CH, AS.
Amaranthus blitoides S. Watson - T - N-Am.; **Si**: BR, Cattaneo & Grano 2017.
Amaranthus cruentus L. - T - Neotrop.; **Si**: BR.
Amaranthus viridis L. - T - S-Am; AC, CH, AS, *C!*.

Amaryllidaceae

Narcissus obsoletus (Haw.) Spach. - G - Me; **Si**: Pampanini 1926, AC, both as "*Narcissus serotinus*", AS. According to Díaz Lifante & Andrés Camacho (2007), *Narcissus serotinus* L. is confined to Algeria, Morocco, Portugal, Spain and Tunisia. In Greece, occurs *N. obsoletus* (Haw.) Spach.

Narcissus tazetta L. - G - MS; **Si**: BR.

Sternbergia lutea subsp. *lutea* (L.) Spreng. - G - MS; **Si**: BR.

Anacardiaceae

Pistacia atlantica Desf. - P - MS; **Si**: AC, CH, AS.

Pistacia lentiscus L. - P - Me; **Si**: AC, CH, AS, *C!*; **Sk**: AC, *C!*.

Pistacia terebinthus subsp. *palaestina* (Boiss.) Engl. - P - EM; **Si**: AC, CH, AS, *C!*.

Schinus molle L.; **Si**: AC.

This species has not been taken into account in the floristic analysis since it is actually considered a non-established alien in Greece (Dimopoulos & al. 2018).

Apiaceae

Ammi majus L. - T - MS; **Si**: BR.

Anethum graveolens L. - T - SW-As.; **Si**: BR.

Bunium ferulaceum Sm. - G - EM; **Si**: AC, CH, AS.

Bupleurum gracile d'Urv - T - Me; **Si**: AC, CH, AS.

Bupleurum lancifolium Hornem - T - MS; **Si**: AS.

Bupleurum subovatum Spreng. - T - EA; **Si**: AS.

Cachrys cristata DC. - H - Me; **Si**: AC, CH, AS, *C!*.

Crithmum maritimum L. - C - ME; **Si**: AC, CH, AS, *C!*; **Sk**: AC, *C!*.

Daucus broteri Ten. - T - Me; **Si**: AS.

Daucus involucratus Sm. - T - EM; **Si**: AC, CH, AS, *Cattaneo's*; **Sk**: *C*!*.

Eryngium campestre L. - H - EA; **Si**: AC, AS, *C!*.

Eryngium glomeratum Lam. - H - EM; **Si**: AC, CH, AS, *C!*.

Ferula communis L. - H - ME; **Si**: CH, AS.

Foeniculum vulgare Mill. - H - Me; **Si**: AC, CH, AS.

Lagoecia cuminoides L. - T - ME; **Si**: AC, CH, AS, *C!*; **Sk**: *C*!*

Malabaila aurea (Sm.) Boiss. - H - EM; **Si**: AC, AS.

Opopanax hispidus (Friv.) Griseb. - H - MS; **Si**: AC, CH, AS.

Orlaya daucoides (L.) Greuter - T - MS; **Si**: AC, CH, AS.

Pimpinella cretica Poir. - T - EM; **Si**: AC, CH, AS, *Cattaneo's*.

Pimpinella peregrina L. - H - EA; **Si**: AC, CH, AS.

Scaligeria napiformis (Spreng.) Grande - H - EM; **Si**: AC, as *Scaligeria cretica* (Mill.) Boiss., CH, AS, *Cattaneo's*.

Scandix australis L. subsp. *australis* - T - ME; **Si**: AC, CH, AS.

Scandix pecten-veneris L. - T - EA; **Si**: AS.

Smyrnium creticum Mill. - H - EM; **Si**: AC, CH, AS.

Smyrnium olusatrum L. - H - MA; **Si**: CH, AS, *C!*.

Tordylium apulum L. - T - Me; **Si**: AC, CH, AS.

Tordylium pestalozzae Boiss. - T - EM; **Si**: CH, AS, both as *Tordylium aegaeum* Runemark, *Cattaneo's*.

Torilis africana Spreng. - T - ME; **Si**: *Carlström* (LD 1418744), AS.

Torilis arvensis (Huds.) Link -T - ME; **Si**: AS.

Torilis leptophylla (L.) Rchb. f. - T - EA; **Si**: AC, CH, AS, *Cattaneo's*.

Torilis nodosa (L.) Gaertn. - T - EA; **Si**: AC, CH, AS.

Apocynaceae
Nerium oleander L. - P - Me; **Si**: CH, AS.

Araceae
Arisarum vulgare O. Targ. Tozz. - G - Me; **Si**: AC, AS.
Arum concinnatum Schott - G - EM; **Si**: AS.
Arum creticum Boiss. & Heldr. - G - EM; **Si**: AC, AS, *C!*.
(*Biarum bovei* Blume)
This record by Desio (Pampanini 1926) is probably erroneous (Carlström 1987).
(*Biarum davisii* Turrill)
This species, closely related to *B*. *marmarisense* (P. C. Boyce) P. C. Boyce, is reported in the literature for Symi but is apparently endemic to Crete. The record is probably erroneous.
Arum dioscoridis Sm. - G - EM; **Si**: AC, AS; **Sk**: *C*!*.
Biarum marmarisense (P.C. Boyce) P.C. Boyce - G - EM; **Si**: AS.
Biarum tenuifolium subsp. *zelebori* (Schott) P.C. Boyce - G - EM; **Si**: AC, as *Biarum tenuifolium* var. *zelebori* (Schott) Engl., AS.
Dracunculus vulgaris Schott - G - Me; **Si**: AC, AS, *C!*; **Sk**: *C*!*.

Aristolochiaceae
Aristolochia hirta L. - H - EM; **Si**: AC, CH, AS.
Aristolochia parvifolia Sm. - H - Me; **Si**: AC, CH, AS.

Asparagaceae
Asparagus aphyllus subsp. *orientalis* (Baker) P.H. Davis - C - EM; **Si**: AC, AS, *C!*; **Sk**: AC, *C!*.
Asparagus horridus L. - C - Me; **Sk**: AC, as *Asparagus stipularis* Forssk.

Asphodelaceae
Asphodeline lutea (L.) Rchb. - G - ME; **Si**: Fae, AC, AS.
Asphodelus ramosus L. - G - Me; **Si**: AC, as "*Asphodelus aestivus*" AS; **Sk**: AC, as "*Asphodelus aestivus*".
According to Dimopoulos & al. (2013) *Asphodelus aestivus* L. is absent from Greece and confined to the W Mediterranean area. Greek records refer to *A*. *ramosus* subsp. *ramosus*.

Asteraceae
Achillea cretica L. - C - EM; **Si**: AC, CH, AS; **Sk**: *Both* (LD 1547398), *Cattaneo's*.
Anthemis chia L. - T - Me; **Si**: AC, CH, AS.
Anthemis macrotis (Rech. f.) Oberpr. & Vogt - T - EM; **Si**: AC, as *Matricaria macrotis* Rech. f., CH, AS, *Cattaneo's*.
Anthemis rigida Heldr. - H - EM; **Si**: AC, CH, AS.
Asteriscus aquaticus (L.) Less. - T - ME; **Si**: AC, CH, AS; **Sk**: *C*!*.
Atractylis cancellata L. - T - Me; **Si**: AC, CH, AS; **Sk**: AC, AS.
Bellis annua L. - T - Me; **Si**: AC, CH, AS.
Bellis sylvestris Cirillo - H - Me; **Si**: BR.
Calendula arvensis (Vaill.) L. - T - ME; **Si**: AC, CH, AS.
Carduus argentatus L. - T - EM; **Si**: AS, *C!*.
Carduus pycnocephalus L. - T - ME; **Si**: AC, AS; **Sk**: AC.
Carlina graeca Heldr. & Sartori - H - BA; **Si**: AC, AS, both as *Carlina corymbosa* subsp. *graeca* (Heldr. & Sartori) Nyman, CH, *C!*; **Sk**: *C*!*.
Carlina gummifera (L.) Less. - T - Me; **Si**: AC, as *Atractylis gummifera* L., CH, AS, *C!*.

Carlina lanata L. - H - Me; **Si**: AC, CH, AS, *Cattaneo's*; **Sk**: AC.
Carlina tragacanthifolia Klatt - H - EM; **Si**: AS.
Carthamus boissieri Halácsy - T - EM; **Si**: Fae, AC, CH, AS, *C!*.
Carthamus creticus L. - T - Me; **Si**: AC, AS, both as *Carthamus lanatus* subsp. *baeticus* (Boiss. & Reut.) Nyman, CH; **Sk**: AC, as *Carthamus lanatus* subsp. *baeticus* (Boiss. & Reut.) Nyman.
Carthamus dentatus subsp. *ruber* (Link) Hanelt - T - EM; **Si**: AC, CH, AS, *C!*.
Carthamus leucocaulos Sm. - T - Endemic; **Si**: AS.
Catananche lutea L. - T - Me; **Si**: AC, CH, AS.
Centaurea solstitialis L. - H - Me; **Si**: AC, CH, AS, *Cattaneo's*.
Centaurea acicularis Am. - H - EM; **Si**: AC, CH, as *Centaurea acicularis* var. *urvillei*, *C!*.
Chondrilla juncea L. - H - ME; **Si**: BR, *C!*.
Cichorium intybus L. - H - EA; **Si**: AC, CH, AS, *C!*; **Sk**: *Carlström* (LD 1991887), *C!*.
Cichorium pumilum Jacq. - T - MS; **Si**: AC, CH, AS; **Sk**: *C*!*.
Cichorium spinosum L. - C - Me; **Si**: CH, AS, *C!*.
Crepis commutata (Spreng.) Greuter - H - EM; **Si**: AC, as *Crepis foetida* subsp. *commutata* (Spreng.) Babcock, CH, AS, *Cattaneo's*; **Sk**: AC, as *Crepis foetida* subsp. *commutata* (Spreng.) Babcock.
(*Crepis foetida* subsp. *rhoeadifolia* (M. Bieb.) Čelak.)
Carlström's observation of this species on Symi needs confirmation.
Crepis multiflora Sm. - T - EM; **Si**: AS, *Cattaneo's*.
Crepis pusilla (Sommier) Merxm. - T - Me; **Si**: AS, *Cattaneo's*.
Crepis sancta (L.) Bornm. - T - EA; **Si**: AS, *Cattaneo's*.
Crupina crupinastrum (Moris) Vis. - T - EA; **Si**: AC, CH, AS.
Cyanus segetum Hill - T - Me; **Si**: AC, AS, both as *Centaurea cyanus* L., CH.
Dittrichia graveolens (L.) Greuter - T - Me; **Si**: AC, CH, AS, *C!*.
Dittrichia viscosa (L.) Greuter - C - Me; **Si**: Pampanini 1926, as *Cupularia viscosa* (L.) Godr. & Gren., AC, AS, *C!*.
Echinops spinosissimus subsp. *bithynicus* (Boiss.) Greuter - H - EM; **Si**: AC, CH, AS, *C!*.
Echinops spinosissimus Turra subsp. *spinosissimus* - H - Me; **Si**: AC, CH, AS, *C!*.
Erigeron bonariensis L. - H - Neotrop.; **Si**: BR, *Cattaneo's*.
Filago aegaea subsp. *aristata* Wagenitz - T - EM; **Si**: AS, *Cattaneo's*.
Filago aegaea Wagenitz subsp. *aegaea* - T - Endemic; **Si**: AS.
Filago eriosphaera (Boiss. & Heldr.) Chrtek & Holub - T - EM; **Sk**: *C*!*.
Filago cretensis subsp. *cycladum* Wagenitz - T - Endemic; **Si**: AC, CH, AS.
Filago eriocephala Guss. - T - Me; **Si**: AC, CH, AS, *Cattaneo's*.
Filago gallica L. - T - MA; **Si**: AC, CH, AS, *C!*.
Filago pygmaea L. - T - Me; **Si**: AC, CH, AS; **Sk**: AC.
Filago pyramidata L. - T - Me; **Si**: AC, CH, AS, *Cattaneo's*; **Sk**: AC, *Cattaneo's*.
Galatella cretica Gand. - H - EM; **Si**: Galanos 2016.
Geropogon hybridus (L.) Sch. Bip. - T - Me; **Si**: AC, CH, AS.
Glebionis coronaria (L.) Spach - T - Me; **Si**: AC, as *Chrysanthemum coronarium* L., CH, AS; **Sk**: *Carlström* (LD 1973837).
Glebionis segetum (L.) Fourr. - T - Me; **Si**: AC, as *Chrysanthemum segetum* L., CH, AS, *C!*.
Hedypnois rhagadioloides (L.) F. W. Schmidt - T - Me; **Si**: AC, CH, as *Hedypnois cretica* (L.) Dum. Cours, AS; **Sk**: AC, *Cattaneo's*.
Helichrysum orientale (L.) Vaill. - H - EM; **Si**: AC, CH, AS, *C!*.
Helichrysum stoechas subsp. *barrelieri* (Ten.) Nyman - C - Me; **Si**: AC, CH, as *Helichrysum conglobatum* (Viv.) Steud., AS., *C!*.
Hirtellina fruticosa (L.) Dittrich - C - Endemic; **Si**: AC, AS, both as *Staehelina fruticosa* (L.) L., CH, *Cattaneo's*.

Hyoseris scabra L. - T - Me; **Si**: AS.
Hypochaeris achyrophorus L. - T - Me; **Si**: AS, *Cattaneo's*; **Sk**: *C*!*.
Hypochaeris glabra L. - T - Me; **Si**: AS.
Inula heterolepis Boiss - H - EM; **Si**: AC, AS, both as *Inula verbascifolia* subsp. *heterolepis* (Boiss.) Tutin, CH, *C!*; **Sk**: AC, *C!*.
Lactuca serriola L. - H - Pt; **Si**: AC, CH, AS, *C!*.
Lactuca tuberosa Jacq. - H - EA; **Si**: AS, *C!*.
Leontodon tuberosus L. - H - Me; **Si**: AC, CH, AS, *Cattaneo's*; **Sk**: *C*!*.
Limbarda crithmoides (L.) Dumort. - C - MA; **Si**: AC, as *Inula crithmoides* L., CH, AS.
Matricaria chamomilla L. - T - Co; **Si**: AC, AS, both as *Matricaria recutita* L., CH.
Notobasis syriaca (L.) Cass. - T - Me; **Si**: AC, CH, AS; **Sk**: *C*!*.
Onopordum bracteatum Boiss. & Heldr. - H - EM; **Si**: AC, CH, AS, *C!*.
Onopordum illyricum L. - H - Me; **Si**: AS.
Pallenis spinosa (L.) Cass. - H - Me; **Si**: AC, CH, AS; **Sk**: AC.
Phagnalon rupestre subsp. *graecum* (Boiss. & Heldr.) Batt. - C - Me; **Si**: AC, CH, AS, *C!*; **Sk**: AC.
Picnomon acarna (L.) Cass. - T - Pt; **Si**: AC, CH, AS, *C!*.
Picris pauciflora Willd. - T - EA; **Si**: AC, CH, AS.
Picris rhagadioloides (L.) Desf. - T - Pt; **Si**: AC, CH, both as *Picris altissima* Delile, AS, *C!*.
Podospermum canum C.A. Mey. - H - EA; **Si**: AS.
Ptilostemon chamaepeuce (L.) Less. - C - EM; **Si**: AC, CH, AS, *C!*; **Sk**: *C*!*.
Reichardia picroides (L.) Roth - H - Me; **Si**: AC, CH, AS, *C!*.
Rhagadiolus stellatus (L.) Gaertn. - T - Me; **Si**: AS, *C!*.
Scolymus hispanicus L. - H - ME; **Sk**: AC, *C!*.
Scorzonera elata Boiss. - H - EM; **Si**: AC, CH, AS, *C!*; **Sk**: *Carlström* (LD 1979590), *C!*.
Scorzonera sublanata Lipsch. - H - BA; **Si**: AS.
Senecio angulatus L. f.; **Si**: BR.
This taxon has not been taken into account in the floristic analysis since it is actually a non-established alien in Greece (Dimopoulos 2018+).
Senecio vulgaris L. - T - Pt; **Si**: AC, CH, AS.
Sonchus asper subsp. *glaucescens* (Jord.) Ball - T - Pt; **Si**: AC, CH, AS.
Sonchus bulbosus (L.) N. Kilian & Greuter - G - Me; **Si**: AS, as *Aetheorhiza bulbosa* (L.) Cass., *Cattaneo's*.
Sonchus oleraceus L. - T - ME; **Si**: AC, CH, AS.
Silybum marianum (L.) Gaertn. - T - Me; **Si**: BR.; **Sk**: *C*!*.
Symphyotrichum squamatum (Spreng.) G.L. Nesom - C - Neotrop.; **Si**: AS.
Taraxacum minimum (Guss.) N. Terracc. - H - Me; **SI**: BR. *C!*.
Tolpis umbellata Bertol. - T - Me; **Si**: Cattaneo & Grano 2018, *Cattaneo's*.
Tolpis virgata (Desf.) Bertol. - H - Me; **Si**: BR, *Cattaneo's*.
Tragopogon porrifolius subsp. *longirostris* (Sch. Bip.) Greuter. - H - EM; **Si**: AC, AS, both as *Tragopogon longirostris* Sch. Bip., CH.
Tragopogon porrifolius L. - H - Me; **Si**: AS, *C!*.
Tyrimnus leucographus (L.) Cass. - T - Me; **Si**: Fae, AC, CH, AS.
Urospermum picroides (L.) F.W. Schmidt - T - Me; **Si**: AC, CH, AS, *Cattaneo's*; **Sk**: *C*!*.

Boraginaceae
Anchusa aegyptiaca (L.) A. DC. - T - EM; **Si**: CH, AS.
Anchusa azurea Mill. - H - Me; **Si**: BR.
Anchusa hybrida Ten. - H - Me; **Si**: AS.
Cerinthe major L. - T - MS; **Si**: CH, AS, *Cattaneo's*.

Cynoglossum columnae Ten. - T - Me; **Si**: AC, CH, AS.
Cynoglossum creticum Mill. - H - EA; **Si**: AC, CH, AS.
Echium arenarium Guss. - H - Me; **Si**: AC, CH, AS.
Echium italicum subsp. *biebersteinii* (Lacaita) Greuter & Burdet - H - EA; **Si**: BR.
Echium parviflorum Moench - T - Me; **Si**: AC, CH, AS.
Echium plantagineum L. - T - ME; **Si**: AC, CH, AS, *C!*.
Heliotropium europaeum L. - T - ME; **Si**: CH, AS, as *Heliotropium dolosum* De Not.
Heliotropium hirsutissimum Grauer - T - EM; **Si**: AC, CH, AS, *C!*.
Lithodora hispidula (Sm.) Griseb. subsp. *hispidula* - C - EM; **Si**: AC, CH, AS; **Sk**: *C*!*.
Myosotis ramosissima Rochel - T - EA; **Si**: AC, CH, AS.
Neatostema apulum (L.) I.M. Johnst. - T - Me; **Si**: AC, CH, AS, *Cattaneo's*; **Sk**: AC.
Onosma graeca Boiss. - H - EM; **Si**: Fae, AC, CH, AS.

Brassicaceae
Alyssum simplex Rudolphi - T - ES; **Si**: AC, CH, AS, *Cattaneo's*.
Alyssum strigosum Banks & Sol. - T - MS; **Si**: AC, CH, AS.
Arabis verna (L.) R. Br. - T - Me; **Si**: AC, CH, AS.
Biscutella didyma L. - T - Me; **Si**: AC, CH, AS.
Brassica cretica subsp. *aegaea* (Heldr. & Halácsy) Snogerup, M. A. Gust. & Bothmer - C - EM; **Si**: Cattaneo & Grano 2017.
Cakile maritima Scop. - T - ME; **Si**: BR.
Capsella bursa-pastoris (L.) Medik. - T - Co; **Si**: AC, CH, AS.
Cardamine hirsuta L. - T - Co; **Si**: AC, CH, AS.
Clypeola jonthlaspi L. subsp. *jonthlaspi* - T - MS; **Si**: AC, CH, AS, *Cattaneo's*.
Draba verna L. - T - EA; **Si**: AC, as *Erophila verna* subsp. *macrocarpa* (Boiss.) Walters, (*Carlström* LD 1834669 as *Erophila verna* (L.) Chevall subsp. *praecox* nomen corrigendum pro *Draba verna* L.), CH, as *Draba macrocarpa*, AS, as *Erophila verna* L.
Eruca vesicaria (L.) Cav. - T - MS; **Si**: AC, as *Eruca sativa* Mill, CH, AS.
Erucaria hispanica (L.) Druce - T - MS; **Si**: BR.
Hirschfeldia incana (L.) Lagr.-Foss. - T - EA; **Si**: AC, CH, AS; **Sk**: *C*!*.
Lepidium graminifolium L. - H - EA; **Si**: AS, *Cattaneo's*.
Malcolmia chia (L.) DC. - T - EM; **Si**: AS, *Cattaneo's*; **Sk**: *Both* (LD 1877562).
Malcolmia flexuosa (Sm.) Sm. subsp. *flexuosa* - T - EM; **Si**: AC, CH, AS.
Matthiola sinuata subsp. *glandulosa* (Vis.) Vierh. - H - ME; **Si**: AS; **Sk**: *Both* (LD 1877562), *Cattaneo's*.
Noccaea perfoliata (L.) Al-Shehbaz - T - Pt; **Si**: AC, as *Thlaspi perfoliatum* L., CH, AS.
Raphanus raphanistrum L. - T - EA; **Si**: AS.
Rapistrum rugosum (L.) All. - T - EA; **Si**: AC, CH, AS.
Sinapis alba L. - T - EA; **Si**: AS.
Sinapis arvensis L. - T - ES; **Si**: AS.
Sisymbrium officinale (L.) Scop. - T - ES; **Si**: AC, CH, AS.
Sisymbrium orientale L. - T - EA; **Si**: AC, CH, AS.
Sisymbrium polyceratium L. - T - Me; **Si**: AC, CH, AS.

Cactaceae
Austrocylindropuntia subulata (Móhlenpf.) Backeb. - P - S-Am; **Si**: Galanos 2016.
Opuntia ficus-indica (L.) Mill. - P - Neotrop.; **Si**: Ciferri 1944, AS, *C!*.

Caesalpiniaceae
Ceratonia siliqua L. - P - Me; **Si**: CH, AS, *C!*; **Sk**: *C*!*.

Campanulaceae
Campanula delicatula Boiss. - T - EM; **Si**: AC, CH, AS, *Cattaneo's*.
Campanula erinus L. - T - ME; **Si**: AC, CH, AS, *Cattaneo's*.
Campanula hagielia Boiss. - H - EM; **Si**: AC, CH, AS, *Cattaneo's*.
Campanula lyrata Lam. - H - EM; **Si**: AS.
Campanula nisyria Papatsou & Phitos - H - Endemic; **Si**: CH.
Campanula rhodensis A. DC. - T - Endemic; **Si**: AS, *Cattaneo's*.
Campanula simulans Carlström - T - EM; **Si**: AC, CH, AS, *Cattaneo's*.
Legousia pentagonia (L.) Druce - T - EM; **Si**: AC, CH, AS, *C!*.
Legousia speculum-veneris (L.) Chaix - T - ME; **Si**: AC, CH, AS.

Cannabaceae
Cannabis sativa L. - T - C-As; **Si**: AC, CH.

Capparaceae
Capparis spinosa L. - C - Me; **Si**: AC, *C!*; **Sk**: AC, *C!*.

Caprifoliaceae
Lonicera etrusca Santi - P - Me; **Si**: AC, CH, AS.
Sambucus nigra L. - P - EA; **Si**: CH, AS.

Caryophyllaceae
Arenaria deflexa Decne. - H - EM; **Si**: AC, AS.
Arenaria leptoclados (Rchb.) Guss. - T - EA; **Si**: AC, CH, AS, *C!*.
Cerastium comatum Desv. - T - EM; **Si**: AC, CH, AS.
*Cerastium glomeratum*Thuill. - T - Co; **Si**: AC, CH, AS.
Dianthus elegans d'Urv. - H - EM; **Si**: CH, AS.
Dianthus fruticosus subsp. *rhodius* (Rech. f.) Runemark - C - Endemic; **Si**: AC, CH, AS; **Sk**: AC.
Dianthus strictus Banks & Sol. - H - EM; **Si**: BR.
Dianthus tripunctatus Sm. - T - Me; **Si**: AC, CH, AS, *Cattaneo's*; **Sk**: *Both* (LD 1413394).
Minuartia hybrida (Vill.) Schischk. - T - EA; **Si**: AC, CH, AS, *Cattaneo's*.
Paronychia macrosepala Boiss. - H - EM; **Sk**: *C*!*.
Petrorhagia dubia (Raf.) G. López & Romo - T - Me; **Si**: AS.
Polycarpon tetraphyllum (L.) L. - T - MS; **Si**: AC, CH, AS, *Cattaneo's*; **Sk**: AC.
Sagina apetala Ard. - T - EA; **Si**: AC, CH, AS.
Silene behen L. - T - Me; **Si**: AC, CH, AS.
Silene cretica L. - T - Me; **Si**: AS.
Silene echinospermoides Hub.-Mor. - T - EM; **Si**: AC, CH, AS, *Cattaneo's*.
Silene italica (L.) Pers. - H - EA; **Si**: AC, CH, AS.
Silene nocturna L. - T - Me; **Si**: AC, CH, AS, *Cattaneo's*.
Silene sedoides Poir. - T - Me; **Si**: AC, CH, AS; **Sk**: AC, *Cattaneo's*.
Silene vulgaris subsp. *macrocarpa* Turrill - H - Me; **Si**: AC, CH, AS.
Spergularia bocconei (Scheele) Graebn. - T - MA; **Si**: AS.
Spergularia marina (L.) Griseb. - T - Pt; **Si**: AC, CH, both as *Spergularia salina* J. Presl & C. Presl, AS.
Stellaria pallida (Dumort.) Piré - T - EA; **Si**: AC, CH, AS, as *Stellaria apetala* Ucria.

Chenopodiaceae
Arthrocnemum macrostachyum (Moric.) K. Koch - C - Me; **Si**: AS.
Atriplex halimus L. - P - MS; **Si**: AS.

Atriplex prostrata DC. - C - ES; **Si**: BR.
Beta vulgaris subsp. *maritima* (L.) Arcang. -T - EA; **Si**: AC, as *Beta maritima* L., CH, AS; **Sk**: AC.
Beta vulgaris subsp. *adanensis* Pamuk - T - EM; **Si**: AS; **Sk**: AC.
Chenopodiastrum murale (L.) S. Fuentes & al. - T - EA; **Si**: AC, CH, AS, *C!*; **Sk**: *C*!*.
Chenopodium album L. - T - Co; **Si**: BR.
Halimione portulacoides (L.) Aellen - C - ME; **Si**: AC, CH, as *Atriplex portulacoides* L., AS; **Sk**: AC, as *A. portulacoides*.
Salsola tragus L. - T - Pt; **Si**: AS, as *Salsola kali* L., *C!*.

Cistaceae
Cistus creticus L. subsp. *creticus* - C - Me; **Si**: AC, CH, AS, *C!*; **Sk**: AC, *C!*.
Cistus parviflorus Lam. - C - EM; **Si**: CH, AS.
Cistus salviifolius L. - C - Me; **Si**: AS, *C!*; **Sk**: *C*!*.
Fumana arabica (L.) Spach - C - Me; **Si**: AC, CH, AS; **Sk**: AC.
Fumana thymifolia (L.) Webb - C - Me; **Si**: AS, *C!*.
Tuberaria guttata (L.) Fourr. - T - MA; **Si**: AC, CH, AS.

Colchicaceae
Colchicum balansae Planch. - G - BA; **Si**: AC, AS.
Colchicum macrophyllum B.L. Burtt - G - EM; **Si**: AC, AS.
Colchicum pusillum Sieber - G - EM; **Si**: AC, AS.
Colchicum variegatum L. - G - EM; **Si**: AC, AS.

Convolvulaceae
Convolvulus althaeoides L. - H - Me; **Si**: AC, CH, AS, *C!*; **Sk**: *C*!*.
Convolvulus althaeoides subsp. *tenuissimus* (Sm.) Batt. - H - Me; **Si**: BR, as *Convolvulus elegantissimus* Mill.
Convolvulus arvensis L. - H - Co; **Si**: CH, AS, *C!*.
Convolvulus oleifolius Desr. - C - Me; **Si**: AC, CH, AS; **Sk**: AC.
Convolvulus pentapetaloides L. - T - Me; **Si**: AC, CH, AS.
Convolvulus siculus L. - T - Me; **Si**: AS, *Cattaneo's*.
Cuscuta palaestina Boiss. - T - Me; **Si**: AS.
Cuscuta planiflora Ten. - T - Me; **Si**: AS.

Crassulaceae
Rosularia serrata (L.) A. Berger - H - EM; **Si**: AC, CH, AS, *C!*; **Sk**: *C*!*.
Sedum litoreum Guss. - T - Me; **Si**: AC, CH, AS.
Sedum rubens L. - T - MA; **Si**: AC, CH, AS; **Sk**: *C*!*.
Umbilicus chloranthus Boiss. - G - Me; **Si**: AC, CH, AS, *C!*.
Umbilicus horizontalis (Guss.) DC. - G - Me; **Si**: AC, CH, AS, *C!*.

Cucurbitaceae
Ecballium elaterium (L.) A. Rich. - G - MS; **Si**: AC, CH, AS, *C!*.

Cymodoceaceae
Cymodocea nodosa (Ucria) Asch. - A - MA; **Si**: AC, AS.

Cyperaceae
Carex divisa Huds. - G - EA; **Si**: AC, AS.

Cyperus rotundus L. - G - Co; **Si**: AC, AS.
Scirpoides holoschoenus (L.) Soják - G - Pt; **Si**: AS.

Dipsacaceae
Knautia integrifolia (L.) Bertol. - T - Me; **Si**: AC, CH, AS, *C!*; **Sk**: AC.
Lomelosia divaricata (Jacq.) Greuter & Burdet - T - Me; **Si**: AS.
Lomelosia variifolia (Boiss.) Greuter & Burdet - C - Endemic; **Si**: AC, as *Scabiosa variifolia* Boiss., CH, AS, *C!*.
Pterocephalus plumosus (L.) DC. - T - MS; **Si**: AC, CH, AS, *Cattaneo's*.

Ericaceae
Erica manipuliflora Salisb. - C - Me; **Si**: AC, CH, AS.

Euphorbiaceae
Chrozophora tinctoria (L.) A. Juss. - T - MS; **Si**: BR.
Euphorbia acanthothamnos Heldr. & Sart. ex Boiss. - C - EM; **Si**: AC, CH, AS; **Sk**: AC.
Euphorbia chamaesyce L. - T - ME; **Si**: AS.
Euphorbia dendroides L. - P - Me; **Si**: AC, CH, AS, *C!*; **Sk**: *C*!*.
Euphorbia exigua L. - T - ME; **Si**: AC, CH, AS.
Euphorbia falcata L. - T - EA; **Si**: AC, CH, AS; **Sk**: AC.
Euphorbia helioscopia L. - T - Co; **Si**: BR.
Euphorbia hypericifolia L.; **Si**: Galanos 2016, *Cattaneo's*.
This alien species is reported as being introduced in EAe (Euro+Med 2006–) but not established, hence it has not been counted among the vascular flora of Symi.
Euphorbia nutans Lag. - T - N-Am; **Si**: BR.
Euphorbia peplis L. - T - ME; **Si**: AC, CH, AS.
Euphorbia peplus L. - T - Co; **Si**: AC, CH, AS.
Euphorbia prostrata Aiton - T - Neotrop.; **Si**: BR.
Mercurialis annua L. - T - Pt; **Si**: AC, CH, AS, *C!*; **Sk**: AC.

Fabaceae
Anagyris foetida L. - P - Me; **Si**: AC, CH, AS, *C!*; **Sk**: AC, *C!*.
Astragalus hamosus L. - T - MS; **Si**: AC, CH, AS.
Bituminaria bituminosa (L.) C.H. Stirt. - H - ME; **Si**: AC, as *Psoralea bituminosa* L., CH, AS, *Cattaneo's*.
Calicotome villosa (Poir.) Link - P - Me; **Si**: AC, CH, AS, *C!*; **Sk**: AC.
Genista acanthoclada DC. - C - EM; **Si**: AC, CH, AS, *C!*.
Hymenocarpos circinnatus (L.) Savi - T - Me; **Si**: AC, CH, AS.
Lathyrus annuus L. - T - MS; **Si**: AS.
Lathyrus aphaca L. - T - MS; **Si**: AC, CH, AS.
Lathyrus cicera L. - T - MS; **Si**: AS.
Lathyrus setifolius L. - T - Me; **Si**: AS.
Lens culinaris subsp. *odemensis* (Ladiz.) M. E. Ferguson & al. - T - EM; **Si**: AC, as *L. nigricans* (M. Bieb.) Godr., (*Carlström* LD 1992710 as *L. nigricans*, nomen corrigendum pro *L. odemensis* Ladiz.) AS, as *L. odemensis* Ladiz.
Lotus angustissimus L. - T - ME; **Si**: AS.
Lotus cytisoides L. - H - Me; **Si**: AC, CH, AS, *C!*; **Sk**: AC, *C!*.
Lotus edulis L. - T - Me; **Si**: AC, CH, AS.
Lotus ornithopodioides L. - T - Me; **Si**: AC, CH, AS.

Lotus peregrinus L. - T - EM; **Si**: AC, CH, AS.
Lupinus angustifolius L. - T - Me; **Si**: AS.
Lupinus pilosus L. - T - EM; **Si**: AC, as *Lupinus varius* L., CH, AS.
Medicago arborea L. - P - Me; **Si**: Heldreich 1877, AC, CH.
Medicago coronata (L.) Bartal. - T - MS; **Si**: AC, CH, AS.
Medicago disciformis DC. - T - Me; **Si**: AS.
Medicago littoralis Loisel - T - MS; **Si**: AS, *Cattaneo's*.
Medicago minima (L.) L. - C - Pt; **Si**: AS.
Medicago monspeliaca (L.) Trautv. - T - MS; **Si**: AC, CH, AS; **Sk**: AC.
Medicago polymorpha L. - T - Pt; **Si**: AC, CH, AS.
Medicago rugosa Desr. - T - Me; **Si**: AS.
Medicago sativa L. - H - EA; **Si**: BR.
Melilotus indicus (L.) All. - T - EA; **Si**: AC, CH, AS.
Onobrychis aequidentata (Sm.) d'Urv. - T - Me; **Si**: AS.
Onobrychis caput-galli Lam. - T - Me; **Si**: AC, CH, AS.
Ononis mitissima L. - T - Me; **Si**: AC, CH, AS.
Ononis reclinata L. - T - ME; **Si**: AC, CH, AS; **Sk**: AC.
Ononis spinosa L. - C - Eu; **Si**: AS.
Ornithopus compressus L. - T- Me; **Si**: AS.
Pisum fulvum Sm. - T - EM; **Si**: AS.
Pisum sativum L. - T - Co; **Si**: AS.
Robinia pseudoacacia L. - P - N-Am; **Si**: AS.
Scorpiurus muricatus L. - T - Me; **Si**: AC, CH, AS.
Securigera carinata Lassen - T - EM; **Si**: *Carlström* (LD 1998792), AS.
Securigera cretica (L.) Lassen - T - Me; **Si**: AS.
Securigera parviflora (Desv.) Lassen - T - EM; **Si**: AS.
Securigera securidaca (L.) Degen & Dörfl. - T - Me; **Si**: AC, as *Coronilla securidaca* L., CH, AS.
Trifolium affine C. Presl. - T - BA; **Si**: AC, CH, AS.
Trifolium argutum Banks & Sol. - T - EM; **Si**: AS, *Cattaneo's*.
Trifolium arvense L. - T - Pt; **Si**: AC, CH, AS, *C!*.
Trifolium boissieri Guss. - T - EM; **Si**: AC, CH, AS.
Trifolium campestre Schreb. - T - EA; **Si**: AC, CH, AS, *C!*.
Trifolium clypeatum L. - T - EM; **Si**: AC, CH, AS.
Trifolium fragiferum L. - H - EA; **Si**: AS.
Trifolium grandiflorum Schreb. - T - MS; **Si**: AC, CH, AS.
Trifolium hirtum All. - T - Me; **Si**: AC, CH, AS.
Trifolium infamia-ponertii Greuter - T - Me; **Si**: AC, CH, AS.
Trifolium lappaceum L. - T - MS; **Si**: AC, CH, AS.
Trifolium leucanthum M. Bieb. - T - Me; **Si**: AC, CH, AS.
Trifolium nigrescens subsp. *petrisavii* (Clementi) Holmboe - T - EM; **Si**: AC, CH, both as *Trifolium nigrescens* Viv., AS.
Trifolium pilulare Boiss. - T - EM; **Si**: AC, CH, AS.
Trifolium scabrum L. - T - EA; **Si**: AC, CH, AS; **Sk**: *C*!*.
Trifolium scutatum Boiss. - T - EM; **Si**: AS.
Trifolium stellatum L. - T - Me; **Si**: AC, CH, AS, *C!*.
Trifolium subterraneum L. - T - ME; **Si**: AS.
Trifolium suffocatum L. - T - ME; **Si**: AS.
Trifolium tomentosum L. - T - Me; **Si**: AS.
Trifolium uniflorum L. - H - EM; **Si**: AC, CH, AS.

Trigonella balansae Boiss. & Reut. - T - EM; **Si**: AC, AS, as *T. corniculata* subsp. *balansae* (Boiss. & Reut.) Lassen; **Sk**: AC, as *T. corniculata* subsp. *balansae* (Boiss. & Reut.) Lassen, *Cattaneo's*.
Vicia cretica Boiss. & Heldr. - T - EM; **Si**: AC, CH, AS.
Vicia cuspidata Boiss. - T - EM; **Si**: AC, CH, AS.
Vicia hybrida L. - T - ME; **Si**: AC, CH, AS.
Vicia lutea L. - T - Me; **Si**: BR.
Vicia palaestina Boiss. - T - EM; **Si**: BR.
Vicia parviflora Cav. - T - MA; **Si**: AC, as *Vicia laxiflora* Brot., CH, AS, *Cattaneo's*.
Vicia sativa L. subsp. *sativa* - T - Pt; **Si**: AC, CH, AS.
Vicia villosa subsp. *eriocarpa* (Hausskn.) P.W. Ball - T - EM; **Si**: AC, as *Vicia villosa* Roth., CH, AS.

Fagaceae
Quercus aucheri Jaub. & Spach - P - EM; **Si**: AC, CH, AS, *C!*.
Quercus coccifera L. - P - Me; **Si**: AC, CH, AS, *C!*; **Sk**: AC, *C!*.
Quercus ilex L. - P - Me; **Si**: Fae, AC, AS.
Quercus ithaburensis subsp. *macrolepis* (Kotschy) Hedge & Yalt. - P - Me; **Si**: AC, CH, AS, *C!*.

Frankeniaceae
Frankenia pulverulenta L. - T - MS; **Si**: AS.

Fumariaceae
Fumaria macrocarpa Parl. - T - Me; **Si**: AC, AS.

Gentianaceae
Blackstonia perfoliata (L.) Huds. - T - ME; **Si**: Cattaneo & Grano 2018.
Centaurium erythraea Rafn. subsp. *erythraea* - T - EA; **Si**: AC; **Sk**: AC, *C!*.
(*Centaurium erythraea* subsp. *rhodense* (Boiss. & Reut.) Melderis)
This record by Carlström (1987) for Symi needs confirmation.
Centaurium spicatum (L.) R. M. Fritsch - T - MS; **Si**: BR, as *Schenkia spicata* (L.) G. Mans.
Centaurium pulchellum (Sw.) Druce - T - EA; **Si**: AC, AS, *C!*.
Centaurium tenuiflorum (Hoffmanns. & Link) Fritsch - T - ME; **Si**: AC, AS; **Sk**: AC, *C!*.

Geraniaceae
Erodium chium (L.) Willd. - T - Me; **Si**: AC, AS, *C!*; **Sk**: *C*!*.
Erodium ciconium (L.) L'Hér. - T - EA; **Si**: AS.
Erodium cicutarium (L.) L'Hér. - T - Ct; **Si**: AS; **Sk**: *C*!*.
Erodium gruinum (L.) L'Hér. - T - EM; **Si**: AC, AS.
Erodium laciniatum (Cav.) Willd. - T - Me; **Sk**: *C*!*.
Erodium malacoides (L.) L'Hér. - T - MS; **Si**: AC, AS.
Erodium moschatum (L.) L'Hér. - T - EA; **Si**: AS.
Geranium dissectum L. - T - EA; **Si**: AS.
Geranium lucidum L. - T - EA; **Si**: AC, AS.
Geranium molle L. - T - Pt; **Si**: AC, AS, *C!*; **Sk**: *C*!*.
Geranium purpureum Vill. - T - Me; **Si**: Galanos 2016, *C!*.
Geranium rotundifolium L. - T - Pt; **Si**: AC, AS.

Hyacinthaceae
Bellevalia trifoliata (Ten.) Kunth - G - Me; **Si**: BR.
Drimia maritima (L.) Stearn, - G - EM; **Si**: AC, as *Urginea maritima* (L.) Baker, AS, *C!*; **Sk**: *C*!*.

Leopoldia comosa (L.) Parl. - G - ME; **Si**: AS, as *Muscari comosum* (L.) Mill., *C!*.
Leopoldia weissii Freyn - G - EM; **Si**: AS, as *Muscari weissii* Freyn.
Muscari macrocarpum Sweet - G - EM; **Si**: Fae, AC, AS.
Muscari parviflorum Desf. - G - Me; **Si**: BR.
Ornithogalum arabicum L. - G - Me; **Si**: AC, AS.
Ornithogalum narbonense L. - G - Me; **Si**: AC, AS, both as *Ornithogalum brachystylum* Zahar., *C!*.
Ornithogalum sphaerolobum Zahar. - G - EM; **Si**: AS.
Prospero autumnale (L.) Speta - G - Me; **Si**: AC, as *Scilla autumnalis* L., AS.

Hydrocharitaceae
Halophila stipulacea (Forssk.) Asch. - A - S-As.; **Si**: AS.

Hypericaceae
Hypericum empetrifolium Willd. - C - EM; **Si**: AC, AS, *Cattaneo's*.
Hypericum triquetrifolium Turra - G - MS; **Si**: AC, AS, *Cattaneo's*; **Sk**: AC, *C!*.

Iridaceae
Crocus biflorus subsp. *nubigena* (Herb.) B. Mathew - G - EM; **Si**: BR.
Crocus tournefortii J. Gay - G - Endemic; **Si**: Ciferri 1944, AC, as *Crocus boryi* subsp. *tournefortii* (J. Gay) Greuter & al., AS.
Freesia refracta (Jacq.) Klatt - G - S-Afr.; **Si**: BR.
Gladiolus anatolicus (Boiss.) Stapf - G - EM; **Si**: AC, AS.
Gladiolus italicus Mill. - G - MS; **Si**: AS.
Iris unguicularis subsp. *carica* (Wern. Schultze) A.P. Davis & Jury - G - EM; **Si**: BR.
Moraea sisyrinchium (L.) Ker-Gawl. - G - Me; **Si**: AS.
Romulea ramiflora Ten. - G - Me; **Si**: AC, AS.
Romulea tempskyana Freyn - G - EM; **Si**: BR.

Juncaceae
Juncus bufonius L. - T - Co; **Si**: AS.
Juncus heldreichianus T. Marsson ex Parl. - H - EM; **Si**: AC, AS.

Lamiaceae
Ballota acetabulosa (L.) Benth. - C - BA; **Si**: AC, AS, *C!*; **Sk**: AC, *C!*.
Clinopodium graveolens (M.Bieb.) Kuntze - T - Me; **Si**: AC, as "*Satureja rotundifolia*", AS, as *Acinos graveolens* (M. Bieb.) Link, *Cattaneo's*.
According to Govaerts (2003) *Satureja rotundifolia* (Pers.) Briq. is a synonym of *Clinopodium graveolens* subsp. *rotundifolium* (Pers.) Govaerts, and the distribution of this subspecies is confined to Algeria, Morocco, Spain and Tunisia, whereas *Clinopodium graveolens* (M. Bieb.) Kuntze is widespread in Mediterranean area until Central Asia.
Lamium amplexicaule L. - T - Pt; **Si**: AS.
Lamium moschatum Mill. - T - EM; **Si**: AS.
Lavandula stoechas L. - P - Me; **Si**: AS.
Marrubium vulgare L. - H - EA; **Si**: AC, AS.
Mentha pulegium L. - H - Me; **Si**: AS.
Mentha spicata L. - H - EA; **Si**: BR.
Micromeria juliana (L.) Benth. ex Rchb. - C - Me; **Si**: AC, as *Satureja juliana* L., AS.
Micromeria myrtifolia Boiss. & Hohen. - C - EM; **Si**: AC, as *Satureja myrtifolia* (Boiss. & Hohen.) Greuter & Burdet, AS; **Sk**: AC.

Micromeria nervosa (Desf.) Benth. - C - Me; **Si**: AS.
Origanum onites L. - C - Me; **Si**: AC, AS, *C!.*
Origanum symes Carlström - C - Endemic; **Si**: AC, AS, *Cattaneo's*.
Phlomis bourgaei Boiss. - P - EM; **Si**: AS.
Phlomis cretica C. Presl - H - Endemic; **Si**: AS, *Cattaneo's*.
Phlomis lycia D. Don - P - EM; **Si**: AC, AS, *Cattaneo's*.
Prasium majus L. - P - Me; **Si**: AC, AS.
Rosmarinus officinalis L. - P - Me; **Si**: AC, AS.
Salvia fruticosa Mill. - P - EM; **Si**: AC, AS, *C!*; **Sk**: AC, *C!.*
Salvia sclarea L. - H - MS; **Si**: AS.
Salvia verbenaca L. - H - MA; **Si**: AC, AS; **Sk**: AC.
Salvia viridis L. - T - Me; **Si**: AC, AS.
Satureja thymbra L. - C - Me; **Si**: AC, AS, *C!.*
Sideritis albiflora Hub.-Mor. - H - EM; **Si**: AC, AS.
Sideritis romana subsp. *curvidens* (Stapf) Holmboe - T - EM; **Si**: AC, AS, both as *Sideritis curvidens* Stapf.
Stachys cretica subsp. *smyrnaea* Rech. f. - H - EM; **Si**: AC, AS, *C!.*
Stachys spinulosa Sm. - H - BA; **Si**: AC, AS, *C!.*
Teucrium divaricatum Heldr. - C - EM; **Si**: AC, AS, *C!.*
Teucrium montbretii subsp. *heliotropiifolium* (Barbey) P.H. Davis - C - Endemic; **Si**: AC, AS, *Cattaneo's*.
Thymbra capitata (L.) Cav. - C - Me; **Si**: AC, as *Coridothymus capitatus* (L.) Rechb. fil., AS, *C!*; **Sk**: AC, as *C. capitatus* (L.) Rechb. fil., *C!*.

Liliaceae
Fritillaria sibthorpiana (Sm.) Baker - G - EM; **Si**: AS.
Gagea graeca (L.) Irmisch - G - BA; **Si**: AC, AS. *C!.*

Linaceae
Linum arboreum L. - C - EM; **Si**: AC, AS, *C!.*
Linum bienne Mill. - T - Me; **Si**: AS.
Linum corymbulosum Rchb. - T - EA; **Si**: AC, AS.
Linum strictum L. - T - Me; **Si**: AC. AS, *C!*; **Sk**: AC, *C!.*

Lythraceae
Lythrum hyssopifolia L. - T - EA; **Si**: AS; **Sk**: *Both* (LD 1425104).

Malvaceae
Alcea heldreichii (Boiss.) Boiss. - H - BA; **Si**: AC, AS, *C!.*
Althaea hirsuta L. - T - EA; **Si**: AC, AS, as *Malva setigera* K.F. Schimp. & Spenn.
Malva arborea (L.) Webb & Berthel. - P - Me; **Si**: AC, as *Lavatera arborea* L., AS.
Malva cretica Cav. subsp. *cretica* - T - Me; **Si**: AC, AS.
Malva multiflora (Cav.) Soldano & al. - T - Me; **Si**: AC, as *Lavatera cretica* L., AS.
Malva neglecta Wallr. - T - EA; **Si**: Cattaneo & Grano 2018.
Malva nicaeensis All. - T - Me; **Si**: AC, AS.
Malva parviflora L. - T - MS; **Si**: AC, AS.
Malva punctata (All.) Alef. - T - Me; **Si**: AC, as *Lavatera punctata* All., AS, *C!*; **Sk**: AC, as *L. punctata* All.
Malva sylvestris L. - T - EA; **Si**: AS, *C!.*

Moraceae
Ficus carica L. - P - MS; **Si**: Ciferri 1944, AC, AS, *C!*; **Sk**: *C*!*.

Myrtaceae
Myrtus communis L. - P - Me; **Si**: AC, AS.

Nyctaginaceae
Mirabilis jalapa L. - H - S-Am.; **Si**: Galanos 2016.

Oleaceae
Olea europaea L. - P - Me; AC, AS, *C!*; **Sk**: AC, *C!*.

Orchidaceae
Anacamptis coriophora (L.) R.M. Bateman & al. - G - EA; **Si**: AS.
Anacamptis pyramidalis (L.) Rich. - G - Eu; **Si**: AC, AS.
Anacamptis sancta (L.) R.M. Bateman, Pridgeon & M. W. Chase - G - EM; **Si**: AC, as *Orchis sancta* L., AS, *C!*.
Himantoglossum robertianum (Loisel.) P. Delforge - G - Me; **Si**: AS.
Neotinea maculata (Desf.) Stearn - G - Me; **Si**: AS.
Ophrys argolica subsp. *lucis* (Kalteisen & H.R. Reinhard) H.A. Pedersen & Faurh. - G - EM; **Si**: AS.
Ophrys fusca Link - G - Me; **Si**: AS.
Ophrys lutea subsp. *galilaea* (H. Fleischm. & Bornm.) Soó - G - Me; **Si**: AS.
Ophrys omegaifera H. Fleischm. subsp. *omegaifera* - G - EM; **Si**: AS.
Ophrys speculum Link - G - Me; **Si**: AS.
Ophrys speculum subsp. *regis-ferdinandii* (Renz) Soó - G - EM; **Si**: AS, as *O. regis-ferdinandii* (Renz) Buttler.
Ophrys tenthredinifera Willd. - G - Me; **Si**: AS.
Ophrys umbilicata Desf. subsp. *umbilicata* - G - Me; **Si**: AS.
Orchis anatolica Boiss. - G - EM; **Si**: AS.
Orchis anthropophora (L.) All. - G - MA; **Si**: AS.
Orchis italica Poir. - G - Me; **Si**: AS.
Serapias bergonii E.G. Camus - G - EM; **Si**: AC, as *Serapias vomeracea* subsp. *laxiflora* (Soó) Gölz & H.R. Reinhard, AS.
Serapias parviflora Parl. - G - Me; **Si**: AS.

Orobanchaceae
Bellardia trixago (L.) All. - T - MS; **Si**: AS.
Orobanche crenata Forssk. - T - ME; **Si**: AS.
Orobanche minor Sm. - T - EA; **Si**: AS.
Orobanche pubescens d'Urv. - T - Me; **Si**: AS, *Cattaneo's*.
Parentucellia latifolia (L.) Caruel - T - MS; **Si**: AS, as *Bellardia latifolia* (L.) Cuatrec.
Phelipanche mutelii (F.W. Schultz) Pomel - T - Pt; **Si**: AC, as *Orobanche ramosa* var. *brevispicata* (Ledeb.) Graham, AS, *C!*.
(*Orobanche ramosa* L. var. *ramosa*)
Carlström (1987) reports this species for Symi but it is in synonymy with *Orobanche ramosa* L. According to Dimopoulos & al. (2018) this species is confined to the W & C Mediterranean area and regarded as being absent from Greece. Greek records are almost certainly referring to *Phelipanche mutelii* (F.W. Schultz) Pomel.

Oxalidaceae
Oxalis corniculata L. - H - Pt; **Si**: AS, *C!*.
Oxalis pes-caprae L. - G - S-Afr.; **Si**: AS, *C!*.

Papaveraceae
Papaver dubium L. - T - EA; **Si**: AC, AS.
Papaver purpureomarginatum Kadereit - T - EM; **Si**: AS, *C!*.
Papaver rhoeas L. - T - Pt; **Si**: AC, AS, *C!*; **Sk**: *C*!*.

Phytolaccaceae
Phytolacca americana L. - P - N-Am.; **Si**: AS.
Phytolacca dioica L. - P - S-Am.; **Si**: AS.

Plantaginaceae
Plantago afra L. - T - Me; **Si**: AC, AS, *Cattaneo's*; **Sk**: AC.
Plantago albicans L. - H - Me; **Si**: AC, AS; **Sk**: AC.
Plantago arenaria Waldst. & Kit. - T - MS; **Si**: BR, as *Plantago indica* L.
Plantago cretica L. - T - EM; **Si**: AC, AS, *Cattaneo's*.
Plantago lagopus L. - T - Me; **Si**: AC, AS; **Sk**: AC.
Plantago weldenii Rchb. - T - Me; **Si**: AC, as *P. coronopus* subsp. *commutata* (Guss.) Pilg, AS, as *P. coronopus* subsp. *weldenii* (Rchb.) Arcang.; **Sk**: *C!*.

Platanaceae
Platanus orientalis L. - P - EM; **Si**: Cattaneo & Grano 2018.

Plumbaginaceae
Limonium hirsuticalyx Pignatti - C - Endemic; **Si**: *C*!*.
Limonium cfr. *hirsuticalyx / meyeri* - C - Endemic; **Sk**: *C*!*.
Limonium narbonense Mill. - H - MS; **Sk**: *Both* (LD 1573070).
Limonium ocymifolium - C - Endemic; **Si**: AC, AS.
Limonium sinuatum (L.) Mill. - H - Me; **Si**: AC, AS.

Poaceae
Achnatherum bromoides (L.) P. Beauv. - H - Me; **Si**: AC, as *Stipa bromoides* (L.) Dörfl., AS.
Achnatherum fallacinum H. Scholz & Raus - H - Endemic; **Si**: AS.
Aegilops biuncialis Vis. subsp. *biuncialis* - T - MS; **Si**: AC, AS.
Aegilops caudata L. - T - EM; **Si**: AS, as *Aegilops markgrafii* (Greuter) K. Hammer.
Aegilops geniculata Roth - T - Me; **Si**: AS.
Aegilops triuncialis L. subsp. *triuncialis* - T - MS; **Si**: AC, AS.
Aegilops umbellulata Zhuk. - T - EM; **Si**: AS.
Aira elegans Willd. ex Roem. & Schult. - T - MS; **Si**: AS, as *Aira elegantissima* Schur.
Andropogon distachyos L. - H - ST; **Si**: AC, AS.
Anisantha madritensis (L.) Nevski - T - MS; **Si**: AC, AS, as *Bromus madritensis* L.
Anisantha fasciculata (C. Presl) Nevski - T - Me; **Si**: AS, as *Bromus fasciculatus* C. Presl.
Anisantha sterilis (L.) Nevski. - T - MS; **Si**: AS, as *Bromus sterilis* L.
Aristida adscensionis subsp. *caerulescens* (Desf.) Auquier & J. Duvign. - H - SS; **Si**: AS.
Arrhenatherum palaestinum Boiss. - H - EM; **Si**: AC, AS.
Arundo donax L. - G - Co; **Si**: BR.
Avena barbata Link subsp. *barbata* - T - Me; **Si**: AC, AS, *C!*.

Avena sterilis L. subsp. *sterilis* - T - MS; **Si**: AS, *C!*.
Avena sterilis subsp. *ludoviciana* (Durieu) Gillet & Magne - T - MS; **Si**: AS.
Brachypodium retusum (Pers.) P. Beauv. - H - Me; **Si**: AS.
Briza maxima L. - T - ST; **Si**: AC, AS, *C!*.
Bromus alopecuros Poir. subsp. *alopecuros* - T - Me; **Si**: AC.
Bromus alopecuros subsp. *caroli-henrici* (Greuter) P.M. Sm. - T - EM; **Si**: AC, AS.
Bromus chrysopogon Viv. - T - MS; **Si**: AS.
Bromus intermedius Guss. - T - Me; **Si**: AC, AS.
Bromus lanceolatus Roth - T - Pt; **Si**: AC, AS.
Bromus scoparius L. - T - Me; **Si**: AC, AS.
Catapodium marinum (L.) C.E. Hubb. - T - MA; **Si**: AC, AS.
Catapodium rigidum (L.) C.E. Hubb. - T - Me; **Si**: AC, AS.
Cornucopiae cucullatum L. - T - EM; **Si**: AS.
Cynodon dactylon (L.) Pers. - G - Co; **Si**: AC, AS, *C!*; **Sk**: AC.
Cynosurus echinatus L. - T - Me; **Si**: AC, AS.
Dactylis glomerata subsp. *hispanica* (Roth) Nyman - H - Me; **Si**: AC, AS; **Sk**: AC.
Echinaria capitata (L.) Desf. - T - Me; **Si**: AC, AS.
Echinochloa crus-galli (L.) P. Beauv. - T - Co; **Si**: BR.
Gastridium phleoides (Nees & Meyen) C.E. Hubb. - T - Me; **Si**: AC.
Gastridium ventricosum (Gouan) Schinz & Thell. - T - Me; **Sk**: AC, *C!*.
Hordeum bulbosum L. - H - ST; **Si**: AC, AS.
Hordeum murinum subsp. *leporinum* (Link) Arcang. - T - Me; **Si**: AC, AS.
Hordeum vulgare subsp. *spontaneum* (K. Koch) Thell. - T - MS; **Si**: Ciferri 1944, AS.
Hyparrhenia hirta (L.) Stapf - H - ST; **Si**: AC, AS, *C!*.
Lagurus ovatus L. - T - Me; **Si**: AC, AS.
Lolium perenne L. - H - ES; **Si**: AC, AS.
Lolium rigidum Gaudin - T - ST; **Si**: AS.
Lolium temulentum L. - T - Co; **Si**: AS.
Melica ciliata subsp. *glauca* (F. W. Schultz) K. Richt. - H - Me; **Si**: Fae, AC, both as *M. ciliata* L.
Melica minuta L. - H - Me; **Si**: AC, AS.
Ochlopoa infirma (Kunth) H. Scholz - T - Me; **Si**: AC, AS, both as *Poa infirma* Kunth.
Parapholis incurva (L.) C.E. Hubb. - T - MA; **Si**: AC, AS; **Sk**: *C*!*.
Parapholis marginata Runemark - T - Me; **Si**: AC, AS.
Paspalum distichum L. - G - Neotrop.; **Si**: AC, as *Paspalum paspalodes* (Michx.) Scribn., AS.
Phalaris minor Retz. - T - ST; **Si**: AS.
Phalaris paradoxa L. - T - Me; **Si**: AC, AS.
Phleum subulatum (Savi) Asch. & Graebn. - T - Me; **Si**: AC, as *Phleum subulatum* subsp. *ciliatum* (Boiss.) Humphries, AS; **Sk**: AC, as *P. subulatum* subsp. *ciliatum* (Boiss.) Humphries, *C!*.
Phragmites frutescens H. Scholz - G - EM; **Si**: BR.
Piptatherum coerulescens (Desf.) P. Beauv. - H - Me; **Si**: AC, AS.
Piptatherum miliaceum (L.) Coss. subsp. *miliaceum* - C - Me; **Si**: AC, AS.
Poa bulbosa L. - H - Pt; **Si**: AC, AS.
Poa pelasgis H. Scholz - H - EM; **Si**: AC, AS.
Polypogon monspeliensis (L.) Desf. - T - ST; **Si**: AC, AS.
Psilurus incurvus (Gouan) Schinz & Thell. - T - Me; **Si**: AS.
Rostraria cristata (L.) Tzvelev - T - Co; **Si**: AC, AS.
Setaria adhaerens (Forssk.) Chiov. - T - Ct; **Si**: BR.
Setaria verticillata (L.) P. Beauv. - T - Ct; **Si**: BR.
Sorghum halepense (L.) Pers. - G - Co; **Si**: BR.

Sporobolus pungens (Schreb.) Kunth - G - ST; **Si**: AS.
Stipa capensis Thunb. - T - Me; **Si**: BR.
Trachynia distachya (L.) Link - T - MS; **Si**: AC, AS, as *Brachypodium distachyon* (L.) P. Beauv.
Vulpia ciliata Dumort. - T - MS; **Si**: AS.
Vulpia myuros (L.) C.C. Gmel. - T - Me; **Si**: AC, AS.

Polygonaceae
Emex spinosa (L.) Campd. - T - Me; **Si**: AS.
Polygonum aviculare L. - T - Ct; **Si**: BR.
Polygonum maritimum L. - H - ME; **Si**: BR.
Rumex bucephalophorus subsp. *aegaeus* Rech. f. - T - EM; **Si**: AS, *C!*.
Rumex pulcher subsp. *anodontus* (Hausskn.) Rech. f. - H - Me; **Si**: AS.
Rumex pulcher subsp. *woodsii* (De Not.) Arcang. - H - MS; **Si**: AC, AS; **Sk**: *Carlström* (LD 1973269), *C!*.
Rumex tuberosus subsp. *creticus* (Boiss.) Rech. f. - G - EM; **Si**: AC, AS, *C!*.

Portulacaceae
Portulaca oleracea aggr. - T - Co; **Si**: AC, AS, *C!*.

Posidoniaceae
Posidonia oceanica (L.) Delile - A - Me; **Si**: AS, *C!*.

Primulaceae
Anagallis arvensis L. - T - Co; **Si**: AC, AS; **Sk**: AC*, C!*.
Cyclamen persicum Mill. - G - Me; **Si**: AC, AS, *C!*; **Sk**: *C*!*.

Punicaceae
Punica granatum L. - P - SW-As.; **Si**: AS, *C!*.

Rafflesiaceae
Cytinus hypocistis (L.) L. - G - Me; **Si**: AS.

Ranunculaceae
Anemone coronaria L. - G - Me; **Si**: BR.
Anemone pavonina Lam. - G - Me; **Si**: AS.
Clematis cirrhosa L. - P - Me; **Si**: AC, AS.
Delphinium peregrinum L. - T - MS; **Si**: Fae, AC, AS, *C!*.
Myosurus sessilis S. Watson - T - Ct; **Si**: AC, as *Myosurus minimus* L., AS, as *Myosurus heldreichii* H. Lév.
Nigella arvensis subsp. *brevifolia* Strid - T - Endemic; **Si**: AC, AS.
Nigella arvensis subsp. *glauca* (Boiss.) N. Terracc. - T - EM; **Si**: AC, AS.
Ranunculus asiaticus L. - H - MS; **Si**: AS.
Ranunculus chius DC. - T - MS; **Si**: AS.
Ranunculus creticus L. - H - EM; **Si**: AC, AS, *Cattaneo's*.
Ranunculus muricatus L. - T - MS; **Si**: AC, AS.
Ranunculus paludosus Poir. - H - ME; **Si**: AS.
Ranunculus sardous Crantz - T - EA; **Si**: BR.
Staphisagria macrosperma Spach. - T - Me; **Si**: AC, AS, both as *Delphinium staphisagria* L., *C!*; **Sk**: *C*!*.

Rhamnaceae
Rhamnus lycioides subsp. *graeca* (Boiss. & Reut.) Tutin - P - EM; **Si**: BR, Cattaneo & Grano 2017.
Rhamnus pichleri C. K. Schneid. & Bornm. - P - EM; **Si**: AC, AS.

Rosaceae
Aphanes arvensis L. - T - EA; **Si**: AC, AS.
Crataegus azarolus L. - P - EM; **Si**: AC, AS, *C!*.
Prunus discolor (Spach) C. K. Schneid. - P - EM; **Si**: Cattaneo & Grano 2017 as *Prunus graeca* (Lindl.) Steud.
Pyrus spinosa Forssk. - P - Me; **Si**: Fae, AC, AS, *C!*.
Sanguisorba minor subsp. *balearica* (Nyman) Muños Garm. & C. Navarro - H - EA; **Si**: AS.
Sanguisorba verrucosa (G. Don) Ces. - H - Me; **Si**: AC, as *Sanguisorba minor* subsp. *magnolii* (Spach) Cout., AS, *Cattaneo's*.
Sarcopoterium spinosum (L.) Spach - C - EM; **Si**: AC, AS, *C!*; **Sk**: AC, *C!*.

Rubiaceae
Asperula brevifolia Vent. - H - EM; **Si**: AC, AS.
Crucianella imbricata Boiss. - T - EM; **Si**: AC, AS.
Crucianella latifolia L. - T - ME; **Si**: AC, AS, *Cattaneo's*.
Galium aparine L. - T - EA; **Si**: AS.
Galium brevifolium Sm. subsp. *brevifolium* - T - EM; **Si**: AC, AS, as *Galium brevifolium* Sm.
Galium canum subsp. *ovatum* Ehrend. - C - EM; **Si**: AC, AS, *C!*.
Galium floribundum Sm. subsp. *floribundum* - T - EM; **Si**: AC, AS, as *Galium floribundum* Sm.
Galium graecum L. subsp. *graecum* - C - EM; **Si**: AC, AS, as *Galium graecum* L., *Cattaneo's*.
Galium murale (L.) All. - T - Me; **Si**: AC, AS.
Galium setaceum Lam. - T - Me; **Si**: AC, AS.
Rubia tenuifolia d'Urv. - P - EM; **Si**: AC, AS.
Sherardia arvensis L. - T - EA; **Si**: AC, AS.
Theligonum cynocrambe L. - T - Me; **Si**: AC, AS, *C!*.
Valantia hispida L. - T - Me; **Si**: AS.
Valantia muralis L. - T - Me; **Si**: AS; **Sk**: *C*!*.

Rutaceae
Ruta chalepensis L. subsp. *chalepensis* - C - Me; **Si**: AC, AS.

Santalaceae
Osyris alba L. - P - Me; **Si**: AC, AS; **Sk**: AC.

Saxifragaceae
Saxifraga hederacea L. - T - EM; **Si**: AC, AS.

Scrophulariaceae
Scrophularia canina L. - H - ME; **Si**: AS.
Scrophularia lucida L. - H - Me; **Si**: AC, AS.
Scrophularia peregrina L. - T - Me; **Si**: AC, AS.
Verbascum aschersonii Murb. - H - EM; **Si**: AC, AS.
Verbascum glomeratum Boiss. - H - MS; **Si**: Fae, AC, AS.
Verbascum propontideum Murb. - H - EM; **Si**: AC, AS, *C!*.

Verbascum sinuatum L. - H - MS; **Si**: AC, AS, *C!*; **Sk**: AC, *C!*.
Verbascum symes Murb. & Rech. f. - H - EM; **Si**: Fae, AC, AS, *C!*.

Solanaceae
Datura inoxia Mill. - T - Am.; **Si**: RB.
Hyoscyamus albus L. - T - Me; **Si**: AC, AS.
Hyoscyamus aureus L. - H - EM; **Si**: BR.
Mandragora officinarum L. - H - Me; **Si**: AS; **Sk**: *C*!*.
Nicotiana glauca R.C. Graham - P - S-Am.; **Si**: Ciferri 1944, AS, *C!*.
Solanum nigrum L. subsp. *nigrum* - P - Co; **Si**: AS.
Solanum villosum Mill. - T - EA; **Si**: AS.

Tamaricaceae
Tamarix smyrnensis Bunge - P - EA; **Si**: BR.

Tropaeolaceae
Tropaeolum majus L. - T - S-Am; **Si**: Galanos 2016.

Urticaceae
Parietaria cretica L. - T - EM; **Si**: AC, AS, *C!*; **Sk**: *C*!*.
Parietaria judaica L. - H - EA; **Si**: AC, AS, *C!*.
Parietaria lusitanica L. - T - ME; **Si**: AS.
Urtica membranacea Poir. - T - MS; **Si**: AC, AS.
Urtica pilulifera L. - T - MS; **Si**: Fae, AC, AS; **Sk**: *C*!*.
Urtica urens L. - T - Co; **Si**: AS.

Valerianaceae
Centranthus calcitrapae (L.) Dufr. - T - Me; **Si**: AC, AS.
Centranthus ruber (L.) DC. - H - Me; **Si**: BR.
Valerianella coronata (L.) DC. - T - EA; **Si**: AS.
Valerianella discoidea (L.) Loisel. - T - Me; **Si**: AC, AS.
Valerianella eriocarpa Desv. - T - Me; **Si**: AC, AS, both as *Valerianella muricata* (Roem. & Schult.) W.H. Baxter.
Valerianella obtusiloba Boiss. - T - EM; **Si**: AS.

Verbenaceae
Vitex agnus-castus L. - P - MS; **Si**: AC, AS; **Sk**: AC.

Veronicaceae
Antirrhinum majus L. - C - W-Med.; **Si**: BR.
Cymbalaria longipes (Boiss. & Heldr.) A. Cheval. - H - EM; AC, AS, *Cattaneo's*.
Cymbalaria muralis G. Gaertn., B. Mey. & Scherb. - H - SW-Eur.; **Si**: Cattaneo & Grano 2018.
Kickxia commutata subsp. *graeca* (Bory & Chaub.) R. Fern. - H - EM; **Si**: AC, AS.
Kickxia elatine subsp. *crinita* (Mabille) Greuter - T - Me; **Si**: AC, AS; **Sk**: *Both* (LD 1331640), AC.
Linaria chalepensis (L.) Mill. - T - ME; **Si**: AS.
Linaria pelisseriana (L.) Mill. -T - MS; **Si**: AS.
Misopates orontium (L.) Raf. - T - ME; **Si**: AS.
Veronica arvensis L. - T - EA; **Si**: AC, AS.

Veronica cymbalaria Bodard - T - Me; **Si**: *C*!*.
Veronica polita Fr. - T - EA; **Si**: AS.

Zygophyllaceae
Tribulus terrestris L. - T - Co; **Si**: AS.

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