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CONTRIBUTION TO THE VASCULAR FLORA OF PAPASIDERO (NORTH-WESTERN CALABRIA, ITALY)

Abstract - A floristic survey of the Papisidero municipality (54.65 km²) was carried out from 2008 to 2011, allowing us to list 580 specific and infraspecific taxa (567 verified by us), belonging to 353 genera and 89 families. Several species are rather interesting from a phytogeographic and/or conservation point of view. 14 exotic species were also recorded, 10 of which are considered invasive in the regional flora. The most represented families are Asteraceae (66 taxa), Fabaceae (56), Lamiaceae (40), Poaceae (31), while most represented genera are *Trifolium* (11), *Euphorbia* and *Ophrys* (9), *Lathyrus* and *Geranium* (8). Biological and chorological spectra show a clear dominance of Hemicriptophytes and Mediterranean elements respectively, as one can expect based on the climatic conditions of the area at issues.

Key words - Biodiversity, flora, floristic richness, Italy, phytogeography, Calabria.

Riassunto - Contributo alla flora vascolare di Papisidero (Calabria nord-occidentale, Italia) - Negli anni tra il 2008 ed il 2011 è stata effettuata una ricerca floristica nell'ambito del territorio comunale di Papisidero (54,65 km²), che ha permesso la redazione di un elenco di 580 taxa specifici e sottospecifici (di cui 567 da noi verificati), appartenenti a 353 generi ed 89 famiglie. Svariate entità sono risultate di interesse fitogeografico e/o conservazionistico. Le specie esotiche identificate ammontano a 14, 10 delle quali sono considerate invasive per la flora regionale. Le famiglie maggiormente rappresentate sono le Asteraceae (66 taxa), Fabaceae (56), Lamiaceae (40), Poaceae (31); mentre i generi maggiormente rappresentati sono *Trifolium* (11 taxa), *Euphorbia* ed *Ophrys* (9), *Lathyrus* e *Geranium* (8). L'analisi degli spettri biologico e corologico mostra, rispettivamente, la prevalenza di Emicriptofite e di elementi Mediterranei, in accordo con le condizioni climatiche che caratterizzano l'area.

Parole chiave - Biodiversità, flora, ricchezza floristica, Italia, fitogeografia, Calabria.

INTRODUCTION

Papisidero municipality (province of Cosenza) represents an area of ecological importance located in the north-western part of Calabria (South Italy) (Fig. 1). It totally falls within the Pollino National Park, and it is partially protected by the natural reserve «Valle del Fiume Lao», instituted in 1987 for the protection of many undisturbed and well preserved landscapes, densely wooded and representing important habitats for some endemic animals. The municipality has as

extent of 54.65 km², ranging from 75 to 1,462 m a.s.l. The highest peak is Mt. Ciagola, while other reliefs does not reach 1,100 m.

Floristic information concerning Papisidero are quite poor. According to Bernardo *et al.* (2005), this area is scarcely known and investigated. Some useful data are available for the near upper part of the Lao river basin, thanks to the surveys carried out by botanist Biagio Longo (Longo, 1893, 1894, 1902).



Fig. 1 - Localization of the study area in Italy (top right) and within Calabria region.

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As concerns Papisidero, there is only one record provided by Longo, that is *Erica multiflora*. Other recently recorded plants have been published between 1990 and 2011 by various authors (Cenci *et al.*, 1990; Bianchini & Di Carlo, 1992; Brullo & Spampinato, 1997; Snogerup & Snogerup, 2001; Peruzzi & Gargano, 2003; Peruzzi & Gargano, 2004; Di Marco & Peruzzi, 2009; Di Marco & Peruzzi, 2010; Di Marco *et al.*, 2010; Di Marco *et al.*, 2011). It is a list of 53 taxa, 36 of which collected near the Lao river.

GEOLOGICAL, GEOMORPHOLOGICAL AND CLIMATIC FEATURES OF THE AREA

The so-called «Monte Ciagola group» belongs to the southern Apennine (Bernardo *et al.*, 2011). It is located near the Montea-Caramolo mountains, situated in the south-western portion of Pollino National Park, comprising mainly limestone and dolomitic-limestone formations. From the geological point of view, the «Monte Ciagola group» is very similar to these mountains, belonging to the same geological unit. In Papisidero municipality in detail crystalline-schist formations and Triassic flint are prevailing (Napolitano & Grisolia, 1991).

The geomorphology of this area is irregular: the landscape is mainly mountainous, with slopes, cliffs and several gorges due to the water erosion on carbonatic rocks. Actually, there are many springs and streams in the area. The Lao river is the main river: although it has a torrential regime, it is characterized by conspicuous mean rate flows and it represent the Calabrian river with the maximum low water rate flow (Napolitano & Grisolia, 1991).

Papisidero has a typical Mediterranean climate, with mild temperatures and heavy rainfall. In average 1470.9 mm of rainfall each year. Most rainy months are December (257 mm) and January (223.4 mm); July is the most dry (18 mm) (www.arpacal.it). The annual mean temperatures, in the Lao basin near Papisidero, is ranging from 12 to 14 °C (www.regione.calabria.it).

MATERIALS & METHODS

Field researches were carried out during the years 2008-2011 in 23 sampling localities (Fig. 2), which were selected in order to include the different habitat typologies, such as pastures, dry grasslands, rocky habitats, garigues, riparian areas, scrubs, woodlands, wet habitats and artificial environments.

For the species identification we mainly used Pignatti (1982), but in many cases we also considered updated monographs (Cenci *et al.*, 1990; Raffaelli, 1991; Brullo *et al.*, 1999; Davis, 1999; Ricceri & Arrigoni, 2000; Sno-

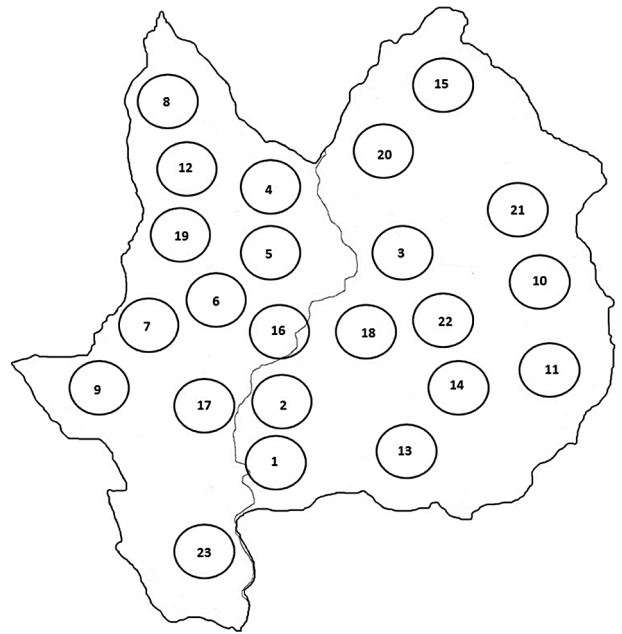


Fig. 2 - Studied area with sampling localities (circles are only indicative and do not reflect the reciprocal size of the localities) evidenced. 1: Varco - Riccetta - Scarica Pietre, 200-450 m. 2: Timpa - Monaco - Mancoso, 200-480 m. 3: Capo Monte - Coste del Pizzo, 220-558 m. 4: Massa - Vignali, 255-430 m. 5: Livito - Carpinello - Pantana, 380-580 m. 6: Foresta - Cozzo S. Angelo, 350-650 m. 7: S. Pietro, 897-969 m. 8: Brusento - Serra - Mt. Ciagola, 650-1462 m. 9: Prastiole - Valle della Pietra, 300-730 m. 10: S. Nocajo, 360-630 m. 11: Vernito, 500-660 m. 12: Piano delle Fosse - Melara, 810-1009 m. 13: Anzo La Guardia - Colle dei Cerri, 610-780 m. 14: Vitimoso - Castiglione - Rantuono, 300-498 m. 15: Nuppolaria - S. Elia, 350-507 m. 16: Fiume Lao, 140-190 m. 17: La Manca, 140-200 m. 18: Ombrice, 140-190 m. 19: Schiena del Fellaro - Timpone Sirio, 870-1039 m. 20: Montagna, 310-383 m. 21: Colle di Trodo, 480-699 m. 22: Canale Miriachi, 180-230 m. 23: L'Isola - Tremoli, 320-402 m.

gerup & Snogerup, 2001; Bernardo & Puntillo, 2002; Del Carratore & Garbari, 2002; Marchetti, 2004; Danin *et al.*, 2005; Tison & Malécot, 2007; Persson, 2008; Brullo *et al.*, 2009; GIROS, 2009; Gottschlich, 2009; Bacchetta *et al.*, 2010; Foggi *et al.*, 2011; Iamónico, 2011; Španiel *et al.*, 2011).

Scientific names are attributed according to Conti *et al.* (2005, 2007) or even most recent works. The family circumscription and systematic order follows Peruzzi (2010). Life forms and chorological types are assigned according to Pignatti (1982). Several species (*Cupressus sempervirens* L., *Pinus halepensis* Mill., *Pinus pinaster* Aiton s.l. and *Juglans regia* L.) are excluded from the biological and chorological analyses, being cultivated or coming from reforested areas. For each taxon all the localities of occurrence (coded as numbers according to Fig. 2) are recorded. Dried specimens (*exsiccata*) are preserved in PI and CLU. The taxa not found by us, but recorded in literature are marked by the symbol «*».

In order to establish the typology of exotic species at regional level (invasive, naturalized, casual), we referred to Celesti-Grappo *et al.* (2010). Finally, we checked Conti *et al.* (1997) to verify the regional conservation status for each taxon, according to the IUCN categories. The floristic richness expected for the area was calculated according to Cristofolini (1998), by means of the extrapolation of a locally valid linear regression formula between the logarithm of considered areas extent (in km²) and the logarithm of the respective taxa densities (n° taxa/km²) (Table 1). For this aim, we considered the subregional Calabrian floras published in the last 40 years (La Valva & Ricciardi, 1978; La Valva, 1984; Maiorca & Spampinato, 1994; Bernardo & Maiorca, 1997; Maiorca *et al.*, 2002; Musarella & Tripodi, 2004; Maiorca *et al.*, 2007; Maiorca & Puntillo, 2009). The regression line represents the expected taxa density logarithm, according to the area extent logarithm. By applying this methodology it is possible to obtain an objective measure of floristic diversity, irrespective of the size of the area.

Tab. 1 - Expected and observed floristic diversity in subregional Calabrian floras published in the last 40 years. The values of observed and expected n° taxa/km² ratio higher than 1 are marked in bold font.

Subregional Calabrian floras	Area (km ²)	n° taxa	Observed n° taxa/km ²	Expected n° taxa/km ²	Obs./exp.
Rupi di Pentidattilo	0.01	251	25100	16519.62	1.52
Valle dell'Argentino	39.8	846	21.26	17.27	1.23
Bosco di Mavigliano	6.5	602	92.62	77.43	1.2
Alto di Cassano	1	421	421	364.75	1.15
Foce del Crati	3	482	160.67	146.87	1.09
Isola di Dino	0.5	295	590	647.52	0.91
Laghi La Vota	1.85	243	131.35	219.17	0.6
Isola di Cirella	0.12	161	1341.67	2110.76	0.64

FLORISTIC LIST

LYCOPODIIDAE

Selaginellaceae

Selaginella denticulata (L.) Link - Ch rept - Stenomedit. - Loc.: 1, 2, 3, 4, 5, 9, 10, 11, 14, 15, 16, 17, 18, 20, 21, 22, 23

EQUISETIDAE

Equisetaceae

**Equisetum arvense* L. - G rhiz - Circumbor. - Loc.: 16 - Brullo & Spampinato (1997)

Equisetum ramosissimum Desf. - G rhiz - Circumbor. - Loc.: 1, 2, 4, 5, 10, 11, 14, 15, 16, 17, 18, 20, 21, 22, 23

Equisetum telmateja Ehrh. - G rhiz - Circumbor. - Loc.: 4, 10, 14

POLYPODIIDAE

Dennstaedtiaceae

**Pteridium aquilinum* (L.) Kuhn subsp. *aquilinum* - G rhiz - Cosmop. - Loc.: 16 - Brullo & Spampinato (1997)

Pteridaceae

Adiantum capillus-veneris L. - G rhiz - Pantrop. - Loc.: 1, 2, 3, 4, 5, 10, 11, 14, 15, 16, 17, 18, 20, 22, 23

Anogramma leptophyllum (L.) Link - T caesp - Cosmop. subtrop. - Loc.: 1, 4, 5

Aspleniaceae

Asplenium ceterach L. s.l. - H ros - Euras. temp. - Loc.: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 14, 15, 17, 18, 20, 21, 23

Asplenium onopteris L. - H ros - Subtrop. nesicol. - Loc.: 2, 4, 8, 15, 20

Asplenium scolopendrium L. subsp. *scolopendrium* - H ros - Circumbor. temp. - Loc.: 1, 2, 4, 10, 14, 15, 17, 22

Asplenium trichomanes L. subsp. *quadrivalens* D.E. Mey. - H ros - Cosmop. temp. - Loc.: 1, 2, 3, 4, 5, 7, 8, 9, 10, 11, 14, 15, 16, 17, 18, 20, 21, 23

Dryopteridaceae

Dryopteris filix-mas (L.) Schott - G rhiz - Subcosmop. - Loc.: 1, 2, 3, 4, 5, 9, 10, 11, 14, 15, 17, 20, 21, 22, 23

Polystichum aculeatum (L.) Roth - G rhiz - Eurasiat. - Loc.: 2, 3, 7, 8, 9, 14, 15

Polypodiaceae

Polypodium cambricum L. - H ros - Eurimedit. - Loc.: 1, 2, 3, 4, 5, 6, 7, 8, 10, 11, 14, 15, 16, 17, 18, 20, 21, 22, 23

PINIDAE

Cupressaceae

Cupressus sempervirens L. - P scap - E Medit. (Euri) - Loc.: 3, 6, 20, 21

Juniperus oxycedrus L. subsp. *deltoides* (R.P. Adams) N.G. Passal. - P scap - Eurimedit. - Loc.: 8, 14

Pinaceae

Pinus halepensis Mill. - P scap - Stenomedit. - Loc.: 6

Pinus pinaster Aiton s.l. - P scap - W Medit. (Steno) - Loc.: 2, 6, 20, 21, 23

MAGNOLIIDAE

Lauraceae

Laurus nobilis L. - P caesp - Stenomedit. - Loc.: 1, 2, 3, 4, 5, 10, 14, 15, 16, 17, 18, 20, 23

Araceae

Arum italicum Mill. subsp. *italicum* - G rhiz - Stenomedit. - Loc.: 1, 2, 3, 4, 5, 6, 10, 11, 14, 15, 20, 21, 23

Biarum tenuifolium (L.) Schott subsp. *tenuifolium* - G rhiz - Stenomedit. - Loc.: 8

Dioscoreaceae

Tamus communis L. - G rad - Eurimedit. - Loc.: 1, 2, 3, 4, 5, 7, 9, 10, 11, 14, 15, 17, 20

Colchicaceae

Colchicum lusitanum Brot. - G bulb - W Medit. Mount. - Loc.: 7, 8

Smilacaceae

Smilax aspera L. - NP - Palaeosubtrop. - Loc.: 1, 2, 3, 4, 5, 7, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 20, 22, 23

Liliaceae

Lilium bulbiferum L. subsp. *croceum* (Chaix) Jan - G bulb - Oroph. C Europ. - Loc.: 7, 8, 12, 14

Orchidaceae

Anacamptis coriophora (L.) R.M. Bateman, Pridgeon & M.W. Chase - G bulb - Eurimedit. - Loc.: 1, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 19, 20, 21, 23

Anacamptis morio (L.) R.M. Bateman, Pridgeon & M.W. Chase - G bulb - Europ. Caucas. - Loc.: 1, 2, 3, 4, 5, 10, 11, 12, 14, 15, 19, 20, 23

Anacamptis papilionacea (L.) R.M. Bateman, Pridgeon & M.W. Chase - G bulb - Eurimedit. - Loc.: 5, 7, 8, 9, 10, 11, 12, 13, 19, 20, 21

Anacamptis pyramidalis (L.) Rich. - G bulb - Eurimedit. - Loc.: 1, 2, 3, 4, 5, 6, 10, 11, 12, 13, 14, 15, 19, 20, 21, 23

Dactylorhiza maculata (L.) Soó subsp. *saccifera* (Brongn.) Diklic - G bulb - Palaeotemp. - Loc.: 14

Dactylorhiza romana (Sebast.) Soó subsp. *romana* - G bulb - Stenomedit. - Loc.: 13

Epipactis helleborine (L.) Crantz subsp. *latina* W.Rossi & E.Klein - G rhiz - Palaeotemp. - Loc.: 1, 2, 3, 4

Limodorum abortivum (L.) Sw. - G rhiz - Eurimedit. - Loc.: 1, 4

Neotinea tridentata (Scop.) R.M. Bateman, Pridgeon & M.W. Chase - G bulb - Eurimedit. - Loc.: 4

Ophrys apifera Huds. - G bulb - Eurimedit. - Loc.: 1, 2, 3, 4, 5, 8, 10, 11, 14, 19, 20, 21

Ophrys fusca Link. subsp. *lucana* (P. Delforge, Devillers-Tersch. & Devillers) Kreutz - G bulb - Stenomedit. - Loc.: 5

Ophrys holosericea (Burm. f.) Greuter subsp. *holosericea* - G bulb - Eurimedit. - Loc.: 1, 2

Ophrys holosericea (Burm. f.) Greuter subsp. *posidonia* (P. Delforge) Kreutz - G bulb - Endem. - Loc.: 1

Ophrys incubacea Bianca - G bulb - Eurimedit. - Loc.: 1, 2, 3, 4, 5, 11, 16, 22

Ophrys lacaitae Lojac. - G bulb - Anfiadriat. - Loc.: 5

Ophrys lutea Cav. subsp. *lutea* - G bulb - Stenomedit. - Loc.: 1, 2

Ophrys tenthredinifera Willd. - G bulb - Stenomedit. - Loc.: 13, 14, 21

Ophrys x cosentiana H. Baumann & Künkele - G bulb - Endem. - Loc.: 2

Orchis italica Poiret - G bulb - Stenomedit. - Loc.: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 19, 20, 21, 23

Orchis pauciflora Ten. - G bulb - Stenomedit. - Loc.: 13, 19, 21

Orchis provincialis Balb. ex Lam. & DC. - G bulb - Stenomedit. - Loc.: 13

Orchis quadripunctata Cirillo ex Ten. - G bulb - NE Stenomedit. - Loc.: 7, 8, 10, 12, 13, 19, 21

Orchis simia Lam. - G bulb - Eurimedit. - Loc.: 1, 5, 7, 8, 9, 10, 11, 12, 15, 19, 21

Platanthera chlorantha (Custer) Rchb. - G bulb - Eurosib. - Loc.: 4, 5, 7, 9, 10, 20

Serapias lingua L. - G bulb - Stenomedit. - Loc.: 1, 2, 3, 4, 5, 10, 14, 19

Serapias vomeracea (Burm. f.) Briq. subsp. *longipetala* (Ten.) H. Baumann & Künkele - G bulb - Stenomedit. - Loc.: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 19, 20, 21, 23

Spiranthes spiralis (L.) Chevall. - G rhiz - Europ. Caucas. - Loc.: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 17, 20, 21, 23

Iridaceae

Crocus longiflorus Rafin. - G bulb - Subendem. - Loc.: 3, 6, 7, 8, 12

Gladiolus x byzantinus Mill. - G bulb - Stenomedit. - Loc.: 1, 7

Gladiolus dubius Guss. - G bulb - S Europ. - Loc.: 5, 14, 20, 21, 23

Gladiolus italicus Miller - G bulb - Eurimedit. - Loc.: 2, 4, 5, 9, 10, 11, 14, 15, 20, 23

Hermodactylus tuberosus (L.) Salisb. - G rhiz - N Medit. (Steno) - Loc.: 1, 3, 4, 5, 6, 8, 9, 10, 11, 12, 14, 15, 20, 21

Xanthorrhoeaceae

Asphodeline liburnica (Scop.) Rchb. - G rhiz - NE Medit. (Steno) Anfiadriat. - Loc.: 1, 5, 8, 12, 13, 14, 19, 21

Asphodeline lutea (L.) Rchb. - G rhiz - E Medit. - Loc.: 1, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 19, 20, 21, 23

Asphodelus ramosus L. subsp. *ramosus* - G rhiz - Stenomedit. - Loc.: 1, 2, 12, 19

Amaryllidaceae

Allium flavum L. subsp. *flavum* - G bulb - Eurimedit. - Loc.: 8, 12

Allium porrum L. subsp. *porrum* - G bulb - Eurimedit. - Loc.: 1, 5, 10, 11, 14, 15

Allium pendulinum Ten. - G bulb - W Stenomedit. - Loc.: 1, 2, 3, 4, 7, 9, 10, 11, 13, 14, 15, 20, 21, 23

Allium sphaerocephalon L. - G bulb - Palaeotemp. - Loc.: 1, 2, 3, 4, 5, 6, 9, 10, 11, 14, 15, 17, 20, 21, 23

Allium tenuiflorum Ten. - G bulb - Stenomedit. - Loc.: 1, 6, 7, 8, 12, 20, 21, 23

Allium vineale L. - G bulb - Eurimedit. - Loc.: 1, 2, 5, 6, 10, 11, 14, 15, 20, 21, 23

Galanthus reginae-olgae Orph. subsp. *reginae-olgae* - G bulb - Europ. Caucas. - Loc.: 1

Narcissus poeticus L. - G bulb - Oroph. S Europ. - Loc.: 19

Sternbergia lutea (L.) Ker Gawl. - G bulb - Medit. Mount. - Loc.: 2, 3

Asparagaceae

Agave americana L. - P caesp - N Amer. - Loc.: 1, 2, 3, 4
Anthericum liliago L. - G bulb - Submedit. Subatl. - Loc.: 3, 20, 21

Asparagus acutifolius L. - G rhiz - Stenomedit. - Loc.: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 17, 19, 20, 21, 23

Muscari commutatum Guss. - G bulb - CE Medit. - Loc.: 1, 2, 4, 5, 10, 11, 13, 14, 15, 19, 21

Muscari comosum (L.) Mill. - G bulb - Eurimedit. - Loc.: 1, 2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 13, 14, 15, 17, 19, 20, 21, 23

Ornithogalum montanum Cirillo - G bulb - NE Medit. Mount. - Loc.: 1, 2, 3, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 19, 20, 21, 23

Prospero autumnalis (L.) Speta subsp. *autumnalis* - G bulb - Eurimedit. - Loc.: 5, 6, 7, 8, 12, 13, 15, 19

Ruscus aculeatus L. - G rhiz - Eurimedit. - Loc.: 1, 2, 3, 4, 5, 6, 7, 8, 9, 14, 15, 17, 20, 23

Juncaceae

Juncus bufonius L. - T caesp - Cosmop. - Loc.: 2, 5, 13

Juncus inflexus L. - H caesp - Palaeotemp. - Loc.: 4, 5, 7, 10, 11, 13, 14, 15, 20, 23

Luzula forsteri (Sm.) DC. - H caesp - Eurimedit. - Loc.: 7, 13

Cyperaceae

Carex caryophyllea Latourr. - H scap - Eurasiat. - Loc.: 1, 2, 3, 4, 5, 6, 7, 9, 10, 11, 13, 14, 15, 17, 23

Carex divulsa Stokes - H caesp - Eurimedit. - Loc.: 1, 2, 3, 4, 5, 7, 9, 10, 11, 13, 14, 15, 17, 20, 21, 23 - Reported also in Brullo & Spampinato (1997)

Carex pendula Huds. - C caesp - Eurasiat. - Loc.: 1, 2, 4, 10, 14, 16, 17, 18, 22 - Reported also in Brullo & Spampinato (1997)

**Carex remota* L. - H caesp - Europ. Caucas. - Loc.: 16 - Brullo & Spampinato (1997)

Cyperus longus L. - G rhiz - Palaeotemp. - Loc.: 4, 5, 10, 11, 13, 14, 20, 23

Scirpoides holoschoenus (L.) Sojak - G rhiz - Medit. Atl. - Loc.: 2, 3, 4, 5, 7, 10, 11, 13, 14, 15, 20

Poaceae (Gramineae)

Achnatherum bromoides (L.) P. Beauv. - H caesp - Stenomedit. - Loc.: 4, 5, 7, 13, 21

Achnatherum calamagrostis (L.) P. Beauv. - H caesp - Oroph. S Europ. - Loc.: 1, 3, 4, 5, 14, 15, 17, 20, 21

Alopecurus myosuroides Huds. - T scap - Subcosmop. - Loc.: 2

Ampelodesmos mauritanicus (Poiret) Dur. et Sch. - H caesp - SW Stenomedit. - Loc.: 1, 2, 3, 4, 5, 6, 8, 9, 10, 12, 14, 15, 17, 19, 20, 21, 23

Anthoxanthum odoratum L. subsp. *odoratum* - H caesp - Eurasiat. - Loc.: 1, 2, 3, 4, 5, 6, 8, 9, 10, 11, 13, 14, 15, 19, 20, 21, 23

Arundo collina Ten. - G rhiz - Stenomedit. - Loc.: 1, 2, 4, 10, 14, 15, 16, 18, 20

Avena barbata Pott ex Link - T scap - Eurimedit. Turan. - Loc.: 1, 2, 3, 4, 5, 9, 10, 11, 14, 15, 20, 21, 23

Brachypodium phoenicoides (L.) Roem. et Schult. - H caesp - W Stenomedit. - Loc.: 1, 2, 3, 4, 5, 9, 10, 11, 14, 15, 20, 23

**Brachypodium sylvaticum* (Huds.) P. Beauv. - H caesp - Palaeotemp. - Loc.: 16 - Brullo & Spampinato (1997)

Briza maxima L. - T scap - Palaeosubtrop. - Loc.: 1, 2, 3, 4, 5, 9, 10, 11, 13, 14, 15, 16, 20, 21, 23

Briza minor L. - T scap - Subcosmop. - Loc.: 11, 14

Bromopsis erecta (Huds.) Fourr. subsp. *erecta* - H caesp - Palaeotemp. - Loc.: 2, 4, 8, 9, 10, 12, 13

Bromus intermedius Guss. - T scap - Eurimedit. - Loc.: 2, 4, 5, 10, 11, 12, 14, 15, 20, 21, 23

Catapodium rigidum (L.) C.E. Hubb. ex Dony - T scap - Eurimedit. - Loc.: 1, 3, 4, 5, 10, 11, 14, 15, 20, 23

Cynosurus echinatus L. - T scap - Eurimedit. - Loc.: 2

Dactylis glomerata L. subsp. *hispanica* (Roth) Nyman - H caesp - Stenomedit. - Loc.: 1, 2, 3, 4, 5, 6, 9, 10, 11, 12, 14, 15, 17, 20, 21, 23

Dasypyrum villosum (L.) P. Candargy, non Borbàs - T scap - Eurimedit. Turan. - Loc.: 1, 2, 3, 4, 5, 7, 10, 11, 12, 13, 14, 15, 20, 21, 23

Digitaria sanguinalis (L.) Scop. s.l. - T scap - Cosmop. - Loc.: 1, 2, 3, 4, 10, 11, 14

Festuca rubra L. - H caesp - Subcosmop. - Loc.: 1, 4, 5, 14, 20, 21

Hyparrhenia hirta (L.) Stapf subsp. *hirta* - H caesp - Palaeotrop. - Loc.: 1, 2, 3, 4, 5, 6, 10, 11, 14, 15, 17, 20, 21, 23

Koeleria splendens C. Presl subsp. *grandiflora* (Bertol. ex Schultes) Domin - H caesp - Medit. Mount. - Loc.: 1, 2, 3, 4, 5, 6, 8, 9, 10, 12, 13, 14, 15, 17, 19, 20, 21

Lagurus ovatus L. - T scap - Eurimedit. - Loc.: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 17, 20, 21, 23

Leucopoa calabrica (Hack.) H. Scholz & Foggi - H caesp - Endem. - Loc.: 1, 4

Lolium rigidum Gaudin s.l. - T scap - Palaeosubtrop. - Loc.: 1, 2, 4, 11, 14

Melica uniflora Retz. - H caesp - Palaeotemp. - Loc.: 4, 7, 8, 9, 13, 21

Poa annua L. - T caesp - Cosmop. - Loc.: 1, 2, 3, 4, 5, 10, 11, 14, 23

Schedonorus arundinaceus (Schreb.) Dumort. subsp. *mediterraneus* (Hackel) H. Scholz & Valdés - H caesp - Palaeotemp. - Loc.: 10, 14

Schedonorus arundinaceus (Schreb.) Dumort. subsp. *arundinaceus* - H scap - Palaeotemp. - Loc.: 5, 6, 9, 12 - Reported also in Cenci *et al.*, 1990

Setaria verticillata (L.) P. Beauv. - T scap - Thermocosmop. - Loc.: 1, 2, 3, 4, 5, 9, 10, 11, 12, 14, 15, 19, 21, 23
Sorghum halepense (L.) Pers. - G rhiz - Thermocosmop. - Loc.: 1, 2, 3, 4

Triticum neglectum (Req. ex Bertol.) Greuter - T scap - Medit. Turan. - Loc.: 1, 2, 3, 4, 5, 10, 11, 14, 15, 20, 23

Papaveraceae

Papaver rhoeas L. subsp. *rhoeas* - T scap - E Medit. - Loc.: 1, 2, 3, 4, 5, 9, 10, 11, 13, 14, 15, 17, 20, 21, 23

Fumariaceae

Fumaria capreolata L. subsp. *capreolata* - T scap - Eurimedit. - Loc.: 1, 2, 3, 4, 5, 6, 9, 10, 11, 12, 13, 14, 15, 20, 23

Fumaria officinalis L. subsp. *wirtgenii* (W.D.J. Koch) Arcang. - T scap - Subcosmop. - Loc.: 1, 3, 13, 19, 20

Ranunculaceae

Anemone hortensis L. subsp. *hortensis* - G bulb - N Medit. - Loc.: 3, 4, 5, 6, 7, 9, 10, 11, 12, 13, 14, 15, 20, 21, 23

Anemone apennina L. subsp. *apennina* - G rhiz - SE Europ. - Loc.: 4, 5, 6, 7, 8, 10, 12, 13, 15, 19, 20, 21, 23

Aquilegia vulgaris auct. Fl. Ital. - H scap - Palaeotemp. - Loc.: 20

**Clematis vitalba* L. - P lian - Europ. Caucas. - Loc.: 16 - Brullo & Spampinato (1997)

Clematis flammula L. - P lian - Eurimedit. - Loc.: 1, 2, 3, 4, 5, 6, 7, 9, 10, 11, 13, 14, 15, 16, 17, 18, 20, 23

Consolida ajacis (L.) Schur - T scap - Eurimedit. - Loc.: 1, 2, 4, 5, 6, 10, 21, 23

Consolida pubescens (DC.) Soó - T scap - W Medit. - Loc.: 1, 2, 4, 5, 7, 9, 10, 11, 12, 13, 14, 15, 17, 20

Ficaria verna Huds. subsp. *verna* - G bulb - Eurasiat. - Loc.: 1, 2, 4, 5, 10, 11, 14, 15, 16, 17, 21, 22, 23

Helleborus foetidus L. subsp. *foetidus* - Ch suffr - Subatl. - Loc.: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 13, 14, 15, 17, 20, 21, 22, 23

Hepatica nobilis Mill. - G rhiz - Circumbor. - Loc.: 4

Nigella damascena L. - T scap - Eurimedit. - Loc.: 1, 2, 3, 4, 5, 7, 9, 10, 11, 12, 13, 14, 15, 17, 19, 20, 21, 23

Ranunculus lanuginosus L. - H scap - Europ. Caucas. - Loc.: 2, 4, 10

Ranunculus millefoliatus Vahl - H scap - Medit. Mount. - Loc.: 1, 2, 4, 5, 10, 11, 12, 13, 14, 20, 21

Ranunculus muricatus L. - T scap - Eurimedit. - Loc.: 5, 10

Ranunculus neapolitanus Ten. - H scap - NE Medit. - Loc.: 1, 2, 3, 4, 5, 9, 10, 11, 14, 15, 20, 23

Ranunculus sardous Crantz - T scap - Eurimedit. - Loc.: 2, 10, 13, 14

Saxifragaceae

Saxifraga tridactylites L. - T scap - Eurimedit. - Loc.: 4, 10, 14, 16, 19

Saxifraga bulbifera L. - H scap - NE Medit. - Loc.: 12, 13, 19, 21

Crassulaceae

Sedum acre L. - Ch succ - Europ. Caucas. - Loc.: 4

Sedum album L. - Ch succ - Eurimedit. - Loc.: 1, 8

Sedum amplexicaule DC. subsp. *tenuifolium* (Sm. in Sibth. & Sm.) Greuter - Ch succ - Stenomedit. - Loc.: 4, 10

Sedum cepaea L. - T scap - Submedit. Subatl. - Loc.: 1, 2, 3, 4

Sedum dasyphyllum L. - Ch succ - Eurimedit. - Loc.: 4, 5

Sedum hispanicum L. - T scap - SE Europ. (Pont.) - Loc.: 10

Sedum ochroleucum Chaix - Ch succ - N Medit. Mount. - Loc.: 1, 2, 3, 4, 5, 10, 14, 15, 20, 21

Umbilicus horizontalis (Guss.) DC. - G bulb - Stenomedit. - Loc.: 1, 2, 3, 4, 5, 9, 10, 14, 15, 16, 17, 18, 20, 22

Geraniaceae

Erodium cicutarium (L.) L'Hér. - T scap - Subcosmop. - Loc.: 1, 2, 3, 4, 5, 6, 7, 9, 10, 11, 12, 13, 14, 15, 17, 19, 20, 21, 23

Erodium malacoides (L.) L'Hér subsp. *malacoides* - H bienn - Medit. Macarones. - Loc.: 1, 5, 6, 11, 13, 14, 15, 23

Geranium columbinum L. - T scap - Europ. S Siber. - Loc.: 1, 2, 3, 4, 5, 6, 10, 11, 13, 14, 15, 20, 21, 23

Geranium dissectum L. - T scap - Subcosmop. - 1, 2, 3, 4, 10, 13, 14, 20

Geranium lucidum L. - T scap - Eurimedit. - Loc.: 1, 2, 3, 4, 5, 6, 8, 10, 14, 20

Geranium molle L. - T scap - Subcosmop. - Loc.: 1, 2, 3, 4, 5, 6, 9, 13

Geranium pyrenaicum Burm. f. subsp. *pyrenaicum* - H scap - Eurimedit. - Loc.: 1, 2, 4, 5, 6, 10, 11, 13, 14, 15, 16, 20, 21, 23

Geranium robertianum L. - H bienn - Subcosmop. - Loc.: 1, 2, 3, 4, 5, 9, 10, 11, 12, 14, 15, 20, 21, 22, 23

Geranium sanguineum L. - H scap - Europ. Caucas. - Loc.: 19

Geranium versicolor L. - G rhiz - NE Medit. Mount. (Anfiadriat.) - Loc.: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 14, 15, 17, 18, 20, 21, 22, 23 - Reported also in Brullo & Spampinato (1997)

Lythraceae

Lythrum junceum Banks & Sol. - H scap - Stenomedit. Macarones. - Loc.: 2, 16

Onagraceae

Circaea lutetiana L. subsp. *lutetiana* - H scap - Circumbor. (Subatl.) - Loc.: 22

Epilobium hirsutum L. - H scap - Subcosmop. - Loc.: 4, 10, 11, 14, 15, 20, 22, 23

Epilobium palustre L. - H scap - Circumbor. - Loc.: 7, 10

Myrtaceae

Myrtus communis L. - P caesp - Stenomedit. - Loc.: 1, 2, 3, 4, 5, 7, 8, 9, 10, 11, 14, 16, 17, 18, 20, 21, 23

Fabaceae (Leguminosae)

Anthyllis vulneraria L. s.l. - H scap - Eurimedit. - Loc.: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 19, 20, 21, 23

Bituminaria bituminosa (L.) C. H. Stirt. - H scap - Eurimedit. - Loc.: 1, 2, 3, 4, 5, 6, 7, 9, 10, 11, 12, 13, 14, 15, 17, 19, 20, 21, 23

Colutea arborescens L. - P caesp - Eurimedit. (Subpont.) - Loc.: 3

Cytisophyllum sessilifolium (L.) O. Lang - P caesp - SW Europ. - Loc.: 1, 2, 3, 4, 7, 8, 9, 14, 15, 20, 21, 23

Cytisus spinescens C. Presl - Ch suffr - Anfiadriat. - Loc.: 3, 5, 6, 8, 12, 19, 21

Emerus major Mill. s.l. - NP - C Europ. - Loc.: 1, 2, 3, 4, 5, 7, 9, 10, 11, 14, 15, 16, 17, 18, 20, 21, 23

Hippocrepis biflora Spreng. - T scap - Eurimedit. - Loc.: 1

Hippocrepis comosa L. subsp. *comosa* - H caesp - C and S Europ. - Loc.: 1, 2, 3, 5, 6, 7, 9, 11, 12, 20, 21

Hippocrepis glauca Ten. - H caesp - S Europ. - Loc.: 5

Lathyrus aphaca L. subsp. *aphaca* - T scap - Eurimedit. - Loc.: 1, 2, 3, 4, 5, 6, 9, 10, 11, 12, 14, 15, 20, 21, 23

Lathyrus cicera L. - T scap - Eurimedit.(?) - Loc.: 1, 2, 4, 5, 10, 11, 12, 13, 14, 15, 20, 21

Lathyrus digitatus (Bieb.) Fiori - G rhiz - Pont. - Loc.: 8, 12

Lathyrus latifolius L. - H scand - S Europ. - Loc.: 1, 2, 3, 4, 5, 7, 9, 10, 11, 13, 14, 15, 19, 20, 21, 23

Lathyrus niger (L.) Bernh. - G rhiz - Europ. Caucas. - Loc.: 13

Lathyrus pratensis L. - H scap - Palaeotemp. - Loc.: 1, 2, 4, 5, 9, 10, 14, 15, 20

Lathyrus setifolius L. - T scap - Eurimedit. - Loc.: 1, 2, 3, 4, 5, 10, 11, 14, 15

Lathyrus venetus (Mill.) Wohlf. - G rhiz - Pont. - Loc.: 1, 2, 3, 4, 9, 10, 14, 15, 20, 23

Lotus corniculatus L. s.l. - H scap. - Cosmop. - Loc.: 1, 3, 4, 5, 9, 10, 11, 12, 13, 14, 15, 20, 23

Lotus dorycnium L. - H scap - S Europ. Pont. - Loc.: 1, 2, 3, 4, 5, 6, 7, 9, 10, 11, 13, 14, 15, 19, 20, 21, 23

Lotus edulis L. - T scap - Stenomedit. - Loc.: 1, 2, 3, 4, 5, 6, 10, 11, 12, 14, 15, 20, 21, 23

Lotus hirsutus L. - Ch suffr - Eurimedit. - Loc.: 1, 2, 3, 4, 5, 9, 10, 11, 14, 15, 19, 20, 21, 23

Lotus ornithopodioides L. - T scap - Stenomedit. - Loc.: 1, 2, 3, 4, 5, 9, 10, 11, 14, 15, 19, 20, 23

Lotus tenuis Waldst.& Kit.ex Willd. - H scap - Palaeotemp. - Loc.: 2, 7, 9, 20

Medicago lupulina L. - T scap - Palaeotemp. - Loc.: 9, 14, 19, 20, 21

Medicago minima (L.) L. - T scap - Eurimedit. C Asiat. - Loc.: 3, 4, 13, 14, 19

Medicago sativa L. - H scap - Cosmop. - Loc.: 2, 5, 6, 7, 10, 11, 13, 14, 15, 20

Melilotus albus Medik. - T scap - Subcosmop. - Loc.: 4, 10, 11, 14

Melilotus indicus (L.) All. - T scap - Subcosmop. - Loc.: 1, 2, 4, 7, 14

Melilotus italicus (L.) Lam. - T scap - N Medit. - Loc.: 1, 2, 3, 4, 5, 11, 14, 20, 23

Onobrychis alba (W. et K.) Desv. subsp. *alba* - Ch suffr - Eurimedit. - Loc.: 19

Ononis oligophylla Ten. - T scap. - Endem. - Loc.: 5, 6, 7, 8, 13, 14

Ononis pusilla L. subsp. *pusilla* - H scap - Eurimedit. - Loc.: 4, 5, 12

Ononis spinosa L. - Ch suffr - Eurimedit. - Loc.: 6, 13

Pisum sativum L. subsp. *sativum* - T scap - Subcosmop. - Loc.: 1, 2, 3, 4, 5, 9, 10, 11, 12, 13, 14, 15, 20, 21, 23

Robinia pseudacacia L. - P scap - N Amer. - Loc.: 3, 15, 20, 21, 23 - Reported also in Brullo & Spampinato (1997)

Scorpiurus muricatus L. - T scap - Eurimedit. - Loc.: 1, 2, 3, 4, 5, 9, 10, 11, 14, 15, 20, 23

Spartium junceum L. - P caesp - Eurimedit. - Loc.: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 13, 14, 15, 17, 19, 20, 21, 23

Sulla coronaria (L.) Medik. - H scap - W Medit. - Loc.: 21

Trifolium angustifolium L. subsp. *angustifolium* - T scap - Eurimedit. - Loc.: 1, 2, 3, 4, 5, 10, 12, 14, 15, 17, 19, 20, 21, 23

Trifolium brutium Ten. - T scap - Endem. - Loc.: 12, 19

Trifolium campestre Schreb. - T scap - W Palaeotemp. - Loc.: 1, 2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 14, 15, 20, 23

Trifolium fragiferum L. subsp. *fragiferum* - H rept - (W) Palaeotemp. - Loc.: 1, 3, 5, 9, 13, 14, 23

Trifolium hybridum L. - H caesp - S Europ. - Loc.: 1, 2, 4, 5, 6, 8, 10, 14, 15, 20

Trifolium lappaceum L. - T scap - Eurimedit. - Loc.: 1, 3, 4, 5

Trifolium ochroleucum Hudson - H caesp - Pont. Eurimedit. - Loc.: 12, 13

Trifolium repens L. subsp. *repens* - H rept - Subcosmop. - Loc.: 1, 2, 3, 4, 5, 9, 10, 11, 14, 15, 20, 21, 23

Trifolium resupinatum L. - T rept - Palaeotemp. - Loc.: 3, 5, 10

Trifolium scabrum L. - T rept - Eurimedit. - Loc.: 3, 6, 8, 9, 10, 12, 17, 19, 21

Trifolium stellatum L. - T scap - Eurimedit. - Loc.: 1, 2, 3, 4, 5, 10, 11, 12, 13, 14, 15, 17, 19, 20, 21, 23

Tripodion tetraphyllum (L.) Fourr. - T scap - Stenomedit. - Loc.: 1, 2, 3, 4, 5, 9, 10, 11, 13, 14, 15, 17, 19, 20, 23

Vicia bithynica (L.) L. - T scap - Eurimedit. - Loc.: 2, 4, 5, 10, 11, 14, 15

Vicia grandiflora Scop. - H scap - SE Europ. Pont. - Loc.: 1, 2, 3, 4, 5, 10, 13, 14, 20

Vicia lathyroides L. - T scap - Eurimedit. - Loc.: 5

Vicia melanops Sm. - T scap - S Europ. - Loc.: 1, 2, 4, 5, 10, 11, 14, 15, 20

Vicia ochroleuca Ten. subsp. *ochroleuca* - H scap - W Medit. Mount. - Loc.: 4
Vicia villosa Roth subsp. *varia* (Host) Corb. - T scap - Eurimedit. - Loc.: 1, 2, 5, 6, 8, 9, 10, 11, 12, 13, 14, 15, 19, 20, 21, 23

Polygalaceae

Polygala major Jacq. - H scap - E Medit. Pont. - Loc.: 1, 2, 3, 4, 5, 6, 7, 9, 10, 11, 12, 13, 14, 15, 17, 19, 20, 21, 23

Polygala monspeliaca L. - T scap - Stenomedit. - Loc.: 1, 2, 6, 13, 14

Polygala vulgaris L. - H scap - Eurasiat. - Loc.: 3, 4, 5, 7, 9, 10, 12, 19

Rosaceae

Agrimonia eupatoria L. subsp. *eupatoria* - H scap - Subcosmop. - Loc.: 1, 2, 3, 4, 5, 6, 7, 9, 10, 11, 14, 15, 16, 18, 19, 20, 21, 22, 23

Aremonia agrimonoides (L.) DC. subsp. *agrimonoides* - H ros - Oroph. NE Medit. - Loc.: 1, 2, 3, 7, 8, 9, 13, 14
Fragaria vesca L. subsp. *vesca* - H rept - Cosmop. - Loc.: 1, 2, 8, 10, 11, 13, 14, 15, 20, 22, 23 - Reported also in Brullo & Spampinato (1997)

Geum urbanum L. - H scap - Circumbor. - Loc.: 1, 2, 4, 10, 11, 14, 15, 16, 17, 18, 20, 22, 23

Crataegus monogyna Jacq. - P caesp - Palaeotemp. - Loc.: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 17, 19, 20, 21, 22, 23 - Reported also in Brullo & Spampinato, 1997

Potentilla micrantha Ramond ex DC. - H ros - Eurimedit. - Loc.: 13

Potentilla pedata Willd. ex Hornem. - H scap - (Euri) W Medit. - Loc.: 8, 12

Potentilla reptans L. - H ros - Subcosmop. - Loc.: 1, 2, 4, 5, 10, 11, 14, 15, 20, 23

Poterium sanguisorba L. subsp. *balearicum* (Burg. ex Nyman) Stace - H scap - Subcosmop. - Loc.: 1, 3, 5, 6, 8, 9, 10, 12, 13, 14, 15, 19, 20, 21

Prunus domestica L. - P scap - Uncertain origin - Loc.: 1, 2, 4, 5, 14

Pyrus communis L. - P scap - Loc.: 1, 2, 4, 5, 14

Rosa canina L. - NP - Palaeotemp. - Loc.: 1, 2, 3, 4, 5, 14

Rosa sempervirens L. - NP - Stenomedit. - Loc.: 1, 2, 3, 4, 9, 10, 11, 14, 15, 17, 20, 23

Rubus ulmifolius Schott - NP - Eurimedit. - Loc.: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23 - Reported also in Brullo & Spampinato (1997)

Rhamnaceae

Rhamnus alaternus L. subsp. *alaternus* - P caesp - Stenomedit. - Loc.: 1, 2, 3, 4, 5, 9, 10, 14, 15, 16, 17, 20, 23 - Reported also in Bianchini & Di Carlo (1992)

Ulmaceae

**Ulmus minor* Mill. - P scap - Europ. Caucas. - Loc.: 16 - Brullo & Spampinato (1997)

Cannabaceae

**Humulus lupulus* L. - P lian - Europ. Caucas. - Loc.: 16 - Brullo & Spampinato (1997)

Moraceae

Ficus carica L. - P scap - Medit. Turan. - Loc.: 1, 2, 3, 4, 5, 7, 9, 10, 14, 16, 18, 22, 23 - Reported also in Brullo & Spampinato (1997)

Urticaceae

Parietaria judaica L. - H scap - Eurimedit. Macarones. - Loc.: 1, 2, 3, 4, 5, 9, 10, 11, 14, 16, 18, 23

Cucurbitaceae

Bryonia dioica Jacq. - G rhiz - Eurimedit. - Loc.: 1, 10

Fagaceae

Castanea sativa Mill. - P scap - SE Europ. - Loc.: 1, 2, 4, 5, 7, 10, 11, 14, 15, 20, 23

Fagus sylvatica L. subsp. *sylvatica* - P scap - C Europ. - Loc.: 8

Quercus cerris L. - P scap - N Eurimedit. - Loc.: 13

Quercus ilex L. subsp. *ilex* - P scap - Stenomedit. - Loc.: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23

Quercus pubescens Willd. subsp. *pubescens* - P scap - SE Europ. (sub-pont.) - Loc.: 1, 2, 3, 4, 5, 9, 10, 11, 14, 15, 20, 23

Juglandaceae

Juglans regia L. - P scap - SW Asiat. (?) - Loc.: 1, 2, 4, 5, 10, 11, 14, 15, 16, 20, 21, 23 - Reported also in Brullo & Spampinato (1997)

Betulaceae

Alnus cordata (Loisel.) Loisel. - P scap - Anfiadriat. - Loc.: 1, 2, 7, 10, 11, 13, 14, 15, 16, 17, 18, 20, 22, 23

Alnus glutinosa (L.) Gaertn. - P scap - Palaeotemp. - Loc.: 2, 4, 7, 10, 11, 14, 15, 16, 17, 18, 20, 21, 22, 23 - Reported also in Brullo & Spampinato (1997)

Carpinus orientalis Mill. subsp. *orientalis* - P caesp - Pont. - Loc.: 1, 2, 3, 4, 5, 7, 9, 10, 11, 14, 15, 16, 18, 20, 23

Corylus avellana L. - P caesp - Europ. Caucas. - Loc.: 1, 2, 4, 5, 7, 9, 10, 11, 13, 14, 15, 17, 20, 23

Ostrya carpinifolia Scop. - P scap - Circumbor. - Loc.: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 14, 15, 16, 17, 18, 20, 21, 22, 23

Celastraceae

Euonymus europaeus L. - P caesp - Eurasiat. - Loc.: 1, 2, 3, 4, 14, 16, 23

Oxalidaceae

Oxalis pes-caprae L. - G bulb - S Afr. - Loc.: 1, 2, 3, 5, 14, 15

Oxalis stricta L. - H scap - S Amer. - Loc.: 3, 16

Euphorbiaceae

- Euphorbia barrelieri* Savi subsp. *thessala* (Formànek) Bornm. - Ch suffr - NE Medit. - Loc.: 20, 21
Euphorbia characias L. - NP - Stenomedit. - Loc.: 3
Euphorbia exigua L. subsp. *exigua* - T scap - Eurimedit. - Loc.: 1, 2, 11, 14
Euphorbia falcata L. subsp. *falcata* - T scap - Eurimedit. Turan. - Loc.: 7
Euphorbia helioscopia L. subsp. *helioscopia* - T scap - Cosmopol. - Loc.: 1, 2, 3, 4, 5, 10, 11, 14, 15, 20, 23
Euphorbia hirsuta L. - G rhiz - Medit. Macarones. - Loc.: 13, 14
Euphorbia meuseli Geltman - Ch suffr - Endem. - Loc.: 4, 8
Euphorbia peplus L. - T scap - Cosmop. - Loc.: 2, 3, 4, 10, 11, 14
Euphorbia spinosa L. - Ch suffr - N Medit. - Loc.: 6, 8, 12, 13, 19
Mercurialis annua L. - T scap - Palaeotemp. - Loc.: 1, 2, 3, 4, 5, 10, 11, 14, 15, 20, 21, 23

Linaceae

- Linum bienne* Mill. - H bienn - Eurimedit. Subatl. - Loc.: 1, 2, 4, 7, 9, 13, 14, 19, 20, 21
Linum strictum L. - T scap - Stenomedit. - Loc.: 14, 20
Linum tenuifolium L. - Ch suffr - Submedit. Pont. - Loc.: 1, 2, 3, 4, 5, 6, 7, 9, 10, 11, 12, 13, 14, 15, 17, 19, 20, 21, 23
Linum trigynum L. - T scap - Eurimedit. - Loc.: 1, 3, 4, 6, 13, 14

Hypericaceae

- Hypericum hircinum* L. subsp. *majus* (Aiton) N. K. B. Robson - NP - Stenomedit. - Loc.: 1, 2, 4, 5, 10, 11, 14, 15, 16, 17, 18, 20, 22, 23 - Reported also in Brullo & Spampinato, 1997
Hypericum perforatum L. - H scap - Stenomedit. - Loc.: 1, 2, 3, 4, 5, 6, 10, 11, 12, 14, 20
Hypericum perforatum L. - H scap - Subcosmop. - Loc.: 1, 2, 3, 4, 7, 9, 13, 14, 15, 17, 19, 21, 22, 23

Salicaceae

- Populus nigra* L. - P scap - Palaeotemp. - Loc.: 10, 11, 14, 15, 16
Salix alba L. - P scap. - Palaeotemp. - Loc.: 14, 15, 16, 18 - Reported also in Brullo & Spampinato (1997)

Violaceae

- Viola aethnensis* (DC.) Strobl subsp. *splendida* (W. Becker) Merxm. & Lippert - H scap - Endem. - Loc.: 8, 19, 21
Viola odorata L. - H ros - Eurimedit. - Loc.: 1, 2, 4, 5, 10, 11, 14, 15, 20, 21, 23
Viola reichenbachiana Jordan ex Boreau - H scap - Eurosib. - Loc.: 1, 2, 4, 5, 7, 10, 11, 14, 15, 16, 17, 18, 20, 22, 23 - Reported also in Brullo & Spampinato (1997)

Resedaceae

- Reseda lutea* L. subsp. *lutea* - H scap - Europ. - Loc.: 3, 5, 12, 13, 19, 20, 21

Brassicaceae (Cruciferae)

- Aethionema saxatile* (L.) R. Br. subsp. *saxatile* - Ch suffr - Medit. Mount. - Loc.: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 17, 19, 20, 21, 23
Alyssum alyssoides (L.) L. - T scap - Eurimedit. - Loc.: 8, 19
Alyssum diffusum Ten. subsp. *calabricum* Španiel, Marhold, N. G. Passal. & Zozomová-Lihová - Ch suffr - Endem. - Loc.: 8, 19
Arabis collina Ten. subsp. *collina* - H scap - Oroph. Medit. - Loc.: 1, 2, 3, 4, 5, 6, 7, 10, 11, 13, 14, 19, 20, 21, 22, 23
Arabis collina Ten. subsp. *rosea* (DC.) Minuto - H scap - Endem. - Loc.: 1, 3, 5
Arabis verna (L.) R. Br. - T scap - Stenomedit. - Loc.: 1, 2, 3, 4, 5, 6, 10, 11, 13, 14, 15, 16, 17, 20, 21, 22, 23
Aurinaria saxatilis (L.) Desv. subsp. *megalocarpa* (Hauskn.) T.R. Dudley - Ch suffr - Medit. Mount. - Loc.: 1, 2, 4, 5, 10, 15, 20 - Reported also in Bianchini & Di Carlo (1992)
Biscutella didyma L. subsp. *didyma* - T scap - S Medit. Turan. - Loc.: 1, 5, 9, 12
Bunias erucago L. - T scap - N Medit. - Loc.: 4, 10, 14, 20
Calepina irregularis (Asso) Thell. - T scap - Medit. Turan. - Loc.: 1, 2, 3, 4, 5, 10, 15
Capsella bursa-pastoris (L.) Medicus subsp. *bursa-pastoris* - H bienn - Cosmop. - Loc.: 1, 2, 3, 4, 5, 10, 11, 13, 14, 15, 20, 23
Cardamine chelidonia L. - T scap - Subendem. - Loc.: 4, 9
Cardamine graeca L. - T scap - N Medit. - Loc.: 1, 10
Cardamine hirsuta L. - T scap - Cosmop. - Loc.: 1, 2, 3, 10
Hesperis laciniata All. - H scap - N Medit. Mount. - Loc.: 12
Iberis umbellata L. - T scap - N Stenomedit. - Loc.: 20
Lepidium graminifolium L. subsp. *graminifolium* - H scap - Eurimedit. - Loc.: 1, 2, 3, 4, 5
Lunaria annua L. - H scap - SE Europ. - Loc.: 1, 2, 3, 4, 5, 10, 11, 14, 15, 16, 18, 20, 22, 23
Matthiola fruticulosa (L.) Maire subsp. *fruticulosa* - Ch suffr - Subendem. (in Dalmatia also) - Loc.: 21
Moricandia arvensis (L.) DC - T scap - S Medit. Sahar. - Loc.: 1, 2
Nasturtium officinale R. Br. subsp. *officinale* - H scap - Cosmop. - Loc.: 2, 10
Raphanus raphanistrum L. subsp. *raphanistrum* - T scap - Circumbor. - Loc.: 1, 13
Sisymbrium officinale (L.) Scop. - T scap - Subcosmop. - Loc.: 2, 5, 10, 11, 14, 15, 23
Thlaspi praecox Wulfen - T scap - Eurimedit. - Loc.: 19

Sapindaceae

Acer opalus Mill. subsp. *obtusatum* (Waldst. & Kit. ex Willd.) Gams - P scap - SE Europ. - Loc.: 1, 2, 4, 7, 9, 14, 15, 17, 20, 21, 22, 23

Simaroubaceae

Ailanthus altissima (Miller) Swingle - P scap - China - Loc.: 1, 2, 3, 4, 5, 10, 16, 18, 20, 23

Anacardiaceae

Pistacia lentiscus L. - P caesp - S Medit. Macarones. - Loc.: 1, 2, 3, 4, 5, 7, 9, 10, 14, 16, 17, 20, 21, 23

Pistacia terebinthus L. subsp. *terebinthus* - P caesp - Eurimedit. - Loc.: 1, 3, 4, 5, 9, 14

Malvaceae

Althaea cannabina L. - H scap - S Europ. W-Asiat. (Subpont.) - Loc.: 1, 2, 4, 5, 10, 11, 14, 15, 20, 21, 23

Malva cretica Cav. s.l. - T scap - Stenomedit. - Loc.: 1, 2, 10, 11, 14

Malva nicaeensis All. - T scap - Stenomedit. - Loc.: 5, 9, 10, 20

Malva sylvestris L. subsp. *sylvestris* - H scap - Subcosmop. - Loc.: 1, 2, 4, 5, 8, 10, 11, 13, 14, 15, 16, 20, 21, 23

Malva thuringiaca (L.) Vis. - H scap - S Siber. (Subpont.) - Loc.: 7, 11, 14

Cistaceae

Cistus creticus L. subsp. *eriocephalus* (Viv.) Greuter & Burdet - NP - Stenomedit. - Loc.: 3, 5, 10, 14, 20, 21, 23

Cistus salvifolius L. - NP - Stenomedit. - Loc.: 1, 2, 3, 4, 5, 6, 8, 9, 10, 11, 12, 13, 14, 15, 17, 20, 21, 23

Fumana ericifolia Wallr. - Ch suffr - Stenomedit. - Loc.: 1, 2, 3, 4, 5, 6, 9, 10, 11, 12, 14, 15, 17, 19, 20, 21, 23

Helianthemum nummularium (L.) Mill. subsp. *obscurum* (Celak.) Holub - Ch suffr - Europ. Caucas. - Loc.: 1, 2, 3, 4, 5, 6, 9, 10, 11, 12, 14, 15, 17, 19, 20, 21, 23

Santalaceae

Osyris alba L. - NP - Eurimedit. - Loc.: 1, 2, 3, 4, 5, 6, 8, 10, 12, 13, 14, 17, 20, 21, 23

Thesiaceae

Thesium bavarum Schrank - G rad - SE Europ. Pont. - Loc.: 3, 4, 5, 6, 12, 19, 20, 21

Thesium humifusum DC. - Ch suffr - Eurimedit. - Loc.: 8, 12, 13, 14

Viscaceae

Viscum album L. subsp. *album* - P ep - Eurasiat. - Loc.: 2, 14

Plumbaginaceae

Plumbago europaea L. - Ch frut - Stenomedit. - Loc.: 1, 2, 3, 4, 5, 6, 7, 8, 9, 12, 13, 15, 20, 23

Polygonaceae

Persicaria hydropiper (L.) Delarbre - T scap - Circumbor. - Loc.: 10, 16, 18, 22

Persicaria lapathifolia (L.) Delarbre - T scap - Cosmop. - Loc.: 10, 14

Polygonum aviculare L. - T rept - Cosmop. - Loc.: 5, 10, 11, 14, 15, 20, 23

Rumex conglomeratus Murray - H scap - CW Euras. - Loc.: 2, 10, 15

Caryophyllaceae

Cerastium glomeratum Thuill. - T scap - Subcosmop. - Loc.: 1, 2, 3, 4, 5, 10, 11, 14, 19, 20

Cerastium granulatum (Huter, Porta & Rigo) Chiov. - T scap - Endem. - Loc.: 1, 19

Cerastium lacaitae Barberis, Bechi & Miceli - H scap - Endem. - Loc.: 12, 19

Cerastium pumilum Curtis - T scap - Eurimedit. - Loc.: 19

Cerastium tomentosum L. - Ch suffr - Endem. - Loc.: 19, 21

Dianthus armeria L. subsp. *armeria* - H scap - Europ. Caucas. - Loc.: 5, 13, 14

Dianthus longicaulis Ten. - H scap - Medit. Mont. - Loc.: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 19, 20, 21, 23 - Reported also in Bianchini & Di Carlo (1992)

Moehringia muscosa L. - H caesp - Oroph. S and C Europ. - Loc.: 3, 4

Petrorhagia prolifera (L.) P. W. Ball & Heywood - T scap - Eurimedit. - Loc.: 3, 5, 6, 7, 8

Petrorhagia saxifraga (L.) Link - H caesp - Eurimedit. - Loc.: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 19, 20, 21, 23

Saponaria officinalis L. - H scap - Eurosiber. - Loc.: 2, 4, 7, 9, 14

Silene catholica (L.) W. T. Aiton - H ros - Anfiadriat. - Loc.: 1, 14

Silene italica (L.) Pers. subsp. *sicula* (Ucria) Jeanm. - H ros - N Medit. Mount. - Loc.: 1, 2, 3, 4, 10, 14, 15, 20

Silene latifolia Poir. - H bienn - Stenomedit. - Loc.: 1, 2, 3, 4, 5, 6, 7, 9, 10, 11, 14, 15, 20

Silene otites (L.) Wibel - H ros - Euras. - Loc.: 21

Silene paradoxa L. - H ros - N Medit. Mount - Loc.: 1, 3, 4, 5, 6, 8, 9, 12, 21

Silene vulgaris (Moench) Garcke subsp. *vulgaris* - H scap - Subcosmop. - Loc.: 1, 2, 3, 4

Stellaria neglecta Weihe - T scap - Palaeotemp. - Loc.: 1, 2, 3, 4, 5, 10, 11, 14, 15, 20, 21

Amaranthaceae

Chenopodium album L. s.l. - T scap - Subcosmop. - Loc.: 1, 2, 3, 4, 10, 11, 14

Chenopodium murale L. - T scap - Subcosmop. - Loc.: 2, 10, 14, 15, 20

Portulacaceae

Portulaca nitida (Danin & H. & G. Baker) Ricceri & Arrigoni - T scap - Subcosmop. - Loc.: 1, 2, 3, 14

Cactaceae

Opuntia ficus-indica (L.) Mill. - P succ - Neotropic. - Loc.: 2, 3

Cornaceae

Cornus sanguinea L. - P caesp - Eurasiat. temp. - Loc.: 1, 2, 3, 4, 5, 6, 7, 9, 11, 14, 15, 17, 20, 23 - Reported also in Brullo & Spampinato (1997)

Primulaceae

Cyclamen repandum Sm. subsp. *repandum* - G bulb - N Medit. - Loc.: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 13, 14, 15, 16, 17, 18, 20, 21, 22, 23

Lysimachia arvensis (L.) U. Manns. & Anderb. - T rept - Subcosmop. - Loc.: 1, 2, 3, 4, 5, 9, 10, 11, 12, 13, 14, 15, 19, 20, 21, 23

Lysimachia nemorum L. - H scap - Europ. Caucas. - Loc.: 14

Primula vulgaris Hudson subsp. *vulgaris* - H ros - Europ. Caucas. - Loc.: 1, 2, 4, 5, 10, 11, 13, 14, 15, 16, 17, 20, 21, 22, 23

Samolus valerandi L. - H scap - Subcosmop. - Loc.: 2, 4, 5, 14, 16, 18, 20, 22

Ericaceae

Arbutus unedo L. - P - Stenomedit. - Loc.: 3, 4, 5, 9, 14, 17, 20, 23

Erica arborea L. - P caesp - Stenomedit. - Loc.: 3, 4, 6, 7, 8, 9, 13, 14, 15, 20, 21, 23

Erica multiflora L. - NP - Stenomedit. - Loc.: 1, 2, 3, 4, 5, 6, 7, 9, 10, 11, 13, 14, 15, 17, 20, 21, 23

Rubiaceae

Asperula aristata L. f. subsp. *longiflora* (Waldst. & Kit.) Hayek - H scap - Medit. Mount. - Loc.: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 14, 15, 17, 20, 21, 23

Asperula laevigata L. - H scap - W and C Medit. - Loc.: 1, 4, 6, 19

Crucianella latifolia L. - T scap - Stenomedit. - Loc.: 1, 3, 4, 10, 11, 14, 20, 21

Cruciata glabra (L.) Ehrend. - H scap - Eurasiat. - Loc.: 1, 3, 10, 11, 15, 20

Cruciata laevipes Opiz - H scap - Eurasiat. - Loc.: 10, 11, 14

Galium aparine L. - T scap - Eurasiat. - Loc.: 1, 2, 3, 4, 5, 10, 11, 14, 15, 20, 21, 23

Galium lucidum All. subsp. *lucidum* - H scap - Eurimedit. - Loc.: 1, 2, 3, 4, 5, 10, 11, 12, 13, 14, 15, 20, 21

Galium verum L. - H scap - Eurasiat. - Loc.: 1, 3, 4, 5, 6, 10, 14, 21

Plocama calabrica (L. f.) M. Backlund & Thulin - NP - S Medit. - Loc.: 1, 3, 4, 5, 6, 8, 10, 14, 15, 20, 21

Rubia peregrina L. subsp. *longifolia* (Poir.) O. Bolòs - P lian - Stenomedit. Macarones. - Loc.: 1, 2, 3, 4, 5, 9, 10, 14, 15, 17, 20, 22, 23 - Reported also in Bianchini & Di Carlo (1992)

Sherardia arvensis L. - T scap - Subcosmop. - Loc.: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 17, 19, 20, 21, 23

Valantia muralis L. - T scap - Stenomedit. - Loc.: 2

Gentianaceae

Blackstonia perfoliata (L.) Huds. - T scap - Eurimedit. - Loc.: 1, 2, 3, 4, 5, 6, 7, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23

Centaurium erythraea Rafn - T scap - Palaeotemp. - Loc.: 1, 2, 3, 4, 5, 6, 7, 9, 10, 11, 12, 13, 14, 15, 17, 19, 20, 21, 23

Apocynaceae

Asclepias fruticosus L. - P caesp - S Afr. - Loc.: 5, 7, 9, 14, 17

Vinca major L. subsp. *major* - Ch rept - Eurimedit. - Loc.: 1, 2, 3, 4, 5, 7, 8, 9, 10, 11, 13, 14, 15, 16, 17, 18, 20, 21, 22, 23 - Reported also in Brullo & Spampinato (1997)

Boraginaceae

Anchusa azurea Mill. - H scap - Eurimedit. - Loc.: 1, 2, 14

Anchusella cretica (Mill.) Bigazzi, E. Nardi & Selvi - T scap - NE Stenomedit. - Loc.: 19

Borago officinalis L. - T scap - Eurimedit. - Loc.: 1, 2, 3, 4, 5, 10, 11, 14, 15, 20, 23

Buglossoides purpureocaerulea (L.) I.M. Johnst. - H scap - S Europ. Pont. - Loc.: 1, 2, 3, 4, 5, 7, 9, 14, 16, 17, 18, 20, 21, 22, 23

Cerithe major L. subsp. *major* - T scap - Stenomedit. - Loc.: 1, 2, 4, 5, 10, 11, 14, 15, 20, 23

Cynoglossum cheirifolium L. subsp. *cheirifolium* - H bienn - Stenomedit. - Loc.: 5, 8, 12, 19

Cynoglossum creticum Mill. - H bienn - Eurimedit. - Loc.: 1, 2, 3, 4, 5, 9, 10, 11, 12, 13, 14, 15, 20, 21, 23

Echium italicum L. - H bienn - Eurimedit. - Loc.: 1, 2, 3, 4, 5, 6, 7, 9, 10, 11, 12, 13, 14, 15, 20, 21, 23

Echium plantagineum L. - H bienn - Eurimedit. - Loc.: 1, 2, 4, 5, 7, 9

Echium vulgare L. - H bienn - Europ. - Loc.: 1, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 17, 20, 21, 23

Heliotropium europaeum L. - T scap - Eurimedit. Turan. - Loc.: 1, 2, 3, 4, 5, 7, 9, 10, 11, 14, 15, 16, 20, 21, 23

Myosotis ramosissima Rochel ex Schult. subsp. *ramosissima* - T scap - W Asiat. - Loc.: 1, 2, 3, 4, 5, 6, 9, 10, 11, 12, 13, 14, 15, 19, 20, 21, 23

Symphytum bulbosum K. F. Schimp. - G rhiz - SE Europ. - Loc.: 1, 2, 4, 14

Convolvulaceae

Calystegia sepium (L.) R. Br. subsp. *sepium* - H scand - Palaeotemp. - Loc.: 1, 2, 3, 4, 5, 10, 11, 14, 15, 17, 20, 23

Convolvulus arvensis L. - G rhiz - Cosmop. - Loc.: 2, 5, 6, 7, 9, 10, 20

Convolvulus cantabrica L. - H scap - Eurimedit. - Loc.: 1, 2, 3, 4, 5, 6, 8, 10, 11, 12, 13, 14, 15, 17, 20, 21, 23

Cuscuta epithymum (L.) L. - T par - Eurasiat. temp. - Loc.: 8

Solanaceae

**Solanum dulcamara* L. - NP - Palaeotemp. - Loc.: 16 - Brullo & Spampinato (1997)

Solanum nigrum L. - T scap - Cosmop. - Loc.: 2, 5, 8, 9, 11, 14, 15, 16, 18, 20, 21, 23

Oleaceae

Fraxinus ornus L. subsp. *ornus* - P scap - Euri N Medit. Pont. - Loc.: 1, 2, 3, 4, 5, 7, 9, 10, 11, 14, 15, 16, 17, 18, 20, 21, 22, 23

Ligustrum vulgare L. - NP - Europ. W Asiat. - Loc.: 1, 2, 3, 4, 5, 9, 10, 14, 16, 17, 20, 23 - Reported also in Brullo & Spampinato (1997)

Olea europaea L. - P caesp - Stenomedit. - Loc.: 1, 2, 3, 4, 5, 14

Phillyrea latifolia L. - P caesp - Stenomedit. - Loc.: 1, 2, 3, 4, 9, 11, 14, 15 - Reported also in Bianchini & Di Carlo, 1992

Plantaginaceae (Veronicaceae)

Cymbalaria muralis Gaertn., B. Mey. & Scherb. - H scap - Subcosmop. - Loc.: 1, 2, 3, 4, 5, 10, 11, 14, 15, 20, 23

Digitalis ferruginea L. - H scap - Oroph. NE Medit. - Loc.: 13, 19

Digitalis lutea L. subsp. *australis* (Ten.) Arcang. - H scap - Endem. - Loc.: 1, 3, 4, 6, 7, 8, 9, 14, 15, 17, 20

Kickxia commutata (Bernh. ex Rchb.) Fritsch - H rept - Stenomedit. - Loc.: 9

Kickxia elatine (L.) Dumort. - T scap - Eurimedit. - Loc.: 1, 2

Plantago lanceolata L. - H ros - Cosmop. - Loc.: 1, 2, 3, 4, 5, 6, 9, 10, 11, 14, 15, 16, 17, 18, 20, 21, 23

Plantago major L. - H ros - Subcosmop. - Loc.: 1, 2, 3, 4, 5, 10, 11, 14, 15, 20, 23

Plantago sempervirens Crantz - Ch suffr - W Medit. (Euri-) - Loc.: 1, 5

Veronica beccabunga L. - H rept - Eurasiat. - Loc.: 18

Veronica cymbalaria Bodard s.l. - T scap - Eurimedit. - Loc.: 1, 3, 4, 5, 10, 11, 14, 15, 20, 21, 23

Veronica persica Poiret - T scap - Subcosmop. - Loc.: 1, 2, 3, 4, 5, 9, 10, 11, 14, 15, 20, 23

Scrophulariaceae

Scrophularia canina L. - H scap - Eurimedit. - Loc.: 1, 2, 3, 4, 5, 6, 10, 13, 14, 15, 20, 21

Scrophularia peregrina L. - T scap - Stenomedit. - Loc.: 2, 3, 5, 9, 10, 11, 16, 23

Scrophularia scopoli Hoppe ex Pers. - H scap - Oroph. Eurasiat. - Loc.: 7, 8

Verbascum macrurum Ten. - H bienn - NE (Steno) Medit. Mount. - Loc.: 1, 2, 8, 13

Verbascum phlomoides L. - H bienn - Eurimedit. - Loc.: 13

Verbascum sinuatum L. - H bienn - Eurimedit. - Loc.: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 20, 21, 23

Lamiaceae (Labiatae)

Ajuga reptans L. - H scap - Eurasiat. - Loc.: 1, 2, 4, 5, 10, 11, 13, 14, 15, 20, 23

Ballota nigra L. - H scap - Eurimedit. - Loc.: 2, 4, 12

**Ballota hispanica* (L.) Benth. - Ch frut - Oroph. NE

Medit. - Bianchini & Di Carlo (1992)

Clinopodium alpinum (L.) O. Kunze subsp. *meridionalis* (Nyman) Govaerts - Ch suffr - Oroph. S Europ. - Loc.: 1, 3, 4, 6, 12, 19, 20, 21

**Clinopodium grandiflorum* (L.) Kuntze - H scap - Oroph. Medit. and Submedit. - Loc.: 16 - Brullo & Spampinato, 1997

Clinopodium nepeta (L.) O. Kunze subsp. *nepeta* - H scap - Medit. Mount. - Loc.: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23

Clinopodium nepeta (L.) O. Kunze subsp. *sylvaticum* (Bromf.) Peruzzi & F. Conti - H scap - Europ. Caucas. - Loc.: 1, 4, 8, 9, 11, 15, 20, 21, 22

Clinopodium vulgare L. - H scap - Circumbor. - Loc.: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 13, 14, 15, 16, 17, 18, 20, 21, 22, 23

Lamium album L. subsp. *album* - H scap - Eurasiat. Temp. - Loc.: 1, 2, 3, 4, 5, 10, 11, 14, 15, 16, 18, 20, 21, 22, 23

Lamium flexuosum Ten. - H scap - NW Medit. Mount. - Loc.: 10, 18

Lamium galeobdolon L. subsp. *montanum* (Pers.) Hayek - H scap - Europ. Caucas. - Loc.: 4, 14

Lamium garganicum L. subsp. *garganicum* - H scap - Medit. Mount. - Loc.: 19

Lycopus europaeus L. - H scap - Circumbor. - Loc.: 1, 14, 15, 16, 22

Melissa officinalis L. - H scap - Eurimedit. - Loc.: 2, 4, 5, 10, 16, 18, 20, 22

Melittis melissophyllum L. subsp. *albida* (Guss.) P.W. Ball - H scap - NE Medit. Mount. - Loc.: 1, 2, 3, 4, 5, 7, 8, 9, 10, 11, 13, 14

Mentha aquatica L. subsp. *aquatica* - H scap - Subcosmop. - Loc.: 2, 4, 7, 10, 14, 20, 22

Mentha longifolia (L.) Huds. - H scap - Palaeotemp. - Loc.: 1, 2, 3, 4, 5, 7, 9, 10, 11, 13, 14, 15, 18, 20, 21, 22, 23

Mentha pulegium L. subsp. *pulegium* - H scap - Subcosmop. - Loc.: 3, 8, 13, 15

**Mentha suaveolens* Ehrh. subsp. *suaveolens* - H scap - Eurimedit. - Loc.: 16 - Brullo & Spampinato (1997)

Micromeria consentina (Ten.) N. Terracc. - Ch suffr - Endem. - Loc.: 1, 5, 12

Micromeria graeca (L.) Benth. ex Rchb. subsp. *tenuifolia* (Ten.) Nyman - Ch suffr - Endem. - Loc.: 1, 2, 3, 4, 6, 7, 8, 9, 10, 11, 13, 14, 15, 16, 17, 19, 20, 21, 22, 23

Origanum vulgare L. subsp. *viridulum* (Martin-Donos) Nyman - H scap - SE Medit. (Steno) - Loc.: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 17, 19, 20, 21, 22, 23

Prunella laciniata (L.) L. - H scap - Eurimedit. - Loc.: 2, 3, 5, 9, 14

Prunella vulgaris L. subsp. *vulgaris* - H scap - Circumbor. - Loc.: 1, 2, 4, 10, 11, 13, 14, 15, 16, 17, 18, 20, 22, 23

Salvia officinalis L. - Ch suffr - E Stenomedit. - Loc.: 3, 5, 8, 20, 21

Salvia verbenaca L. - H scap - Medit. Atl. - Loc.: 1, 2, 3, 4, 5, 6, 9, 10, 14, 17, 20

Satureja montana L. - Ch suffr - Oroph. W Medit. - Loc.: 1, 3, 4, 6, 7, 8, 9, 12, 14, 15, 19, 20, 21

Scutellaria columnae All. subsp. *gussonei* (Ten.) Arcang. - H scap - Endem. - Loc.: 1, 2, 3, 4, 9, 17

Sideritis italica (Mill.) Greuter & Burdet - Ch suffr - E Medit. Turan. - Loc.: 8, 12, 19

Sideritis romana L. subsp. *romana* - T scap - Stenomedit. - Loc.: 1, 2, 3, 4, 5, 8, 10, 11, 13, 14, 19

Stachys germanica L. - H scap - Eurimedit. - Loc.: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 13, 14, 15, 23

Stachys officinalis (L.) Trevis. - H scap - Europ. Caucas. - Loc.: 6, 8, 12, 13

Stachys recta L. subsp. *grandiflora* (Caruel) Arcang. - H scap - Oroph. N Medit. - Loc.: 1, 2, 3, 4, 7, 12, 14, 19, 20, 21, 23 - Reported also in Bianchini & Di Carlo (1992)

Stachys sylvatica L. - H scap - Eurosib. - Loc.: 1, 2, 4, 16, 19 - Reported also in Brullo & Spampinato (1997)

Teucrium capitatum L. subsp. *capitatum* - Ch suffr - Stenomedit. - Loc.: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 17, 19, 20, 21, 23

Teucrium chamaedrys L. - Ch suffr - Eurimedit. - Loc.: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 17, 19, 20, 21, 23

Teucrium flavum L. - Ch frut - Stenomedit. - Loc.: 1, 2, 7, 21

Teucrium montanum L. - Ch suffr - Oroph. S Europ. - Loc.: 3, 5, 6, 8, 19, 21

Teucrium siculum (Raf.) Guss. subsp. *siculum* - H scap - NE Medit. - Loc.: 3, 4

Thymus spinulosus Ten. - Ch rept - Endem. - Loc.: 3, 4, 5, 6, 12, 13, 14, 19, 20, 21

Orobanchaceae

Bartsia trixago L. - T scap - Eurimedit. - Loc.: 1, 2, 4, 5, 7, 10, 11, 12, 14, 15, 20, 21, 23

Euphrasia stricta L. - T scap - C Europ. - Loc.: 8, 12, 19

Odontites vulgaris Moench - T scap - Eurasiat. - Loc.: 4, 5, 6, 7, 8, 9, 10, 12, 13, 14, 15, 17, 20, 21, 23

Orobanche gracilis Sm. - T par - Europ. Caucas. - Loc.: 5, 21

Orobanche hederæ Duby - T par - Eurimedit. - Loc.: 2, 4, 23

Orobanche lavandulacea Rchb. - T par - W Medit. Macarones. - Loc.: 3

Orobanche minor Sm. - T par - Subcosmop. - Loc.: 2, 4

Orobanche nana Reuter - T par - Palaeotemp. - Loc.: 1, 5

Orobanche variegata Wallr. - T par - W Medit. - Loc.: 4, 10, 11, 21

Parentucellia latifolia (L.) Caruel - T scap - Eurimedit. - Loc.: 4, 5, 10, 12, 13, 14, 19, 20, 21

Parentucellia viscosa (L.) Caruel - T scap - Medit. Atl. - Loc.: 1, 2, 3, 4, 5, 7, 8, 10, 11, 12, 13, 14, 15, 19, 20, 21, 23

Acanthaceae

Acanthus mollis L. subsp. *mollis* - H scap - Stenomedit. - Occid. - Loc.: 1, 22

Verbenaceae

Verbena officinalis L. - H scap - Cosmop. - Loc.: 1, 2, 3, 4, 5, 6, 7, 9, 10, 11, 13, 14, 15, 17, 20, 21, 22, 23

Campanulaceae

Campanula dichotoma L. - T scap - W Stenomedit. - Loc.: 1, 2, 4, 5, 18, 20

Campanula erinus L. - T scap - Stenomedit. - Loc.: 1, 3, 4, 5, 12

Campanula fragilis Cirillo subsp. *fragilis* - Ch suffr - Endem. - Loc.: 1, 2, 3, 4, 5, 8, 21 - Reported also in Bianchini & Di Carlo (1992)

Campanula trachelium L. subsp. *trachelium* - H scap - Palaeotemp. - Loc.: 8, 14

Legousia speculum-veneris (L.) Chaix - T scap - Eurimedit. - Loc.: 1, 2, 3, 4, 5, 9, 10, 13, 14, 15, 20, 21, 23

Solenopsis minuta (L.) C. Presl. subsp. *nobilis* (Wimm.) Meikle - H ros - Stenomedit. - Loc.: 16 - Reported also in Peruzzi & Gargano (2003)

Trachelium coeruleum L. - Ch suffr - W Medit. - 1, 2, 3, 4, 5, 9, 10, 11, 14, 15, 16, 17, 18, 20, 21, 22, 23

Asteraceae (Compositae)

Achillea millefolium L. - H scap - Eurosib. - Loc.: 8, 12, 19

Achillea rupestris Huter, Porta & Rigo subsp. *calcarea* (Huter, Porta & Rigo) Greuter - Ch suffr - Endem. - Loc.: 21

Anthemis arvensis L. subsp. *arvensis* - T scap - Subcosmop. - Loc.: 1, 2, 3, 4, 5, 9, 10, 11, 14, 15, 17, 20, 21, 23

Artemisia vulgaris L. - H scap - Circumbor. - Loc.: 1, 2, 15, 20, 23

Bellis perennis L. - H ros - Circumbor. - Loc.: 1, 2, 3, 4, 5, 10, 14, 15, 20, 23

Bellis sylvestris Cirillo - H ros - Stenomedit. - Loc.: 1, 2, 3, 4, 5, 6, 7, 9, 10, 11, 12, 13, 14, 15, 19, 20, 21, 23

Calendula arvensis L. - T scap - Eurimedit. - Loc.: 5

Carduus nutans L. - H bienn - W Europ. - Loc.: 2, 5, 10, 14

Carduus pycnocephalus L. subsp. *pycnocephalus* - H bienn - (Euri) Medit. Turan. - Loc.: 1, 2, 3, 4, 5, 9, 10, 11, 14, 15, 19, 20, 21, 23

Carlina acanthifolia All. subsp. *acanthifolia* - H ros - Oroph. S Europ. - Loc.: 8, 19

Carlina corymbosa L. - H scap - Stenomedit. - Loc.: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 17, 20, 21, 23

- Carthamus lanatus* L. - T scap - Eurimedit. - Loc.: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 20, 21
- Centaurea deusta* Ten. - H bienn - NE Medit. - Loc.: 1, 2, 3, 4, 5, 6, 8, 9, 10, 11, 12, 14, 15, 16, 17, 20, 21, 23
- Centaurea jacea* L. subsp. *gaudini* (Boiss. & Reut.) Greml. - H scap - SE Europ. - Loc.: 7, 9, 13
- Centaurea solstitialis* L. - H bienn - Subcosmop. - Loc.: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 17, 20, 21, 23
- Cichorium intybus* L. - H scap - Cosmop. - Loc.: 1, 2, 3, 4, 5, 6, 7, 9, 10, 11, 12, 13, 14, 15, 17, 19, 20, 21, 22, 23
- Cirsium arvense* (L.) Scop. - G rad - Subcosmop. - Loc.: 1, 2, 4, 10, 20
- Cirsium creticum* (Lam.) d'Urv. - H bienn - NE Medit. - Loc.: 1, 2, 10, 14
- Cirsium tenoreanum* Petr. - H bienn - Endem. - Loc.: 7, 12, 13
- Cirsium vulgare* (Savi) Ten. - H bienn - Subcosmop. - Loc.: 1, 2, 4, 9, 10, 20, 23
- Coleostephus myconis* (L.) Cass. ex Rchb. f. - T scap - Stenomedit. - Loc.: 2, 4, 10, 11, 14, 15, 20
- Crepis neglecta* L. - T scap - NE Eurimedit. - Loc.: 1, 2, 4, 5, 9, 10, 11, 14, 15, 17, 20, 21, 23
- Crepis rubra* L. - T scap - NE Stenomedit. - Loc.: 1, 2, 3, 4, 5, 6, 8, 9, 10, 11, 12, 13, 14, 15, 19, 20, 21, 23
- Crepis sancta* (L.) Bab. subsp. *nemausensis* (P. Fourm.) Bab. - T scap - Eurimedit. - Loc.: 5, 6, 13
- Crepis setosa* Haller f. - T scap - E Eurimedit. - Loc.: 13
- Dittrichia viscosa* (L.) Greuter subsp. *viscosa* - H scap - Eurimedit. - Loc.: 1, 2, 3, 4, 5, 10, 11, 14, 15, 20, 21, 23
- Echinops ritro* L. - H scap - Stenomedit. - Loc.: 7, 9, 12, 13, 21
- Erigeron bonariensis* L. - T scap - Amer. Trop. - Loc.: 1, 2, 3, 4, 5, 6, 7, 9, 10, 11, 13, 14, 15, 20, 23
- Erigeron canadensis* L. - T scap - Cosmop. - Loc.: 1, 2, 3, 4, 14, 20, 23
- Eupatorium cannabinum* L. - H scap - Palaeotemp. - Loc.: 1, 2, 4, 5, 7, 10, 11, 14, 15, 16, 17, 18, 20, 22, 23 - Reported also in Brullo & Spampinato, 1997
- Filago arvensis* L. - T scap - Eurimedit. S Siber. - Loc.: 4, 19
- Galactites tomentosus* Moench - H bienn - Stenomedit. - Loc.: 1, 2, 3, 4, 5, 6, 7, 9, 10, 11, 12, 13, 14, 15, 20, 21, 23
- Galinsoga parviflora* Cav. - T scap - S Amer. - Loc.: 3
- Glebionis coronaria* (L.) Spach - T scap - Stenomedit. - Loc.: 1, 2, 4, 5, 9, 10, 11, 14, 15, 20, 21
- Helichrysum italicum* (Roth) G. Don - Ch suffr - S Europ. - Loc.: 1, 2, 3, 4, 5, 6, 7, 9, 10, 11, 12, 13, 14, 15, 17, 19, 20, 21, 23
- Helminthotheca echioides* (L.) Holub - T scap - Eurimedit. - Loc.: 1, 2, 4, 5, 10, 14, 15, 16, 20
- Hieracium racemosum* Waldst. & Kit. ex Willd s.l. - H scap - Europ. Caucas. - Loc.: 1, 4
- Hieracium racemosum* Waldst. & Kit. ex Willd. subsp. *crintum* (Sm.) Rouy - H scap - Europ. Caucas. - Loc.: 17
- Hypochoeris achyrophorus* L. - T scap - Stenomedit. - Loc.: 3, 4, 5, 10, 11, 14, 15, 20, 21, 23
- Hypochoeris laevigata* (L.) Ces., Pass. & Gibelli - H ros - SW Medit. Mount. - Loc.: 1, 4, 5
- Inula conyzae* (Griess.) Meikle - H bienn - C Europ. W Asiat. - Loc.: 1, 2, 3, 4, 5, 7, 9, 10, 11, 14, 15, 20
- **Jacobaea vulgaris* Gaertn. - H scap - Palaeotemp. - Loc.: 16 - Brullo & Spampinato (1997)
- Klasea flavescens* (L.) Holub. subsp. *cichoracea* (L.) Greuter & Wagenitz - H scap - Endem. - Loc.: 21
- Lactuca muralis* (L.) Gaertn. - H scap - Europ. Caucas. - Loc.: 1, 2, 3, 4, 5, 7, 9, 10, 11, 14, 15, 16, 17, 18, 20, 21, 22, 23 - Reported also in Brullo & Spampinato (1997)
- Lactuca saligna* L. - H bienn - Eurimedit. Turan. - Loc.: 1, 2, 3, 4, 5, 7, 9, 10, 11, 12, 13, 14, 15, 17, 20, 21, 23
- Lactuca viminea* (L.) J. & C. Presl - H bienn - Eurimedit. W Asiat. - Loc.: 6, 8
- Leontodon tuberosus* L. - H ros - Stenomedit. - Loc.: 1, 2, 3, 4, 5, 6, 9, 10, 11, 14, 15, 17, 20, 21, 23
- Leucanthemum ircutianum* L. subsp. *ircutianum* - H scap - Euro Sib. - Loc.: 1, 2, 3, 4, 5, 9, 10, 11, 12, 14, 15, 20
- Matricaria chamomilla* L. - T scap - Subcosmop. - Loc.: 2, 10, 14, 15, 20
- Onopordum illyricum* L. - H bienn - Stenomedit. - Loc.: 7, 8, 12, 13
- Pallenis spinosa* (L.) Cass. subsp. *spinosa* - T scap - Eurimedit. - Loc.: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 17, 19, 20, 21, 23
- Petasites hybridus* (L.) P. Gaertn., B. Mey. & Schreb. subsp. *hybridus* - G rhiz - Eurasiat. - Loc.: 1, 2, 4, 10, 14, 16, 17, 18, 22
- Phagnalon rupestre* (L.) DC. subsp. *illyricum* (H. Lindb.) Ginzb. - Ch suffr - S Medit. - Loc.: 1
- Picris scaberrima* Ten. - H scap - Endem. - Loc.: 1, 2, 4, 9, 10, 11, 13, 14, 17, 21
- Pilosella piloselloides* (Vill.) Soják - H bienn - Europ. Caucas. - Loc.: 1, 10, 11, 14, 15, 20, 21
- Pulicaria dysenterica* (L.) Bernh. - H scap - Eurimedit. - Loc.: 1, 2, 3, 4, 5, 6, 7, 9, 10, 11, 13, 14, 15, 20, 23
- Pulicaria odora* (L.) Rchb. - H scap - Eurimedit. - Loc.: 1, 2, 3, 4, 5, 9, 10, 11, 13, 14, 15, 20
- Rhagadiolus stellatus* (L.) Gaertn. - T scap - Eurimedit. - Loc.: 1, 4, 5, 10, 14
- Reichardia picroides* (L.) Roth - H scap - Stenomedit. - Loc.: 1, 2, 4, 5, 13, 14, 20, 21, 23
- Senecio scopoli* Hoppe & Hornsch. ex Bluff & Fingerh. subsp. *floccosus* (Bertol.) Greuter - H ros - Endem. - Loc.: 19
- Senecio vulgaris* L. - T scap - Cosmop. - Loc.: 1, 2, 3, 4, 5, 10, 11, 14, 20, 23
- Sonchus asper* (L.) Hill. subsp. *glaucescens* (Jord.) Ball - H bienn - Subcosmop. - Loc.: 1, 2, 3, 4, 5, 10, 11, 14, 15, 20, 21, 23

Tragopogon porrifolius L. s.l. - H bienn - Eurimedit. - Loc.: 1, 2, 3, 4, 5, 9, 10, 11, 14, 15, 19, 20, 21, 23

Tussilago farfara L. - G rhiz - Palaeotemp. - Loc.: 1, 2, 4, 5, 10, 11, 14, 15, 16, 17, 22, 23 - Reported also in Brullo & Spampinato (1997)

Urospermum dalechampii (L.) F. W. Schmidt. - H scap - CW Eurimedit. - Loc.: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 17, 19, 20, 21, 23

Xeranthemum cylindraceum Sm. - T scap - S Siber. S Europ. - Loc.: 8, 12, 13, 19

Adoxaceae

Sambucus ebulus L. - G rhiz - Eurimedit. - Loc.: 1, 2, 16

Sambucus nigra L. - P caesp - Europ. Caucas. - Loc.: 1, 2, 4, 10, 16, 17, 18 - Reported also in Brullo & Spampinato (1997)

Viburnum tinus L. subsp. *tinus* - P caesp - Stenomedit. - Loc.: 1, 2, 3, 4, 9, 14, 17, 21

Caprifoliaceae

Centranthus ruber (L.) DC. - Ch suffr - Stenomedit. - Loc.: 1, 2, 3, 4, 5, 10, 11, 14, 15, 20, 23

Cephalaria joppensis (Rchb.) Coult. - T scap - E Medit. (Steno) - Loc.: 3

Cephalaria leucantha (L.) Roem. & Schult. - H scap - S Europ. - Loc.: 8, 12, 19

Dipsacus fullonum L. - H bienn - Eurimedit. - Loc.: 1, 2, 4, 5, 7, 10, 11, 14, 15, 20, 23

Knautia integrifolia (L.) Bertol. subsp. *integrifolia* - T scap - Eurimedit. - Loc.: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 17, 19, 20, 21, 23

Lomelosia crenata (Cirillo) Greuter & Burdet subsp. *pseudisetensis* (Lacaita) Greuter & Burdet - H scap - Endem. - Loc.: 1, 2, 3, 4, 5, 12, 13, 14

Lonicera implexa Aiton subsp. *implexa* - P lian - Stenomedit. - Loc.: 4, 9, 10, 14, 23

Sixalix atropurpurea (L.) Greuter & Burdet subsp. *grandiflora* (Scop.) Soldano & F.Conti - H bienn - Stenomedit. - Loc.: 2, 3, 4, 5, 6, 7, 8, 10, 11, 12, 14, 15, 17, 19, 20, 21, 23

Valeriana tuberosa L. - H scap - Medit. Mount. - Loc.: 19

Valerianella dentata (L.) Pollich - T scap - Submedit. Subatl. - Loc.: 3

Valerianella eriocarpa Desv. - T scap - Stenomedit. - Loc.: 1, 2, 3, 6, 9, 10, 14

Araliaceae

Hedera helix L. - P lian - Submedit. Subatl. - Loc.: 1, 2, 3, 4, 11, 14, 15, 17, 20, 23 - Reported also in Brullo & Spampinato, 1997

Apiaceae (Umbelliferae)

Anmoides pusilla (Brot.) Breistr. - T scap - Stenomedit. - Loc.: 1, 2, 4, 5, 6, 20, 23

Angelica sylvestris L. s.l. - H scap - Eurosiber. - Loc.: 2, 4, 7, 10, 11, 14, 15, 22, 23 - Reported also in Brullo & Spampinato (1997)

Athamanta ramosissima Port. - H scap - Illyr. C Ital. - Loc.: 1, 2 - Reported also in: Bianchini & Di Carlo (1992); Peruzzi & Gargano (2004)

Bupleurum baldense Turra - T scap - Eurimedit. - Loc.: 1, 2, 3, 6, 7, 8, 12, 13, 14, 19

Bupleurum prealtum L. - T scap - SE Europ. (Sub Pont.) - Loc.: 1, 2, 7, 9, 13

**Bupleurum rollii* (Montel.) Moraldo - T scap - Endem. - Snogerup & Snogerup (2001)

Caucalis platycarpus L. - T scap - Stenomedit. - Loc.: 2

Chaerophyllum temulum L. - T scap - Eurasiat. - Loc.: 1, 2, 4, 5, 10, 11, 14, 15, 20, 23 - Reported also in Brullo & Spampinato (1997)

Carum heldreichii Boiss. - H scap - Anfiadriat. - Loc.: 6

Daucus carota L. subsp. *carota* - H bienn - Subcosmop. - Loc.: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 17, 20, 21, 22, 23

Dichoropetalum schottii (Besser ex DC.) Pimenov & Kljuykov - H scap - SE Europ. - Loc.: 8

Elaeoselinum asclepium (L.) Bertol. - H scap - Stenomedit. - Loc.: 1, 2, 9, 11, 14, 15, 19, 20, 21

Eryngium amethystinum L. - H scap - NE Medit. - Loc.: 2, 3, 4, 5, 6, 7, 8, 9, 12, 13, 14, 19, 21

Eryngium campestre L. - H scap - Eurimedit. - Loc.: 7, 12, 13, 14

Foeniculum vulgare Mill. subsp. *piperitum* (Ucria) Coutinho - H scap - S Medit. - Loc.: 1, 2, 3, 4, 5, 6, 7, 9, 10, 11, 12, 13, 14, 15, 17, 20, 21, 22, 23

Helosciadium nodiflorum (L.) W. D. J. Koch subsp. *nodiflorum* - H scap - Eurimedit. - Loc.: 2, 4, 10, 16, 18

Oenanthe lachenalii C. C. Gmel. - H scap - Medit. Atl. - Loc.: 8, 23

Oenanthe pimpinelloides L. - H scap - Medit. Atl. - Loc.: 2, 4

Orlaya daucooides (L.) Greuter - T scap - Stenomedit. - Loc.: 1, 2, 3, 4, 5, 10, 11, 14, 20, 23

Peucedanum oreoselinum (L.) Moench - H scap - Europ. Caucas. - Loc.: 1, 3, 4, 5, 6, 7, 9, 10, 11, 12, 20, 23

Pimpinella anisoides V. Brig. - H scap - Endem. - Loc.: 1, 2, 7

Pimpinella tragiium Vill. - Ch suffr - Medit. Turan. - Loc.: 2, 6, 7, 8, 9

Sanicula europaea L. - H scap - Oroph. Palaeotemp. and Trop. - Loc.: 4, 16, 22

Scandix pecten-veneris L. - T scap - Subcosmop. - Loc.: 1, 3, 4, 5, 10, 11, 14, 15, 20, 23

Seseli tommasinii Rchb. f. - H scap - Anfiadriat. - Loc.: 5, 6, 8, 9, 10, 11, 12, 14, 15, 20, 23

Thapsia garganica L. - H scap - S Medit. - Loc.: 2, 3

Tordylium apulum L. - T scap - Stenomedit. - Loc.: 1, 2, 3, 4, 5, 10, 11, 12, 13, 14, 15, 20, 21, 23

Torilis arvensis (Huds.) Link - T scap - Subcosmop. - Loc.: 1, 2, 4, 5, 6, 7, 9, 10, 20

Torilis japonica (Houtt.) DC. - T scap - Subcosmop. - Loc.: 14

CONCLUSIONS

This survey allowed to verify the occurrence of 567 taxa, to which other 13 taxa, reported by previous authors but not found by us, should be added. Therefore, we have listed 580 specific and infraspecific taxa, belonging to 353 genera and 89 families. The prevailing family is Asteraceae, followed by Fabaceae, Lamiaceae, and Poaceae. These 4 families contain approximately one third of the total taxa. Apiaceae, Orchidaceae, and Brassicaceae are also well represented. The richest genera are *Trifolium* (11 taxa), *Euphorbia* and *Ophrys* (9 taxa), *Lathyrus* and *Geranium* (8 taxa). The observed floristic richness for Papisidero was lower than expected (726 taxa, according to the linear regression formula), with a ratio observed / expected of 0.80, a value that places Papisidero under the regression line (Fig. 3). This result could be explained for the presence of unreachable and not sampled areas or to a low environmental variability, since the area is rich also in uncultivated fields.

The biological spectrum (Fig. 4) shows a dominance of Hemicriptophytes (38.7%), typical of temperate re-

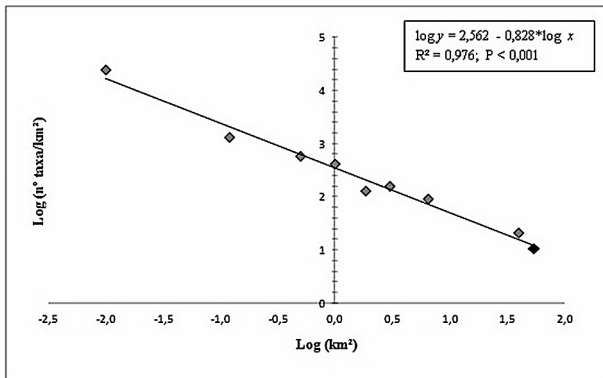


Fig. 3 - Subregional Calabrian floras. Linear regression, with relative formula, among the logarithm of areas (km²) and the logarithm of the ratio n° taxa/km². The value obtained for Papisidero is marked in black.

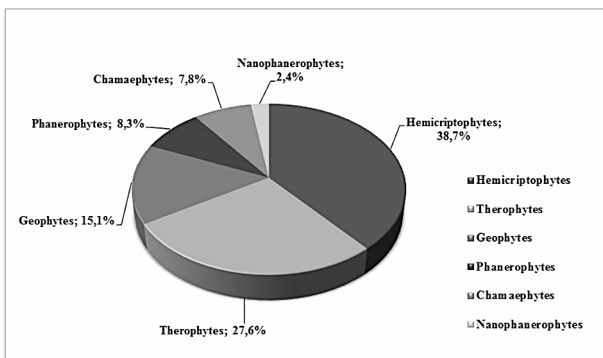


Fig. 4 - Biological spectrum of the vascular flora of Papisidero.

gions, followed by Therophytes (27.6%), typical of cultivated and uncultivated fields. Geophytes, usually spread in pastures and dry grasslands, came third (15.1%). Then there are Phanerophytes and Nanophanerophytes (10.7% altogether), testifying the richness of woodlands, and finally Chamaephytes (7.8%), which are usually prevailing in dry habitat such as garrigues, cliffs or arid slopes.

Also the chorological spectrum (Fig. 5) reflects the climatic and environmental features of the area at issue. In fact, Mediterranean element prevails, in particular the Stenometiterranean (21.2%) followed by Eurimediterranean (20.3%). Species with a wide distribution (Cosmopolitan and Subcosmopolitan) came third (11%), likely favored by the occurrence of sinanthropic and wet habitats. Lastly, Eurasiatic (8.3%) and Palaetempere (7.3%) are following, suggesting the presence of mild climate conditions.

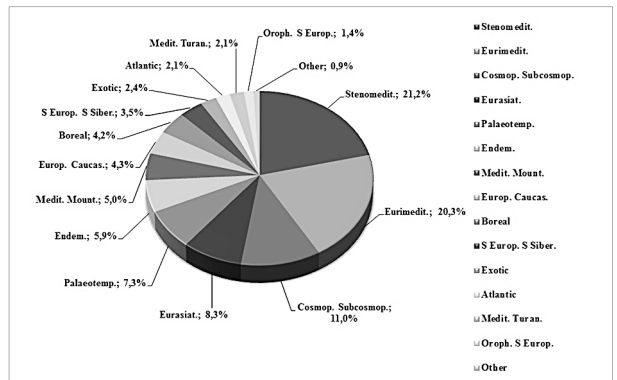


Fig. 5 - Chorological spectrum of the vascular flora of Papisidero.

Italian endemic taxa (Table 2) are 29 (5.9%). Most of these endemics are circumscribed to southern and south-central Apennine, or to Sicily-southern Italy.

The endemic taxa with the most narrow distribution are: *Achillea rupestris* subsp. *calcareae*, *Alyssum difusum* subsp. *calabriticum*, *Picris scaberrima* (Basilicata and Calabria) and *Micromeria consentina* (Calabria and Sicily).

The exotic taxa (Table 3) are 14, but 10 of them are considered invasive exotic elements in the regional flora. Then there are 3 casual and 1 naturalized exotic species.

5 species (*Silene catholica*, *Orobanche lavandulacea*, *Plantago sempervirens*, *Carum heldreichii*, *Portulaca nitida*) and one subspecies (*Galanthus reginae-olgae* subsp. *reginae-olgae*) were only recently recorded for the Calabrian flora. Some of these taxa are rather relevant from a phytogeographic and / or conservation point of view: *Carum heldreichii* and *Silene catholica* are Amphidriatic species and *Galanthus reginae-olgae* subsp. *regi-*

Tab. 2 - Distribution of endemic and subendemic taxa founded in Papisidero.

Italian endemic taxa	Distribution
<i>Achillea rupestris</i> subsp. <i>calcarea</i>	Calabria and Basilicata
<i>Alyssum diffusum</i> subsp. <i>calabricum</i>	Calabria and Basilicata
<i>Picris scaberrima</i>	Calabria and Basilicata
<i>Micromeria consentina</i>	Calabria and Sicily
<i>Euphorbia meuseli</i>	Calabria, Sardinia and Sicily
<i>Cerastium granulatum</i>	Campania, Basilicata and Calabria
<i>Leucopoa calabrica</i>	Campania, Basilicata and Calabria
<i>Viola aethnensis</i> subsp. <i>splendida</i>	From Molise to Calabria
<i>Trifolium brutium</i>	Southern Italy
<i>Ophrys x cosentiana</i>	Southern Italy
<i>Lomelosia crenata</i> subsp. <i>pseudisetensis</i>	Central-southern Italy
<i>Campanula fragilis</i>	Central-southern Italy
<i>Senecio scopoli</i> subsp. <i>floccosus</i>	Central-southern Italy
<i>Cerastium lacaitae</i>	Central-southern Italy
<i>Ononis oligophylla</i>	Central-southern Italy
<i>Cerastium tomentosum</i>	Central-southern Italy
<i>Klasea flavescens</i> subsp. <i>cichoracea</i>	Central-southern Italy
<i>Thymus spinulosus</i>	Central-southern Italy
<i>Pimpinella anisoides</i>	Central-southern Italy
<i>Arabis collina</i> subsp. <i>rosea</i>	Central-southern Italy
* <i>Bupleurum rollii</i>	Central-southern Italy
<i>Ophrys holosericea</i> subsp. <i>posidonia</i>	Central-southern Italy
<i>Micromeria graeca</i> subsp. <i>tenuifolia</i>	Central-southern Italy
<i>Scutellaria colummae</i> subsp. <i>gussonei</i>	Central-southern Italy
<i>Cirsium tenoreanum</i>	Apennine
<i>Digitalis lutea</i> subsp. <i>australis</i>	Apennine
<i>Crocus longiflorus</i>	Central-southern Italy and Dalmatia
<i>Cardamine chelidonia</i>	Italy and Croatia
<i>Matthiola fruticulosa</i>	Italy and Dalmatia

Tab. 3 - Exotic taxa listed in alphabetical order. For each one scientific name, family, typology and the number of localities in which it is found, are reported.

Exotic taxa	Family	Typology	Number of localities
<i>Agave americana</i>	Asparagaceae	Invasive exotic	4
<i>Ailanthus altissima</i>	Simaroubaceae	Invasive exotic	10
<i>Asclepias fruticosus</i>	Apocynaceae	Casual exotic	5
<i>Erigeron bonariensis</i>	Asteraceae	Invasive exotic	15
<i>Erigeron canadensis</i>	Asteraceae	Invasive exotic	7
<i>Galinsoga parviflora</i>	Asteraceae	Invasive exotic	1
<i>Opuntia ficus-indica</i>	Cactaceae	Invasive exotic	2
<i>Oxalis pes-caprae</i>	Oxalidaceae	Invasive exotic	6
<i>Oxalis stricta</i>	Oxalidaceae	Invasive exotic	2
<i>Pisum sativum</i> subsp. <i>sativum</i>	Fabaceae	Casual exotic	15
<i>Prunus domestica</i>	Rosaceae	Casual exotic	5
<i>Robinia pseudacacia</i>	Fabaceae	Invasive exotic	5
<i>Sorghum halepense</i>	Poaceae	Invasive exotic	4
<i>Veronica persica</i>	Plantaginaceae	Naturalized exotic	12

nae-olgae is hiterto recorded in Italy for Tuscany, Calabria and Sicily. Moreover, we identified for Papisidero 3 very rare taxa, *Ophrys lacaitae*, *Solenopsis minuta* subsp. *nobilis* and *Athamanta ramosissima*, quite rare for the Calabrian and Italian flora. The taxa included in regional (Conti *et al.*, 1997) and/or national (Scoppola & Spampinato, 2005) red lists are 26 (Table 4).

Tab. 4 - Taxa included in regional and / or national red lists, listed in alphabetical order. For each one, evaluation level and IUCN category are reported.

Taxa	Evaluation level	IUCN category
<i>Achillea rupestris</i> subsp. <i>calcarea</i>	Regional and national	LR
<i>Anacamptis morio</i>	Regional	LR
<i>Asphodelus ramosus</i> subsp. <i>ramosus</i>	Regional	DD
<i>Asplenium scolopendrium</i> subsp. <i>scolopendrium</i>	Regional	LR
<i>Athamanta ramosissima</i>	Regional and national	EN/VU
<i>Crocus longiflorus</i>	Regional	LR
<i>Dactylorhiza romana</i> subsp. <i>romana</i>	Regional	LR
<i>Epipactis helleborine</i> subsp. <i>latina</i>	Regional	LR
<i>Euphorbia meuseli</i>	Regional	LR
<i>Galanthus reginae-olgae</i> subsp. <i>reginae-olgae</i>	National	VU
<i>Hesperis laciniata</i>	Regional	LR
<i>Iberis umbellata</i>	Regional	VU
<i>Limodorum abortivum</i>	Regional	LR
<i>Ophrys apifera</i>	Regional	LR
<i>Ophrys incubacea</i>	Regional	LR
<i>Ophrys lacaitae</i>	Regional	VU
<i>Ophrys lutea</i>	Regional	LR
<i>Ophrys tentbredinifera</i>	Regional	LR
<i>Orchis italica</i>	Regional	LR
<i>Orchis pauciflora</i>	Regional	LR
<i>Orchis quadripunctata</i>	Regional	LR
<i>Orchis simia</i>	Regional	LR
<i>Picris scaberrima</i>	Regional	LR
<i>Platanthera chlorantha</i>	Regional	LR
<i>Spiranthes spiralis</i>	Regional	LR
<i>Sterbergia lutea</i>	Regional	LR

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