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Classification of plant communities along postfire succession in *Pinus brutia* (Turkish red pine) stands in Antalya (Turkey)

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Abstract: The paper deals with the classification of plant communities that appear along postfire succession of *Pinus brutia* forests (Turkish red pine). The research took place in the Antalya region in the southern part of Turkey. Samplings were performed in nine areas, with different periods after fire: 1, 2, 3, 4, 7, 12, 20, 40 years, and a mature forest with an estimated age of 60 years. Numerical classification and ordination analysis were used to determine the communities and to understand the temporal changes. The vegetation classification showed that separate plant communities can be distinguished along the succession line. It was found that immediately after fire semiruderal, subnitrophilous communities (*Ajugo chamaepitys–Lactucetum serriolae*, *Eryngio falcate–Securigerion securidacae*, *Carthametalia lanati*, *Artemisietea vulgaris*) appear, which remain until the third year, when low scrub vegetation up to 1-m high develops, dominated by low scrub species and termed garrigue (*Phlomido grandiflorae–Cistetum salvifolii*, *Helichryso sanguinei–Origanion syriaci*, *Cisto–Micromerietalia julianae*, *Cisto–Micromerietea julianae*); during the following years, up to 5-m-high scrub vegetation called maquis appears (*Arbuto andrachnes–Quercetum cocciferae*, *Arbuto andrachnes–Quercion cocciferae*, *Pistacio lentisci–Rhamnetalia alaterni*, *Quercetea ilicis*), which remains until the twentieth year when forest vegetation dominated by *Pinus brutia* (*Glycyrrhizo asymetricae–Pinetum brutiae*, *Quercion calliprini*, *Quercetalia ilicis*, *Quercetea ilicis*) develops. The work also discusses the classification of vegetation in the wider area of the eastern Mediterranean region by also indicating some syntaxonomical problems in Turkey.

Key words: Classification, fire, phytosociology, vegetation, Turkey

1. Introduction

Mediterranean vegetation appears in various parts of the world, in regions characterized by a Mediterranean-type climate, with hot, dry summers and mild, wet winters. One of the main areas of such vegetation lies around the Mediterranean Sea. This area is also the cradle of our civilization and so the human influence on vegetation has lasted for millennia. Because of fire-prone vegetation and summer drought, fire has always been a natural phenomenon of Mediterranean landscapes, but nowadays fires are more frequent, since 95% of all fires have anthropogenic causes (Alessandri et al., 2014; Henne et al., 2015). Plants have adaptive traits to fires and sometimes fire even stimulates germination (Kavgacı and Tavşanoğlu, 2010). According to a widely accepted opinion, the process of postfire reconstruction of vegetation is autosuccession (Kazanis and Arianoutsou, 1996), whereby species appearing at the beginning of the succession behave like a species pool for recovery and the plant community changes in an alternation of abundance of species rather than in species composition. Seeders are plants that are destroyed by fire and they recover by germination of seeds, which are buried in the soil seed bank or held in a canopy in fire resistant cones (Tavşanoğlu and Gürkan, 2014). With resprouters, the aboveground biomass burns and they regrow from rootstock, a thick trunk, or branches

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containing heath resistant buds (Tavşanoğlu and Gürkan, 2009; Kavgacı et al., 2010). However, there is some evidence that vegetation recovery after fire does not always follow an autosuccession pathway (Kazanis and Arianoutsou, 1996).

There have been many studies elaborating the process of recovery of *Pinus brutia* Ten. (Turkish red pine) forests after fire (Spanos et al., 2000; Tavşanoğlu and Gürkan, 2009; 2014; Kavgacı et al., 2010, 2016). These were based on a chronosequence approach comparing different fire places with different postfire ages (synchronic approach) or carried out at permanent plots along a time scale (diachronic approach). Although these studies were based on the change in species richness and diversity with time, studies dealing with the classification of plant assemblages appearing along the recovery process are rare. This kind of studies can determine associations and their classification into a systematic system (Braun-Blanquet, 1964; Özyigit et al., 2015). Such systematic treatment of communities enables the classification of vegetation within the EUNIS habitat classification system and it can also be used for other purposes, such as forestry, landscape planning, and nature conservation (Kint et al., 2014). Determination of the distinct communities after fire can be very valuable to understand the postfire respond capability of the vegetation especially in terms of restoration since it gives information about the dominant species and their regeneration traits (obligate seeder or resprouter). Thus, this knowledge can effectively be used during postfire management works.

In this context, this work aimed to classify plant assemblages of different ages after fire in the field. We tried to discover whether distinct communities can be defined. Diagnostic species of individual communities were calculated and communities were classified with associations and higher syntaxa defined according to the standard synsystematic procedure.

2. Materials and methods

2.1. Study site

The study was carried out in Antalya Province, in southwestern Turkey (Figure 1). The climate is typically Mediterranean with hot, dry summers and mild, rainy winters. The average annual temperature is 18.6 °C and average precipitation is 1081 mm per year (Kavgacı et al., 2010). The study area is geologically heterogeneous, with a mix of limestone with karstic elements and deposits of loosely cemented gravels, sandstones, and marls. The potential vegetation of the research area is forest of *Pinus brutia*, which is one of the main tree species of the region. It is a highly flammable coniferous species but adapted to regenerate after fire. According to the fire threat classification it is the most sensitive tree to forest fires in the region (Ertuğrul and Varol, 2015).

2.2. Sampling

We use a space-for-time substitution method (Pickett, 1989). Sampling was performed in nine areas, with different periods after fire: 1, 2, 3, 4, 7, 12, 20, 40 years, and a mature forest with an estimated age of 60 years. These sites were chosen according to the fire records of Antalya Forest Regional Directory. Vegetation samplings were carried out in late spring of 2007. We tried to understand the changes better during the postfire early years than mature stands, since the species turnover is faster in these periods than later. Hence, the postfire early years were intensively sampled. In choosing the study areas burnt in different years, we tried to select ecologically similar places as much as possible. Although this was difficult because of variability in bedrock, *Pinus brutia* is potential natural vegetation at all sites.

In each area representing different physiognomic characters from herb community to forest community, ten samplings with 10 m × 10 m sizes were carried out. They were randomly selected and sufficient to cover all species richness in each area. All species of high plants were listed and the cover of each one was visually estimated on a seven-grade scale (Braun-Blanquet, 1964). We also recorded the structure of communities by dividing the entire vascular flora in three layers (herb, shrub, and tree). The plants were submitted in accordance to their vegetation layer in the vegetation table (see Appendix 1). Additionally, the coverage of vegetation layers, coordinates, altitude, aspect, slope, and bedrock were noted for each vegetation sampling (see Appendix 2).

2.3. Statistical analysis

The samples (hereinafter relevés) were stored in the Turboveg database program (Hennekens and Schaminée, 2001). Hierarchical classification of the data set was carried out by PC-ORD computer program (McCune and Meffords, 2006). The correlation coefficient was used as a resemblance measure and flexible beta with β: –0.25 as the grouping method. Various levels of division were accepted in the dendrogram, resulting in four clusters (A–D) interpretable in terms of a temporal scale. Additionally, the diagnostic species of the accepted clusters were identified by a fidelity measure in the JUICE program (Tichý, 2002). The threshold of the phi value was subjectively selected at 0.50 for a species to be considered diagnostic (Chytrý et al., 2002). Nonmetric multidimensional scaling (NMDS) of relevés was performed by the program package Vegan in the JUICE program (Tichý, 2002) as the ordination analysis to understand the temporal change of the vegetation.

The nomenclature of plants is according to *Flora of Turkey* (Davis, 1965–1988; Davis et al., 1988; Güner, 2012), while phytosociological nomenclature was in accordance with Weber et al. (2000).

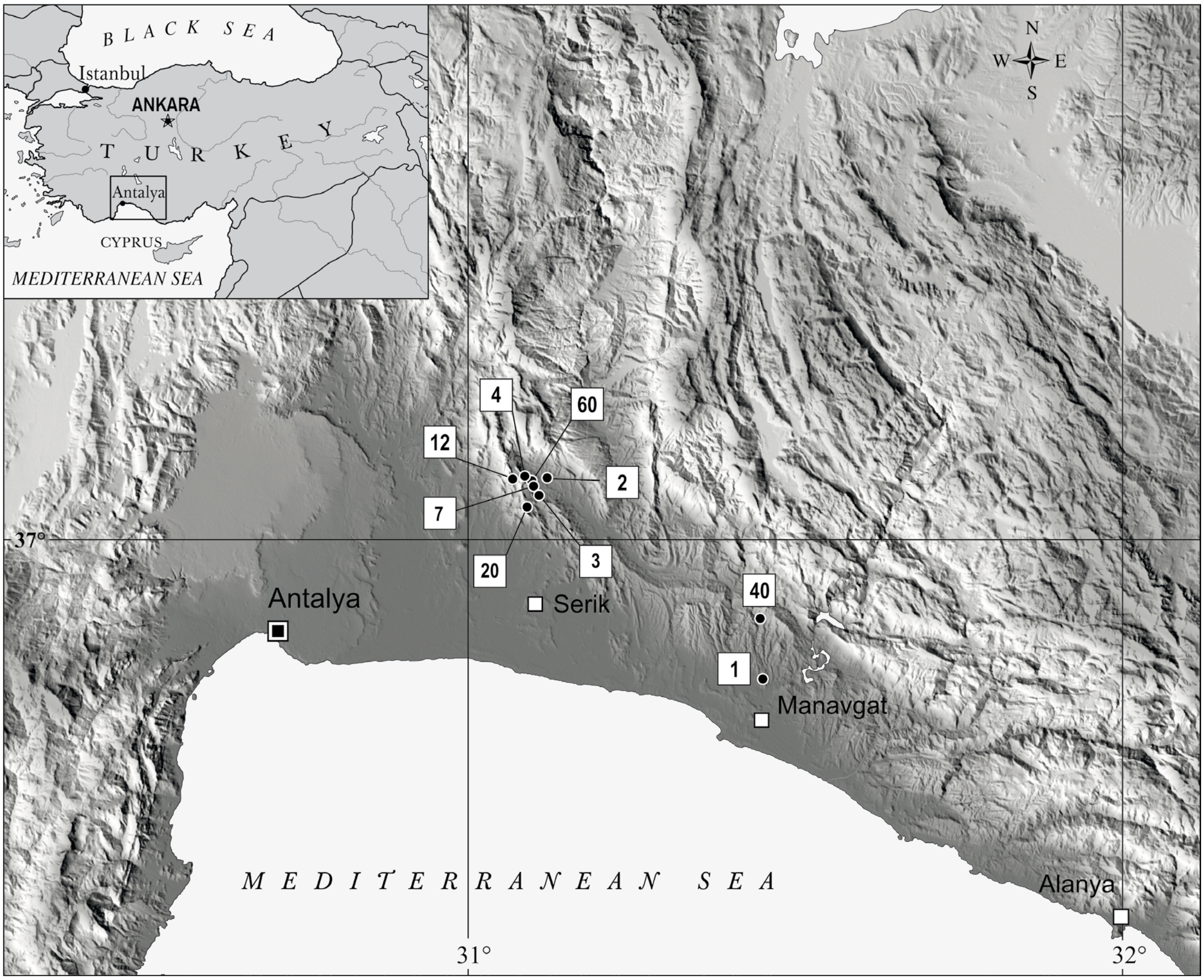

Figure 1. Study area in SW Turkey with sampling areas of different ages indicated. Numbers indicate the postfire ages of *P. brutia* stands.

3. Results and discussion

3.1. Classification and ordination

Cluster analyses showed that postfire vegetation of *Pinus brutia* forests is represented by four main clusters, indicating different plant communities (Figure 2). This grouping can also be seen in the ordination (Figure 3), which also clearly shows the temporal gradient of postfire plant communities on the sites of *Pinus brutia*.

We calculated the diagnostic species and present them in Appendix 1. Because the process is very close to autosuccession and a large proportion of species is present in communities through all stages, the structure also explains a significant part of the variance.

The first group (Group A) contains 1- to 2-year-old stands dominated by weed and ruderal species. Diagnostic species for this group are *Ajuga chamaepitys* subsp. *chia*, *Anagallis arvensis* var. *arvensis*, *Asphodelus aestivus*, *Symphyotrichum laeve Conyza canadensis*, *Daucus carota*, *Filago eriocephala*, *Fritillaria acmopetala* subsp. *acmopetala*, *Lactuca serriola*, and *Phlomis lycia*.

Group B comprises 3-year-old stands dominated by mainly low scrub (chamaephytic) species, among which *Cistus salviifolius* and *C. creticus* are the most dominant. Diagnostic species are mainly a mixture of low scrub, perennial ruderals, grasses, and annual species for this community. Diagnostic species of the community are *Anagallis foemina*, *Asterolinum linum-stellatum*, *Ceratonia siliquae*, *Cistus salviifolius*, *Inula viscosa*, *Laurus nobilis*, *Lens ervoides*, *Leontodon tuberosus*, *Medicago orbicularis*, *Medicago rigidula* var. *rigidula*, *Onobrychis caput-galli*, *Ornithopus compressus*, *Phlomis grandiflora* var. *grandiflora*, *Picnomon acarna*, *Rhamnus pichleri*, *Trifolium arvense* var. *arvense*, *Trifolium campestre*, *Trifolium hirtum*, *Trifolium nigrescens* subsp. *petrisavii*, *Trifolium pratense* var. *pratense*, and *Verbascum sinuatum* subsp. *sinuatum* var. *adenosepalum*.

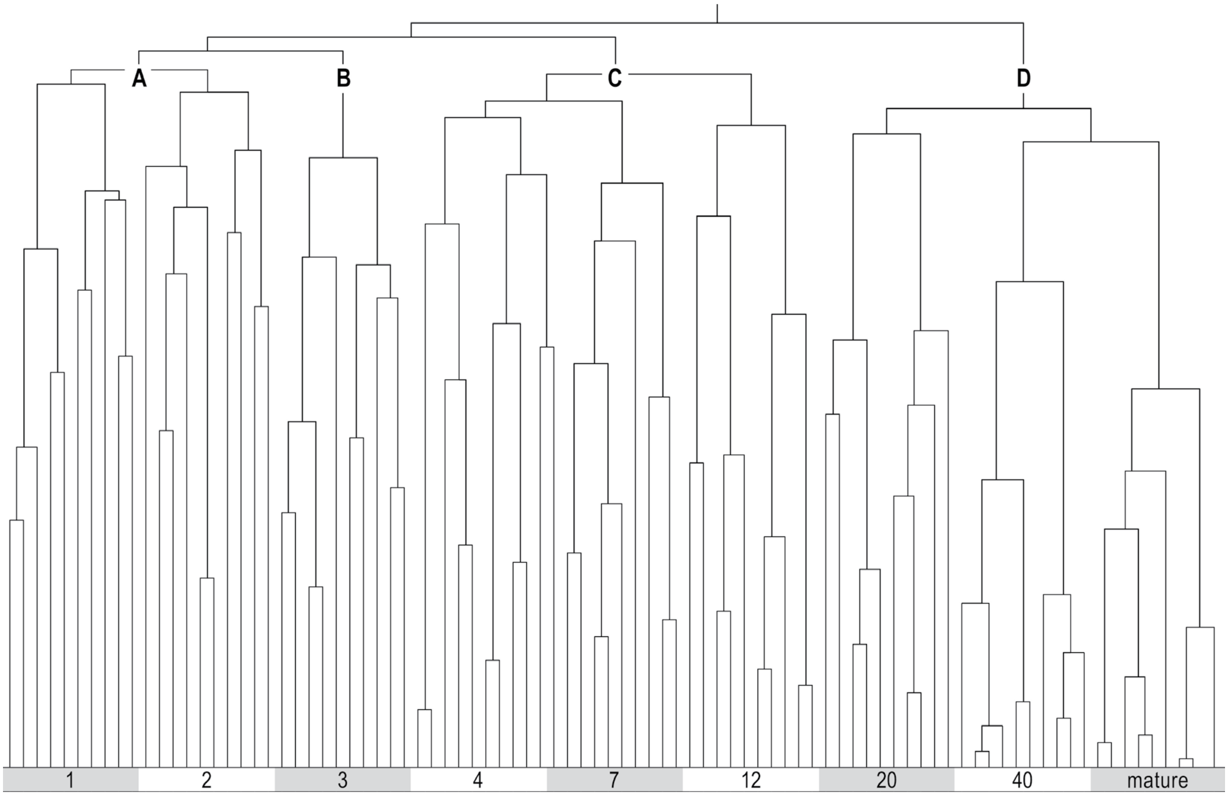

Figure 2. Dendrogram of relevés sampled from postfire vegetation of *Pinus brutia*. A: semiruderal, subnitrophilous vegetation, B: garrigue, C: maquis, D: forest. Numbers indicate the postfire ages of *P. brutia* stands.

Group C comprises scrub and young forest communities that are 4 to 12 years old. Diagnostic are mainly scrub species: *Arbutus andrachne*, *Bromus scoparius*, *Cotinus coggyria*, and *Myrtus communis* subsp. *communis.*

Group D contains 20-year-old to mature forests. Diagnostic species are *Myrtus communis* subsp. *communis* and *Pinus brutia*.

3.2. General view

Semiruderal, opportunistic species profit from the open space and availability of released nutrients after fire. Soon after that, the nutrient content becomes lower and low scrub species germinate, while semiruderal species gradually lose their importance. This period lasts about 2 years, similar to other regions in the Mediterranean basin (Tessler et al., 2016).

In the third year, low scrub vegetation develops. Among the species many resprouters that have recovered after fire can be found. These communities are up to 1-m high and build close stands, which does not enable an abundant appearance of annuals. Such vegetation can be termed garrigue (Galié et al., 2015).

Higher scrub species gradually appear and overgrow low scrub species. This vegetation can be up to 5-m high. In time, some tree species start to dominate the vegetation, indicating development towards forest. These communities are initially a mixture of scrub species and young trees, but in a few years tree species will become dominant, which is already part of the next, final stage. Such vegetation dominated by scrub species can be termed maquis. This stage continues for about 20 years (Tessler et al., 2016).

The last stage of succession is forest dominated by Turkish red pine (*Pinus brutia*). After the firm establishment of this forest, the coverage of scrub species diminishes. This is the potential vegetation of the region. These forests can be exploited for timber and other forest products. During this stage, the forest seed bank re-establishes and in the case of fire seeders can recover from the seed bank again (Kavgacı and Tavşanoğlu, 2010). This stage appears after 20 years. Most of the fields covered by forests have been converted into arable, maquis, or other type of land usage in the region and fire was the one of the reasons for this conversion (Kurt et al., 2015).

3.3. Synsystematics

3.3.1. Semiruderal, subnitrophilous vegetation

Pioneer synanthropic perennial ruderal and nitrophilous herbaceous vegetation that grows on rich soils in organic matter is classified under *Artemisitea* in Eurosiberian and Mediterranean regions (Biondi et al., 2014). Some annual

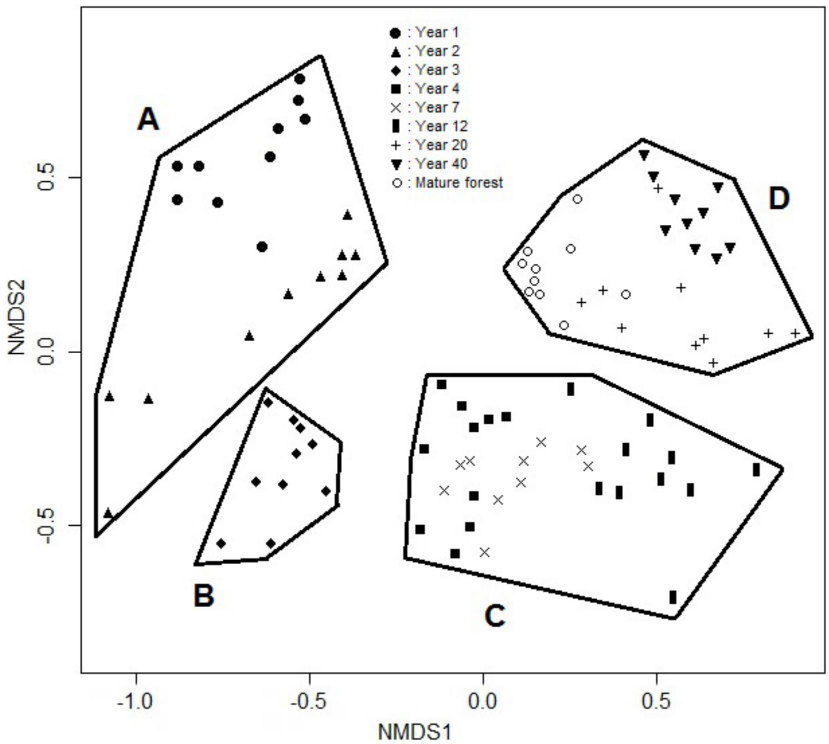

Figure 3. NMDS ordination of relevés. Legends correspond to those in Figure 2.

species appearing in these communities may indicate classification within the order of annual, subnitrophilous, thermoxerophilous, herbaceous communities that grow in abandoned and fallow fields, along roadsides and in disturbed areas in the Mediterranean region: within the order *Brometalia rubenti–tectorum* (syn. *Thero–Brometalia*) of the class *Stellarietea mediae* (Biondi et al., 2014). However, the number of perennial species is higher than the number of annuals in this group. Therefore this community should be classified within the class *Artemisietea*. Furthermore, the community under consideration could be classified within the order *Carthametalia lanati*, encompassing nitrophilous vegetation dominated by thorny species of the family *Asteraceae*, with a late spring/summer life cycle favored by extreme grazing, which grows in the Mediterranean macrobioclimate (Biondi et al., 2014). Trinajstić (1978) even distinguished a separate order (*Inuletalia* Trinajstić 1978 nom inval.) of semiruderal communities that appear on long-abandoned fields built by perennial high forbs and chamaephytes. Such classification needs further research though. On the alliance level, we cannot find an appropriate classification. Vicariant vegetation on the Iberian Peninsula is classified within *Bromo madritensis–Piptatherion miliacei*, which encompasses subnitrophilous communities occupying roadsides, debris, sand dunes, and abandoned farmland, rich in chamaephytes and hemicryptophytes (Costa et al., 2012). Since this vegetation in the eastern Mediterranean is distinguished by many species with an eastern Mediterranean distribution pattern, such as *Phlomis lycia*, *Fritillaria acmopetala* subsp. *acmopetala*, and *Stachys cretica* subsp. *anatolica*, an alliance in its own right should be described, such as *Eryngio falcati–Securigerion securidacae* all. nova hoc loco. Diagnostic species are *Ajuga chamaepitys* subsp. *chia*, *Anagallis arvensis* var. *arvensis*, *Asphodelus aestivus*, *Conyza canadensis*, *Daucus carota*, *Eryngium falcatum*, *Filago eriocephala*, *Fritillaria acmopetala* subsp. *acmopetala*, *Lactuca serriola*, *Oryzopsis miliacea* subsp. *thomasii*, *Phlomis lycia*, *Securigera securidaca*, and *Symphyotrichum laeve* with a type – holotypus hoc loco: *Ajugo chiae–Lactucetum serriolae* ass. nova hoc loco described in this paper.

Ajugo chiae–Lactucetum serriolae ass. nova is characterized by a mixture of therophytes (*Ajuga chamaepytis*, *Conyza canadensis*, *Anagallis arvensis*), chamaephytes (*Phlomis lycia*, *Ruscus aculeatus*), geophytes (*Fritillaria acmopetala*, *Gladiolus anatolicus*), and hemicryptophytes (*Oryzopsis miliacea* subsp. *thomasii*, *Symphyotrichum laeve*). These ruderal communities appear immediately after disturbance, which in this case is fire, when a lot of nutrients in soil are available due to fast mineralization caused by the fire (Tessler et al., 2016). The holotype of the association *Ajugo chiae–Lactucetum* *serriolae* ass. nova is relevé 7 in Appendix 1 (holotypus hoc loco: App. 1/7).

3.3.2. Garrigue

This vegetation is classified within the class *Cisto–Micromerietea*, encompassing all phryganas and garrigues in the eastern Mediterranean basin. Garrigues are fairly diverse in the eastern Mediterranean but the combination of species does not allow describing two classes, as is the case in the western Mediterranean, where one can be found on carbonate and the other on noncarbonate bedrock (*Ononido–Rosmarietea* and *Cisto–Lavanduletea,* respectively). The class *Cisto–Micromerietea* contains two orders; one is limited to the coasts of the Adriatic Sea, as *Cisto–Ericetalia* and the other, *Cisto–Micromerietalia* (incl. *Poterietalia spinose–intermediae*), encompasses all other garrigues of the eastern Mediterranean (Barbero and Quézel, 1989). Classification within the order *Cisto–Micromerietalia* is widely accepted (Ayaşlıgil, 1987) but classification within alliances is not so clear.

Classification on the alliance level needs further research. We have accepted the classification proposed by Barbero and Quézel (1989), who described the alliance *Helichryso sanguinei–Origanion syriaci*. This alliance can be found in the Near East and southern Turkey. Hardly any of the alliance diagnostic species (e.g., *Micromeria myrtifolia*) indicated by Barbearo and Quézel (1989) could be found in our communities. Further collection of material and analyses will be needed to discover the optimal classification scheme for the eastern Mediterranean basin.

Since the region is a biodiversity hotspot (Myers et al., 2000), many endemic species can be found in those communities. We therefore decided to describe a new association: *Phlomido grandiflorae–Cistetum salvifolii* ass. nova with the nomenclatural type relevé 12 in Appendix 1 (holotypus hoc loco: App. 1/12). These are up to 1-m-high communities composed of low scrub, such as *Cistus creticus*, *C. salviifolius*, *Phlomis grandiflora*, and *Micromeria myrtifolia*, mixed with hemicryptophytes (*Carex flacca*, *Stipa bromoides*), therophytes (*Trifolium campestre*, *Ornithopus campestre*), and shoots of scrub and tree species (*Quercus coccifera*).

3.3.3. Maquis

Within 4 years of a fire, communities with a two-layered structure develop. These communities are dominated by evergreen scrub species belonging mainly to resprouters, such as *Arbutus andrachne*, *Ceratonia siliquae*, *Fontaenesia phillyraeoides*, *Juniperus oxycedrus*, *Olea europea* subsp. *europea*, *Phillyrea latifolia*, *Quercus coccifera*, and *Similax aspera*. *Quercus calliprinos* is treated in the paper as merely a synonym of *Quercus coccifera* (Güner, 2012).

We classify all pine and oak woodlands and associated maquis of the Mediterranean basin within the class *Quercetea ilicis*. Some authors do not divide the class into orders and maintain a single order, *Quercetalia ilicis* (Akman, 1995). We decided to accept the division of the class *Quercetea ilicis* into the order *Quercetalia ilicis*, comprising mainly forests and woodlands, and the order *Pistacio lentisci–Rhamnetalia alaterni*, comprising mantle, bush, coppice, maquis, successional stage on burned areas, and similar vegetation (Barbero and Quézel, 1983; Rodwell et al., 2002).

We classify the community within the alliance *Arbuto andrachnes–Quercion cocciferae*. In the altitudinal gradient, communities of this alliance appear above those from the more thermophilous alliance *Ceratonio–Rhamnion oleoidis* (Barbero and Quézel, 1983, Quézel et al., 1992). Communities of *Arbuto–Quercion* can appear as a forest mantle or successional stages of oak forests of *Quercion ilicis* or *Quercion calliprini* in the eastern Mediterranean. The alliance was described by Barbero and Quézel (1983). They did not indicate the nomenclatural type (ICPN, Art. 5) but *Querco–Phillyreetum mediae* is the only appropriate element for typification, and so it should be accepted as holotype. There appears a bibliographic error, because the authors in the text wrongly quote ″Barbero et Quézel 1975″, but in references they give the correct year 1976. Since it is evident that the association was described on Peloponnese, the citation can be treated as a bibliographic error (in the sense of ICPN, Art. 2b) and description of the alliance valid (Barbero and Quézel, 1976). Here we define the type of the association *Querco–Phillyreetum mediae* Barbero and Quézel 1976 that is relevé 6 in a Table 4 on page 15 (lectotypus hoc loco: tab. 4/6, p. 15) in Barbero and Quézel (1976).

The alliance *Arbuto andrachnes–Quercion cocciferae* is a vicariant alliance to the *Rhamno lycioidis–Quercion cocciferae* and *Pistacio–Rhamnion* (Quézel et al., 1978; Barbero and Quézel, 1983; Tsiourlis et al., 2009). The maquis in the Aegean part differs from the maquis of the southern part of Turkey, since some of the species probably cannot be found in the south, such as *Arbutus unedo*, within associations such as *Calluno vulgaris–Arbutetum unedonis*, *Arbutus unedo–Quercus coccifera* (Quézel et al., 1978; Korkmaz et al., 2008; Özel et al., 2012).

Barbero and Quézel (1983) also described the association *Arbuto andrachnes–Quercetum cocciferae calliprini* but the association is not presented with any relevé material (ICPN, Art. 2) and the association name is composed of three plant taxa (ICPN, Art. 10). We therefore decided to compose a new name, *Arbuto andrachnes–Quercetum cocciferae* Kavgacı et al. ass. nova with type relevé 47 in Appendix 1 (holotypus hoc loco: App. 1/47).

The maquis communities in the region dominated by *Arbutus andrachne* were classified by Akman et al. (1978) within *Pistacio palaestinae–Quercetum calliprini.* The association *Pistacio palaestinae–Quercetum calliprini* was described in Israel and Jordan (Zohary, 1960) and was also mentioned in the border area between Turkey and Syria (Nahal, 1961). According to Barbero and Quézel (1983), this widely distributed association encompasses forest and maquis communities and should therefore be separated into several associations.

Arbutus andrachne appears as a dominant species in some other communities in the region, such as the *Arbutus andrachne* dominated community from the Köprülü Kanyon National Park, which was not assigned to an association but only attached to the alliance *Quercion ilicis* (Ayaşlıgil, 1987). The maquis community poor in Mediterranean species from Kelkit Valley in the subeuxine part of the Black Sea region was described as *Cotino–Arbutetum andrachnes* and classified within *Quercetalia ilicis* (Karaer et al., 1999, 2010). Further research will be needed in order to find an appropriate classification system for these communities.

3.3.4. Forest

The forest vegetation is dominated by *Pinus brutia.* The vegetation nearly reaches its prefire floristic and ecological conditions within 20 years (Figures 2 and 3). Some changes can appear over the course of time but they are never as intensive as in the earlier stages. The communities that are the fourth cluster (group D) in the dendrogram will continue to exist until another fire or timber harvesting.

The communities under consideration are classified within *Glycyrrhizo asymetricae–Pinetum brutiae* described by Kurt et al. (2015) on the eastern side of Antalya gulf. The communities can be found in the vicinity of Manavgat-İncekum (Alanya) on the sea-facing slopes with brown soils over marl and marl calcareous rocks at altitudes between 50/100 and 400/500 m in the warm humid Mediterranean zone. They are characterized by local endemics such as *Glycyrrhiza assymetrica*, *Sideritis congesta*, *Thymus revolutus*, and *Phlomis lunariifolia* (Kurt et al., 2015). The communities under consideration were sampled near the place where Kurt and collaborators described the above-mentioned association. Since the floristic composition, distribution, and ecological conditions match those indicated in the description, it was decided to classify the community in this association.

The association can further be classified within *Quercion calliprini*. The alliance is widespread in southwestern and southern Turkey, Syria, and Lebanon and is a vicariant to *Quercion ilicis*. This alliance can further be classified within the order *Quercetalia ilicis* and class *Quercetea ilicis* (Akman, 1995). We did not accept the distinction of forests between the more mesophilous order *Quercetalia ilicis* and the more thermoxerophilous order *Quercetalia calliprini* (Brullo and Spampinato, 2004; Brullo et al., 2008).

Pinus brutia dominated forests are widespread in Turkey, where they can be found in various climates, from semiarid to rainy and from cold to warm types of the Mediterranean climate (Akman, 1995). They are also widespread all around the eastern Mediterranean and it is difficult to say whether these stands are primary or they are influenced by human activities (Quézel et al., 1978). They can be found on calcareous bedrock, terra rossa, marls, marl-limestone, and even on ophiolite bedrocks. They can also be found in thermo-, meso-, and supra-Mediterranean regions. This great diversity in bedrock and climate, as well geographical distribution, has caused significant differences in species composition of the communities. *Pinus brutia* dominated forests are therefore classified within various alliance and order syntaxa; to mention only that on a class level they are classified within evergreen vegetation *Quercetea ilicis* and thermophilous deciduous forests *Quercetea pubescentis* (Barbero et al., 1976; Barbero and Quézel, 1979; Varol et al., 2006).

The current tendency in synsystematics is in favor of taking into account the physiognomic features as well. This caused Biondi et al. (2014) to separate the *Pinus halepensis*, *P. pinea*, and associated plants' dominated communities under a new order as *Pinetalia halepensis* differently from the *Quercetalia ilicis*. It comprises autochthonous stands or least naturally reproduced stands, which may derive from ancient plantations growing in coastal areas, rocky cliffs, or further inland. They can be found in the thermo- and meso-Mediterranean vegetation belts. Further research is needed to discover whether *Pinus brutia* dominated stands show enough floristic integrity and sufficient diversity to be classified into an independent order or into the wider framework of *Pistacio–Pinetalia halepensis*.

Syntaxonomic scheme

Artemisietea vulgaris Lohmeyer, Preising et R. Tx ex von Rochow 1951

Carthametalia lanati Brullo in Brullo et Marceno 1985

Eryngio falcate–Securigerion securidacae Kavgacı et al. 2016

Ajugo chiae–Lactucetum serriolae Kavgacı et al. 2016

Cisto–Micromerietea julianae Oberd. 1954

Cisto–Micromerietalia julianae Oberd. 1954

Helichryso sanguinei–Origanion syriaci Barbero et Quézel 1989

Phlomido grandiflorae–Cistetum salvifolii Kavgacı et al. 2016

Quercetea ilicis Br.-Bl. ex A.Bolos et O.Bolòs in A. Bolòs et Vayreda 1950

Pistacio lentisci–Rhamnetalia alaterni Rivas-Martínez 1975

Arbuto andrachnes–Quercion cocciferae Barbero et Quézel 1983

Arbuto andrachnes–Quercetum cocciferae Kavgacı et al. 2016

Quercetalia ilicis Br.-Bl. ex Molinier 1934

Quercion calliprini Zohary 1955
Glycyrrhizo asymetricae–Pinetum brutiae Kurt et al. 2015

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Appendix 1. Vegetation table of the successional communites of *P. brutia* after fire. H, S and T represent the herb, scrub and tree layers respectively. * indicates the diagnostic species for also the alliance *Eryngio falcati*-*Securigerion securidacae*.

Running number	Layer	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90
Post-fire stand age		1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	7	4	4	7	7	7	7	7	7	7	7	7	12	12	12	12	12	12	12	12	12	12	20	20	20	20	20	20	20	20	20	20	40	40	40	40	40	40	40	40	40	40	60	60	60	60	60	60	60	60	60	60
Association name		*Ajugo chamaepitys-Lactucetum serriolae*																				*Phlomido grandiflorae-Cistetum salvifolii*										*Arbuto andrachnes-Quercetum cocciferae*																														*Glycyrrhizo asymetricae-Pinetum brutiae*																													
Ajuga chamaepitys subsp. *chia**	H	+	.	+	+	+	.	+	+	+	+	.	.	+	.	.	.	+	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.
*Filago eriocephala**	H	+	.	.	.	.	.	+	.	+	+	+	+	+	.	+	+	+	+	+	+	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
*Conyza canadensis**	H	.	+	+	1	.	+	+	+	+	+	.	.	.	.	.	.	.	+	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
*Phlomis lycia**	H	2	2	2	1	1	+	+	+	+	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Fritillaria acmopetala subsp. *acmopetala**	H	.	.	.	+	+	.	.	.	.	.	+	+	+	+	1	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Anagallis arvensis var. *arvensis**	H	+	+	+	.	+	.	.	+	.	+	.	.	.	.	1	+	+	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	+	+	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
*Asphodelus aestivus**	H	+	.	+	+	+	.	.	.	+	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
*Symphyotrichum laeve**	H	.	.	.	+	+	+	+	+	+	+	.	.	.	.	.	.	+	.	+	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Trifolium pratense var. *pratense*	H	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	+	.	.	.	+	1	1	+	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Trifolium campestre	H	+	.	+	.	.	+	+	1	+	+	.	.	.	.	.	.	2	+	.	.	1	1	.	+	+	1	1	1	1	1	.	+	.	.	.	.	.	.	.	.	+	+	.	.	.	+	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Laurus nobilis	H	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	+	.	+	+	1	+	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Phlomis grandiflora var.	H	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	+	+	2	+	.	.	+	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Medicago rigidula var. *rigidula*	H	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	+	+	+	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Trifolium nigrescens subsp. *petrisavii*	H	.	.	.	+	+	+	+	.	+	+	.	.	.	.	.	.	+	+	.	.	+	1	1	+	1	2	1	2	1	2	.	1	+	.	.	1	1	.	.	+	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Ornithopus compressus	H	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	+	.	.	.	+	+	.	1	1	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Trifolium hirtum	H	.	+	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	1	1	+	+	+	.	1	+	+	.	+	.	.	+	+	+	+	.	+	+	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Rhamnus pichleri	H	.	.	.	.	.	.	+	+	+	.	.	.	+	.	+	+	.	.	.	+	+	+	.	+	+	+	+	+	+	+	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.
Asterolinon linum-stellatum	H	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	+	+	.	+	.	+	.	+	+	.	+	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Onobrychis caput-galli	H	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	+	1	+	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Lens ervoides	H	1	.	.	2	2	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	+	.	+	2	2	1	1	1	2	1	.	.	.	.	.	.	.	.	.	.	.	+	+	+	+	1	1	+	+	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	+	+	1	1
Trifolium arvense var. *arvense*	H	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	+	+	+	+	1	1	+	+	+	+	.	.	.	+	1	+	.	1	.	.	.	.	.	.	.	.	.	.	.	+	+	+	.	.	.	.	+	.	.	.	.	+	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Leontodon tuberosus	H	.	.	.	.	.	.	.	+	+	1	.	.	.	.	.	.	.	.	.	.	+	+	.	.	+	.	.	+	+	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Ceratonia siliqua	H	.	.	.	+	1	.	.	.	.	.	.	.	.	.	.	.	.	+	1	.	+	.	.	+	+	.	+	+	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Picnomon acarna	H	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	+	+	.	.	+	+	.	.	.	.	+	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Anagallis foemina	H	+	+	1	+	+	.	.	+	+	+	+	+	.	+	.	.	+	.	.	.	.	+	+	+	+	+	.	+	+	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Inula viscosa	H	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	+	.	+	.	.	1	1	+	+	.	+	.	+	.	+	+	+	+	+	+	.	+	+	.	.	.	+	.	.	.	.	.	.	+	+	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Medicago orbicularis	H	.	+	.	+	.	.	.	.	.	+	.	.	.	.	.	.	+	.	.	.	.	.	+	+	+	.	1	.	+	+	.	.	.	.	.	.	.	.	+	.	.	+	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cotinus coggyria	S	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2	2	+	1	1	1	2	2	2	1	2	1	1	1	1	1	1	+	.	1	1	1	1	1	1	+	.	+	.	.	.	+	.	1	1	.	.	2	2	.	1	+	.	+	.	.	1	.	.	1	.	+	.	1	+	.	.	.	1	1
Cotinus coggyria	H	2	1	1	1	3	1	+	+	1	+	.	.	+	2	1	1	.	+	.	.	+	.	.	.	2	+	+	+	.	1	.	.	.	.	.	1	1	1	.	1	1	+	1	+	+	+	.	.	.	.	+	+	+	+	+	.	+	.	.	.	.	+	.	+	2	.	.	1	2	.	2	2	1	+	1	1	+	1	+	+	2	2	2	3	2	+	3	3	3	4
Bromus scoparius	H	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	+	.	.	+	.	.	.	2	2	.	1	1	.	+	+	+	.	+	.	+	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.
Pinus brutia	T	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	1	.	.	.	.	+	3	3	4	4	3	3	5	5	4	4	4	4	4	4	3	3	4	4	4	4	5	4	5	4	5	5	5	5	4	4
Pinus brutia	S	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	+	3	2	+	2	1	+	3	4	4	2	2	2	2	3	2	2	1	2	1	2	3	3	1	4	4	.	+	.	1	+	+	+	+	+	+	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	+	.	.	+	+
Pinus brutia	H	1	1	2	1	1	1	+	1	1	+	1	+	+	+	1	+	2	2	2	+	+	1	1	1	+	1	2	1	+	+	3	2	1	2	2	+	+	1	1	+	+	+	+	+	+	+	.	1	1	1	.	+	.	+	+	+	.	.	.	.	+	+	+	+	+	.	.	.	.	.	.	.	+	+	+	+	+	+	.	.	+	.	+	+	+	+	+	+	1	+

Eryngio falcati-Securigerion securidacae					
Securigera securidaca	H	2 2 + 1 2 1 2 2 1 1 + + . + . . 1 1 . .	. . + . + 1 1 . . .	. . + + . + + . . + + + + + + + + + + . + + + + ... + .	. . . . + + + + . + ...
Eryngium falcatum	H	2 1 1 1 2 1 1 + + + + + 1 1 1 1 . + . .	+ + + . + . . + . .	. . + + . . 1 1 1 + 1 1 1 1 1 1 1 + + + + 1 . . 2 + . + . +	1 2 + 1 1 1 1 + 1 . + + ... + 1 + . + + + + + . . + + +
Carthametalia lanati					
Carthamus lanatus	H	+ 1 1 + . . + + + + ...	. . . . + ...	. . . .	. . . .
Oryzopsis miliacea subsp. *thomasii*	H	. + 1 + + ... 2 + . . . + + 1 +	3 2 3 2 2 2 2 1 . 1	1 1 1 + + 1 1 1 + 1 1 . . . . . . 1 + + ...	. . . . + ... + + + . + + ...
Verbascum sinuatum subsp. *sinuatum* var. *adenosepalum*	H	. . . . . + + . . + ...	1 + + . . + 1 1 1 1	+ . + . . + 1 . . . + ...	. . . .
Artemisietea vulgaris					
Daucus carota	H	. . . . . . + + + + . . + . . + . + . .	. . . .	. . . .	. . . .
Lactuca serriola	H	. + 1 + 1 + + + + + . + + + + + 1 1 2 2	+ + + + + + + + + +	. . . . . . + . . . + ...	. . . .
Cichorium intybus	H	. . . . + ...	. . . . + ...	. . . .	. . . .
Stachys cretica subsp. *anatolica*	H	. . . . + . + ...	+ + . + ...	. . + ... + ... + . + ...	. . . .
Cisto-Micromerietea, Cisto-Micromerietalia, Helichryso sanguinei-Origanion syriaci					
Cistus salviifolius	H	. . . . +	3 3 2 2 2 2 + 1 2 2	. . . . + 1 1 1 1 3 1 + + 1 2 3 2 3 2 3 3 2 2	1 1 + . . 1 1 + . . 1 . + . + + + 1 + . . . + + ...
Cistus creticus	H	+ . . 2 . + + + + . + 1 1 1 2 1 2 2 2 3	2 2 2 2 2 2 1 1 1 1	3 3 3 2 2 3 3 3 3 2 1 1 2 3 3 2 2 2 3 3 2 3 + 1 + + 1 1 . .	. . . . 1 . + . 1 . . . . + + . . + + + 1 2
Micromeria myrtifolia	H	. . . . . + + . + + ... +	. . . . + ...	. . . . + ... + ...	. . . . . + . . + ...
Teucrium chamaedrys subsp. *lydium*	H	. . + ... + . + + ...	. . . . +	+ . . . . + ...	. + . . . + + + . + ... + . + . + + + + . . + .
Drimia maritima	H	. + ... + + + +	+ + . + + . . . + .	. . + + + . . + . + + + + + + + + + + + ... + .	+ + ... + + . + ... + + + . + 1 + + . +
Thymus cilicicus	H	. . . .	. + ... + +	. . . .	. . . .
Arbuto andrachnes-Quercion					
Arbutus andrachne	S	. . . .	. . . .	2 2 1 1 2 2 2 2 2 1 + 1 1 1 1 1 2 . + + 1 1 2 2 2 1 2 2 + 2	1 2 . 1 1 1 + 1 . 1 . 1 1 . 1 + 2 2 2 2 + 2 + ... 1 2 2
Arbutus andrachne	H	. . . . . + + + + + . + 1 2 2 2 . + + 1	. . . .	+ + . . . + 1 . . 1 . . + ... + + 1 1	+ + + + + ... 1 . + . + + + + + + + + + . + . 1 + + 1
Quercus coccifera	S	. . . .	. . . .	+ 2 1 + 1 + 1 1 2 . 1 + 1 1 1 1 2 2 + 2 + + . . + ...	. 1 . . . . + 1 + 1 + . 1 1 + + + + . . 1 . . . 1 + +
Quercus coccifera	H	1 1 1 1 1 + + 1 + + 2 2 1 2 1 2 + 1 + 1	+ 1 1 1 2 1 + + 1 1	. . . . . + 1 1 1 + + . 1 . . . . 1 + 1 . + . . + . + . . .	. + ... + 1 + + . + 1 + + + + + + + + + + 1 1 + +
Pistacio lentisci-Rhamnetalia alaterni					
Pistacia palaestina	T	. . . .	. . . .	. . . .	. . . . + ...
Pistacia palaestina	S	. . . .	. . . .	. . 1 . + . . + + . + + . + 1 1 + + + 1 + . + . + ...	. . . 1 1 . 1 1 + 2 . + ... + + . + ... 1
Pistacia palaestina	H	1 1 + . + 2 + + + + + + 1 . 1 + ...	. . + + + ...	. + + + ...	. . . + + . . + . . + . + + . + ... + . + + . . . + + +
Myrtus communis subsp. *communis*	S	. . . .	. . . .	1 + 3 1 + 1 2 1 1 2 2 1 1 1 1 . 1 1 + + 2 2 2 2 2 2 2 2 3 3	2 1 3 3 2 2 2 2 . . 2 3 3 2 3 2 2 1 1 1 3 3 2 2 2 2 3 2 2 2
Myrtus communis subsp. *communis*	H	1 + + + 1 2 2 1 2 1 1 2 2 1 2 1 1 . + .	2 + + 1 2 2 1 . + +	. . . . . + + . . . 1 . . . . 1 + 1 + 2 2 2 1 .	1 + 1 1 1 1 + + . + 1 1 + + 1 1 + + . + 2 2 1 + 1 + 1 1 1 1
Pistacia lentiscus	H	+ + + + + ...	. . . .	. . . .	. . . .
Rubia tenuifolia subsp. *doniettii*	H	2 1 1 1	. . . .	. . . .	+ + ... + ...
Rhamnus lycioides subsp. *oleoides*	H	+ + + + 1	. . . .	. . . .	. . . .
Oryzopsis coerulescens	H	. . + ...	. . . .	. . . . + ... + . . + ...	. . . . . 1 1 1 1 + ... 1 + + 1 +

Quercion caliprini					
Fontanesia phillyreoides	T	. . . .	. . . .	. . . .	. . + ...
Fontanesia phillyreoides	S	. . . .	. . . .	. + + 2 + . . . + . . 1 1 1 + 1 . 1 + 1 . . . . + .	2 1 1 . 1 + 1 . + 2 . . + + . . + ... +
Fontanesia phillyreoides	H	. . + + . . . + + + . + 1 . . + ...	. . . .	. . . . + . . 1	+ 1 + ... + + ... + ... + . . . +
Quercetea ilicis and Quercetalia ilicis					
Ruscus aculeatus	H	1 + . 1 2 + + + + . . + + . + + ...	. . . .	. . . . . . + . + ... + + ... + ...	. + . . + ... + . + ...
Phillyrea latifolia	S	. . . .	. . . .	. . + 1 1 . . 1 + 1 . + 1 + 1 1 1 . . . 1 1 1 1 + 1 1 1 . 1	1 1 2 1 2 + . . 1 . 1 1 + 1 1 1 3 1 + 1 + ... 1
Phillyrea latifolia	H	1 1 + 1 1 . + . + + . + 1 . 1 1 . + . .	. 1 + 1 . + + 1 + 1	. . . . + . . . 1 . . . . + . + . + + + ...	+ 1 + . 1 . . . . . + . . . + + . + . + ... + + +
Quercus infectoria subsp. *veneris*	H	+ + 1 + 1 + + + + + . . . + + . . . + .	. . . . + . . . + .	. . . . 1	+ + 1 + 1 1 1 + + ... + + . + . . + . . + + . + + 1 +
Smilax aspera	T	. . . .	. . . .	. . . .	. . . . + . + 1 + . . . + . . . + ...
Smilax aspera	S	. . . .	. . . .	. . . .	. . . . . . 1 1 . . . . + + ...
Smilax aspera	H	+ . 1 1 1 + . + + + + + + + + + ...	+ + + + . . + . . .	+ + + + + + 1 + + . + + + + + + + + + . 1 1 1 1 2 + + + + +	+ 1 + + + + 1 + + . 1 1 + + 1 1 1 + + + + + + + + + 1 2 + 1
Asparagus acutifolius	H	1 1 + 1 1 . . . . . + + + + + + . . + .	+ + + + + + + . + +	+ + + + + + + + . . + + . + + . + . . + + + + + + + + + . +	1 2 + + 1 + + + + + + + . . + . . . + + . + + + + + + + + +
Euphorbia characias subsp. *wulfenii*	H	. . . .	. . . .	+ . . + ... + 1	. . . . . . + . . + ... + ... 1 . . 1 . + . .
Juniperus oxycedrus subsp. *oxycedrus*	H	. . . .	. . . .	. . . . + ...	. . . .
Others					
Carex flacca subsp. *erythrostachys*	H	. . . . . 1 1 1 1 1 1 1 2 1 1 + + 1 + .	2 1 1 1 + + + + 1 2	1 1 1 1 1 1 + 1 1 + 1 1 1 1 1 1 1 + 1 1 1 1 1 1 1 2 2 2 2 2	1 1 + . 1 1 1 1 + + 1 1 + + 1 1 1 1 + + + 1 + + 1 + 1 1 + 1
Lathyrus aphaca var. *pseudoaphaca*	H	1 + + + 1 . . . + . 2 + . 1 1 1 . 1 . .	3 2 3 2 2 1 1 + 2 1	1 1 1 2 1 1 1 1 + 1 2 + + + + + + + + + 1 1 . . + + + + + +	+ . . . + . + + + + ... + + + . + + 1
Stipa bromoides	H	. . . + ... 1 1 + 2 . + . . . +	1 + + 1 2 + + + 2 2	3 3 2 2 2 . . 1 + 1 + ... 1 . + 1 . . . . + +	. 2 + 1 + ... 1 1 + . . . + + 1 1 + 2 2 1 + 1 + + 1
Urospermum picroides	H	. . . . + + + + + . . 1 1 . + .	+ + . . + + + 1 . +	+ + + + + + + + . . + + + + . + . + . . + . 1 + + ...	1 1 1 1 1 . . . . + + + . . + + +
Crepis reuteriana subsp. *reuteriana*	H	. + . + 1 . + . + + . 2 . 1 1 2	1 . . + + ...	. . 1 + + . . + + . + + ... + . . + + + + + + 1 . + + 1	1 . + . . 1 + + 1 + ... + + + + ...
Torilis arvensis subsp. *arvensis*	H	. . . . + . . + + + ...	+ + . + + + + + 1 +	2 1 1 1 1 1 1 2 + 2 1 + + . . + . + + . 1 . . + ... + .	+ . . . . + ... + + + + + + . + . .
Arisarum vulgare subsp. *vulgare*	H	. . + ... + + ... + . .	. + + + + . + . + +	+ . . + + + + + + + + + 1 + + + + + + 1	. . . . . . + + . + ... + . + + + 1 1 1 + +
Crucianella latifolia	H	. . . . . 1 + 1 . + . 1 2 2 1 1 1 1 . 1	. . . . + ... +	. . + + + . . 1 + + 1 1 1 1 1 1 + + + + 1 1 . + . + ...	+ + . . . + ... + ...
Gladiolus anatolicus	H	1 1 1 1 1 + . + . + . + . + + . . + . .	. . . .	. . . . + + + + + + + . + + + + + + + + . . + ...	+ + . . + ... + ... + ... + +
Sonchus bulbosus subsp. *microcephala*	H	1 + 2 + 1 . . . + + . + + + + . . + . .	. + . . + . + . . .	. . . . + ... + . + + ...	. + + 1 + + + . + ... 1 . + + + 1 1 1 + +
Trifolium lappaceum	H	+ + . + + + 1 + + 1 . . . . . + + + + .	. . . .	. 1 1 + + + . . + . + . + . . + + . + . + + . + . + . + 1 1	+ . . . . + ... + ...
Catapodium rigidum subsp. *rigidum* var. *rigidum*	H	. + . . + + + + + . 1 1 + + + + . + . .	. + . . + ...	+ + + + + + . . . + + + + 1 1 . . . . + + ...	. + . . + + ... + + ...
Vicia parviflora	H	. . . . 2 1 . 1 . .	+ . . . + . 1 1 1 +	+ + + + + . . . 1 . . + ... + + 1 + . + . . + + . + .	. . . . . + + + ... + + + + + + ...
Theligonum cynocrambe	H	+ + + + + ... + + 1 + . . . + + +	. . . .	. . . + + . . + + . + + + + . + + + + + ...	. . . . + + . + + . . .

Melilotus indicus	H	1 1 1 + . + + + + + ... + + ...	. + + + + + . . . +	+ 1 . . . + . + . + . + . + . . . + . + ... + + .	. . . . + ...
Medicago minima var. *minima*	H	. . . . . . + . + + ... + . + 1	. . + + + 1	+ . + . + 1 . . . + + + + 1 1 + . + . . + 1 + + + ...	. . . .
Trifolium dubium	H	. . . + ... + . + . . + . + .	. . . .	1 1 + + . . + . + ... + ... + . + 1 . + 1 1 . .	+ + . + + . . + . + ...
Cytinus ruber	H	. . . .	+	+ + . . . + + . + . . + + 1 1 + 1 + 1 + + 1 . . . . +	+ . . . . + + ... + ... + +
Salvia tomentosa	H	. . . . 1 + ...	. . . .	. . . . + ... 1 + + + + ... +	+ . . . . + . . + + . + . + + + 1 . . . . + + + + 1
Legousia falcata	H	+ . + + ... + 1 1 2 + 2 3 . . . +	. . + + + ... +	+ + . + . . + ... + ...	. . . . + + ...
Sonchus oleraceus	H	+ . . + . . + + . + . . + . + + . + . +	. . . .	+ + + + + . + + . + 1 + . + ...	. . . .
Lithodora hispidula subsp.	H	. . . . . + + + + . + + 1 + + . 1 2 . .	. . . .	. . . . + ...	. . . . 1 1 1 . . . 2 2 1 1 . . + ... 1 .
Phlomis lunariifolia	H	. . . . 1 + 1 1 + ...	. . . .	. . . + . . . + + . . . + + . + ... + ...	1 1 1 + 1 . . . . + + + + ...
Ononis species	H	+ + 1 1 + + . . + 1 . . . + . + . . + .	. . . .	. . . . + + ... + + ... + . + . .	. . . . + +
Dactylis glomerata subsp. *hispanica*	H	. . . . . + + + + 1 + ... + ...	+ . . . + . . . + .	. . . . + 1 . . . . . + . . + .	1 1 . . . + + . 1 . . . .
Sonchus asper subsp. *glaucescens*	H	. . . . . . + + . + . + . + . . 1 . 2 1	. + + + + + + + . .	. . . . + + ...	+ . . . . + ...
Cerastium glomeratum	H	. . . . 1 + 1 + 1 1 + . . .	. . . . + . . + . +	. . + 1 + + . 1 . + + ... + + . . .	. . . .
Geranium purpureum	H	. . . . + . + ...	. . + + + . . . + .	+ + + . + ... + ... + ...	. . . . + ... + + + 1 1 1 . .
Aristolochia paecilantha	H	. . . .	+ + . + . . + + . +	. . . + + ... + + + + . . + ...	. . . . + + . . . + + + . +
Quercus infectoria subsp. veneris	S	. . . .	. . . .	. . . . + + . . . + . + 1 + + . + ...	2 1 1 2 2 2 2 2 2 1 . . . .
Sherardia arvensis	H	. . . + . . + . . + ...	. . . .	. . . + ... + . 1 1 1 1 1 . + + + 1 1 . . . + ...	. . . . + ...
Veronica arvensis	H	+ . . . . + + + + + . + . + 1 + ...	+ . . . + ...	. . + ... + . + ... + ...	. . . .
Vicia cracca subsp. *cracca*	H	. . . .	. . . . + ...	. . . . + . . + 1 1 1 1 1 1 1 + +	. . . . . . + + + 1 . . . .
Teucrium polium subsp. *polium*	H	. . . . + + ... + + . .	+	. . . . + . + + . . + . . + ... + ...	+ . . . . + ... + . . + .
Hymenocarpos circinnatus	H	. . . . . . + 1 + + ...	. . . . . . 1 1 + +	. . . . + + . + . . + . . . + . .	. . . . . + ...
Dioscorea communis	H	+ . . + + + ... + + + + + ...	. . . .	. . . .	1 . . . . . + . . + . . . + ...
Scorpiurus subvillosus var. *subvillosus*	H	. + + ... + + + ... + . . .	. + . . + ...	. . . . + . + + . . + ...	. . . . + ...
Trifolium resupinatum var. *resupinatum*	H	. . . . + + . + + + ...	. . + . + . + . . +	. . + + ... + + ...	. . . .
Cardamine hirsuta	H	. . . . + 1 . + + + ...	. . + . + ...	. . . . . . + ... + + + . . +	. . . . + ...
Bromus rigidus	H	. . . .	. . . . . + . + . .	+ + + + + ... 1 . . . . + . . 1 1 + . . + .	. . . .
Euphorbia exigua subsp. *exigua*	H	. . . . + + ...	. . . + + ...	. . . + + ... + ... + + + ...	. . . . + ...
Ornithogalum lanceolatum	H	. . . . + . + . . + + + + . . .	+ . . . + . . + . .	. . . . + . + ...	. . . .
Anthemis pseudocotula	H	. . . . + . . + 1 + + 1 + . . +	. . . .	. + + . . . + ...	. . . .
Dorycnium pentaphyllum subsp. *anatolicum*	H	. . . .	. . . .	. . . . + + . + + . . + +	. . . . + . + + + ... + ...
Styrax officinalis	H	1 + 1 . 2	. . . . + ...	. . . .	. + . + . . + . . + ... +
Geranium columbinum	H	+ + + + + . + ...	. . . .	. . . . . + . + . + + ...	. . . .
Olea europaea subsp. *europaea*	H	. . . . + + + + . . + + . +	. . . .	. . . . + ... + ...	. . . . + ...
Asplenium ceterach	H	. . . .	. . . .	. . . . + . + ...	. . . . . . + . + ... + + . + . + + + . .
Brachypodium pinnatum	H	. . . .	. . . .	. . . . + . . 1 . . + ...	. . . . + ... + + ... + + + + ...
Veronica persica	H	+ . . . 1 . . + + + ... + ...	. . . .	. . . . + ... + + ...	. . . .

Rostraria cristata var. *cristata*	H	. . . . 1 . . . . . + . . .	+	+ . + + ... + + ... + ...	. . . .
Minuartia mesogitana subsp. *mesogita*	H	. . . . + . . . + + + + . .	. . . . + ...	. . + + + ...	. . . .
Senecio vulgaris	H	. . . . + . +	+ . . . + . . . + .	+ . + + ... + ...	. . . .
Medicago polymorpha var. *polymorpha*	H	. . . .	. . . . . + ...	. . . . + ... + 1 1 + + 2	. . . . + ...
Melica minuta	H	. . . .	. . . . +	. . 1 1 1	+ 1 2 1 1 . . . .
Carex muricata subsp. *muricata*	H	1 + 1 + 1	. . . . +	. . . .	. . 1 . + ...
Bituminaria bituminosa	H	+ + + + + . + . + ...	. . . .	. . . . + ...	. . . .
Scorzonera elata	H	. + . + . + + + 1 1	. . . . + . .	. . . .	. . . .
Crataegus monogyna var.	H	. . . . + . + ...	. . . . + ...	. . . .	+ + . . + ... + + ...
Euphorbia stricta	H	. . . . 1 + 1 + 1 2	. . . .	. . . . + + ...	. . . .
Campanula lyrata subsp. *lyrata*	H	. . . . + + . + + + ...	. . . .	. . . . + . + . + .	. . . .
Cupressus sempervirens	S	. . . .	. . . .	. . . . 1 1 1 1 2 1 1 . + .	. . . .
Thesium bergeri	H	. . . . . + . + + + . + . + ...	. . . .	. . . .	. . . . + ...
Chrysopogon gryllus subsp. *gryllus*	H	. . . . . . 1 1 2 2	. . . .	. . . + ... + + ...	. . . .
Tragopogon porrifolius subsp. *longirostris*	H	. . . . + + ...	+ + . . + . . + . .	. . . . + ...	. . . .
Allium pallens subsp. *pallens*	H	. . . . + . . + . .	. . . .	. . . .	+ 1 + . . . + . . + ...
Geranium lucidum	H	. . . .	. . . . +	. . + + + ... + + + ...	. . . .
Sagina maritima	H	. . . . . + ...	. . . .	+ . . + ... + + ... 1	. . . .
Galium murale	H	. . . . . . + . . . + . . + ...	. . . . + ...	. . . + ... + ...	. . . .
Crepis species	H	. . . . + . + . . 1 . . .	. . . .	. + . + + ...	. . . .
Gagea peduncularis	H	. . . . + . + + ...	. + ...	. . . . + + ...	. . . .
Vicia sativa subsp. *nigra* var. *nigra*	H	. . . . + ...	+ . . . + ...	. . . . . . + + . + ...	. . . .
Geranium molle	H	. . . .	. . . . + ...	. . + + + ... + ...	. . . . + ...
Muscari comosum	H	. . . .	. . . .	. . . . + . + . . . + . . + ...	+ . . . . + ...
Styrax officinalis	S	. . . .	. . . .	. . . . + ...	. 1 . + . . + . 1 1 . . . .
Hordeum bulbosum	H	. . . .	. . . .	. . . . + ...	. . . . . + . . . + + ... + . + ...
Oenanthe prolifera	H	2 1 . 1 1	. . . .	. . . .	. . . . + ...
Quercus cerris	H	+ 1 + + 1	. . . .	. . . .	. . . .
Ranunculus marginatus	H	. . . + + + . + + ...	. . . .	. . . .	. . . .
Galium setaceum	H	. . . . . + 1 . + + ... + . . .	. . . .	. . . .	. . . .
Senecio vernalis	H	. . . . . + ... + . . + ... + .	. . . .	. . . .	. . . . + ...
Cirsium arvense	H	. . . . + . + ...	. . . .	. . . .	. . . . + ... + ... + ...
Biserrula pelecinus	H	. . . . + ... + . .	. + + . . + ...	. . . .	. . . .
Sorghum halepense var. *muticum*	H	. . . . 1	. . . .	. . . . + ...	. . . . . . + ... + + ...
Trigonella monspeliaca	H	. . . . + . + +	. + + ...	. . . .	. . . .

Mentha aquatica	H	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	+	+	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.
Rhamnus pichleri	S	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	+	.	.	.	.	.	.	.	.	+	+	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Melilotus officinalis	H	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	+	+	.	.	1	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Ceratonia siliqua	S	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	+	1	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cupressus sempervirens	H	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	+	+	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.
Dorycnium pentaphyllum subsp. *anatolicum*	S	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	+	+	1	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Poa trivialis	H	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	+	+	+	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cercis siliquastrum subsp. *siliquastrum*	H	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	1	1	+	+	.	.	.	.	.	.	.	.	.	.	.	.
Mentha pulegium	H	+	+	.	+	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Helianthemum racemosum	H	.	.	.	.	.	+	+	.	+	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Kickxia elatine subsp. *crinita*	H	.	.	.	.	.	.	+	+	+	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Briza minor	H	.	.	.	.	.	.	+	+	+	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Ajuga orientalis	H	.	.	.	.	.	.	+	+	+	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Galium aparine	H	.	.	.	.	.	.	+	.	+	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.
Cirsium creticum subsp. *creticum*	H	.	.	.	.	.	.	.	.	.	+	.	.	.	.	+	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Tripodion tetraphylla	H	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	+	+	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Tordylium aegaeum	H	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	+	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Psilurus incurvus	H	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	+	.	.	.	.	+	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Bromus tectorum	H	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	+	2	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Polypogon maritimus subsp. *maritimus*	H	+	.	.	.	.	.	.	+	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Hyparrhenia hirta	H	.	.	.	.	.	+	+	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Verbascum glomerulosum	H	.	.	.	.	.	+	+	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Linum strictum var. *spicatum*	H	.	.	.	.	.	+	+	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Lythrum maritimum	H	.	.	.	.	.	+	.	+	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Ononis mitissima	H	.	.	.	.	.	+	.	.	+	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Alcea biennis	H	.	.	.	.	.	+	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Erica manipuliflora	H	.	.	.	.	.	.	.	.	+	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cynodon dactylon var. *dactylon*	H	.	.	.	.	.	.	.	.	.	+	.	.	.	+	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Ornithogalum orthophyllum subsp. *kochii*	H	.	.	.	.	.	.	.	.	.	.	+	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Papaver rhoeas	H	.	.	.	.	.	.	.	.	.	.	+	.	+	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Sinapis arvensis	H	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	+	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Trifolium subterraneum	H	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	1	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Medicago disciformis	H	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Myosotis ramosissima	H	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	+	.	.	.	.	.
Spartium junceum	S	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	+	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Ophrys speculum subsp. *speculum*	H	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Brachypodium distachyon	H	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.
Poa bulbosa	H	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	+	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Vitis sylvestiris	H	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	+
Hypericum aviculariifolium	H	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	+	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Olea europaea subsp. *europaea*	S	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	+	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Crataegus monogyna var.	S	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	+	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Phlomis lunariifolia	S	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	+	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cercis siliquastrum subsp. *siliquastrum*	S	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	+	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Less common species:

Asplenium sp. [H] 78: +, 76: +; *Astragalus brachypterus* [H] 39: +, 86: +; *Bellis perennis* [H] 84: +, 37: +; *Blackstonia perfoliata* subsp. *perfoliata* [H] 39: +, 37: +; *Calicotome villosa* [S] 69: +, 26: +; *Colutea cilicica* [H] 70: +, 69: +; *Cupressus sempervirens* [T] 73: 1, 27: +; *Erigeron annuus* [H] 10: +, 11: +; *Draba verna* [H] 8: +, 67: +; *Glycyrrhiza asymmetrica* [H] 7: +, 42: +; *Hypericum perforatum* subsp. *perforatum* [H] 71: +, 34: +; *Juncus bufonius* [H] 41: +, 38: +; *Lactuca* sp. [H] 81: +, 84: 1; *Lathyrus sativus* [H] 38: +, 8: +; *Legousia speculum-veneris* [H] 11: +, 55: +; *Lolium temulentum* var. *temulentum* [H] 38: +, 18: +; *Melissa officinalis* subsp. *officinalis* [H] 17: +, 18: +; *Myosotis arvensis* subsp. *arvensis* [H] 4: +, 5: +; *Ononis reclinata* [H] 39: +, 37: +; *Orchis papilionacea* subsp. *papilionacea* [H] 9: +, 53: +; *Osyris alba* [H] 40: +, 5: +; *Asteriscus spinosus* [H] 40: +, 37: +; *Phillyrea latifolia* [T] 90: 1, 43: +; *Plantago argentea* [H] 39: +, 37: +; *Plantago major* subsp. *major* [H] 38: +, 37: +; *Poa annua* [H] 38: +, 17: +; *Poa jubata* [H] 81: +, 84: +; *Polygala vulgaris* [H] 41: +, 37: +; *Polygonum aviculare* [H] 81: +, 84: +; Pyrus *communis* subsp. *communis* [S] 59: +, 60: +; *Raphanus raphanistrum* subsp. *raphanistrum* [H] 38: +, 37: +; *Romulea tempskyana* [H] 10: +, 5: +; *Selaginella denticulata* [H] 35: +, 34: +; *Spartium junceum* [H] 64: +, 65: +; *Stellaria graminea* [H] 52: +, 51: +; *Trifolium echinatum* [H] 70: +, 25: +; *Trifolium spumosum* [H] 83: +, 6: +; *Vitis vinifera* [H] 17: +, 12: +; *Arenaria serpyllifolia* subsp. *leptoclados* [H] 17: +; *Asperula* sp. [H] 7: +; *Avena barbata* subsp. *barbata* [H] 49: 1; *Avena wiestii* [H] 8: +; *Calepina irregularis* [H] 38: +; *Capsella bursa-pastoris* [H] 37: +; *Carex coriogyne* [H] 17: +; *Centaurium erythraea* subsp. *erythraea* [H] 37: +; *Ceratonia siliqua* [T] 30: 1; *Cercis siliquastrum* subsp. *siliquastrum* [T] 90: 1; *Chondrilla juncea* [H] 11: +; *Cirsium vulgare* [H] 5: +; *Clematis cirrhosa* [H] 51: +; *Clinopodium vulgare* subsp. *vulgare* [H] 41: +; *Colutea cilicica* [S] 65: +; *Crepis pulchra* subsp. *pulchra* [H] 73: +; *Crucianella* sp. [H] 13: +; *Cynosurus cristatus* [H] 84: +; *Cynosurus echinatus* [H] 41: +; *Daphne sericea* subsp. *sericea* [H] 75: +; *Epilobium tetragonum* subsp. *tetragonum* [H] 39: +; *Erica manipuliflora* [S] 42: 1; *Ficus carica* subsp. *carica* [H] 79: +; *Galanthus* sp. [H] 56: +; *Galium divaricatum* [H] 10: +; *Gypsophila pilosa* [H] 38: +; *Hordeum geniculatum* [H] 48: +; *Hypericum pallens* [S] 89: +; *Iris unguicularis* [H] 38: +; *Juncus* sp.[H] 38: +; *Knautia integrifolia* var. *bidens* [H] 39: +; *Lagoecia cuminoides* [H] 78: +; *Lamium amplexicaule* var. *amplexicaule* [H] 49: +; *Lathyrus aphaca* var. *aphaca* [H] 20: +; *Lathyrus palustris* subsp. *palustris* [H] 26: +; *Lathyrus setifolius* [H] 61: +; *Leontodon* sp. [H] 52: +; *Linaria pelisseriana* [H] 55: +; *Linum nodiflorum* [H] 38: +; *Lithospermum arvense* [H] 84: +; *Marrubium vulgare* [H] 1: +; *Medicago arabica* [H] 12: +; *Mercurialis annua* [H] 12: +; *Lactuca muralis* [H] 32: +; *Nerium oleander* [S] 76: +; *Onobrychis aequidentata* [H] 66: +; *Orchis* sp. [H] 23: +; *Ornithogalum* sp. [H] 70: +; *Orobanche ramosa* [H] 50: +; *Paliurus spina-christi* [S] 17: 1; *Paliurus spina-christi* [H] 9: +; *Phlomis lycia* [S] 43: +; *Picris* sp. [H] 39: +; *Pilosella procera* [H] 49: +; *Pyrus amygdaliformis* var. *amygdaliformis* [S] 31: +; *Pyrus communis* subsp. *communis* [H] 74: +; *Quercus infectoria* subsp. veneris [T] 27: +; *Ranunculus chius* [H] 5: +; *Rubia peregrina* [H] 29: +; *Rubus canescens* var. *canescens* [S] 79: +; *Rumex obtusifolius* subsp. *subalpinus* [H] 41: +; *Sarcopoterium spinosum* [H] 39: +; *Scrophularia peregrina* [H] 83: +; *Silene colorata* subsp. *colorata* [H] 62: +; *Trifolium cherleri* [H] 6: +; *Trigonella spicata* [H] 38: +; *Valantia hispida* [H] 12: +; *Vicia narbonensis* var. *narbonensis* [H] 67: +; *Vitis sylvestiris* [S] 42: +; *Vitis sylvestiris* [T] 43: +; *Vulpia myuros* [H] 20: +.

Appendix 2. Description of relevé sites (running number in the Appendix, locality, Latitude, Longitude, sampling date, altitude (m), aspect and slope (degrees) are submited respectively.

1: Manavgat, 361626, 4077667, 24.04.2007 , 33, SW, 20; **2**: Manavgat, 361592, 4077680, 24.04.2007, 31, WWS, 15; **3**: Manavgat, 361588, 4077692, 24.04.2007, 29, WWS, 22; **4**: Manavgat, 361576, 4077710, 24.04.2007, 30 , W, 20; **5**: Manavgat, 361567, 4077722, 24.04.2007, 33, W, 19; **6**: Manavgat, 361619, 4077745, 24.04.2007, 16, NE, 20; **7**: Manavgat, 361626, 4077734, 24.04.2007, 20, EEN, 25; **8**: Manavgat, 361626, 4077717, 24.04.2007, 21, EEN, 25; **9**: Manavgat, 361605, 4077763, 24.04.2007, 22, NNE, 20; **10**:Manavgat, 361577, 4077770, 24.04.2007, 23, NNW, 20; **11**: Serik, 332944, 4105443, 20.04.2007, 105, NNW, 22; **12**: Serik, 333018, 4105470, 20.04.2007, 107, NNW, 23; **13**: Serik, 333075, 4105463, 20.04.2007, 105, NNW, 18; **14**: Serik, 333189, 4105352, 20.04.2007, 121, SE, 19; **15**: Serik, 333400, 4105513, 20.04.2007, 126, S, 16; **16**: Serik, 332956, 4105451, 20.04.2007, 105, NNW, 22; **17**: Serik, 333029, 4105456, 20.04.2007, 109, NNW, 23; **18**: Serik, 333088, 4105477, 20.04.2007, 108, SE, 19; **19**: Serik, 333197, 4104317, 20.04.2007, 112, SE, 15; **20**, Serik, 333389, 4105500, 20.04.2007, 119, SW, 20; **21**: Serik, 331802, 4103123, 20.04.2007, 146, SE, 3; **22**: Serik, 331820, 4103144, 20.04.2007, 142, SE, 3; **23**: Serik, 331798, 4103101, 20.04.2007, 144, SE, 14; **24**: Serik, 331782, 4103092, 20.04.2007, 143, SE, 8; **25**: Serik, 331770, 4103070, 20.04.2007, 142, SE, 5; **26**: Serik, 331771, 4103041, 20.04.2007, 141, SE, 11; **27**: Serik, 331778, 4103108, 20.04.2007, 144, SE, 12; **28**: Serik, 331752, 410386, 20.04.2007, 143, SE, 3; **29**: Serik, 331746, 4103058, 20.04.2007, 144, SE, 3; **30**: Serik, 331745, 4103034, 20.04.2007, 141, SE, 2; **31**: Serik, 329965, 4105691, 21.04.2007, 180, NNE, 7; **32**: Serik, 329958, 4105708, 21.04.2007, 190, NNE, 6; **33**: Serik, 329951, 4105730, 21.04.2007, 189, NE, 11; **34**: Serik, 329944, 4105765, 21.04.2007, 187, NE, 15; **35**: Serik, 329929, 4105752, 21.04.2007, 180, EEN, 15; **36**: Serik, 329942, 4105832, 21.04.2007, 220, NE, 12; **37**: Serik, 329966, 4105873, 21.04.2007, 200, NE, 16; **38**: Serik, 329964, 4105906, 21.04.2007, 260, EEN, 15; **39**: Serik, 329974, 4105920, 21.04.2007, 240, EN, 16; **40**: Serik, 329946, 4105964, 21.04.2007, 245, EEN, 20; **41**: Serik, 3331021, 4104498, 21.04.2007, 145, EEN, 14; **42**: Serik, 331014, 4104526, 21.04.2007, 144, E, 10; **43**: Serik, 331032, 4104531, 21.04.2007, 140, EEN, 14; **44**: Serik, 331034, 4104573, 21.04.2007, 132, N, 15; **45**: Serik, 331006, 4104569, 21.04.2007, 142, N, 12; **46**: Serik, 331029, 4104659, 21.04.2007, 164, EEN, 13; **47**: Serik, 331006, 4104685, 21.04.2007, 160, E, 12; **48**: Serik, 330971, 4104682, 21.04.2007, 170, EEN, 14; **49**: Serik, 330941, 4104661, 21.04.2007, 179, EEN, 13; **50**: Serik, 330944, 4104639, 21.04.2007, 212, EN, 15; **51**: Serik, 328328, 4105314, 22.04.2007, 530, NE, 11; **52**: Serik, 328318, 4105337, 22.04.2007, 533, NE, 10; **53**: Serik, 328339, 4105346, 22.04.2007, 531, NE, 11; **54**:Serik, 328347, 4105365, 22.04.2007, 527, NE, 11; **55**: Serik, 328379, 4105373, 22.04.2007, 519, NNE, 9; **56**: Serik, 328390, 4105469, 22.04.2007, 530, EEN, 12; **57**: Serik, 328398, 4105492, 22.04.2007, 536, EEN, 10; **58**: Serik, 328400, 4105524, 22.04.2007, 533, EEN, 13; **59**: Serik, 328423, 4105508, 22.04.2007, 550, NE, 10; **60**: Serik, 328446, 4105513, 22.04.2007, 552, EEN, 10; **61**: Serik, 330250, 4101447, 23.04.2007, 370, N, 14; **62**: Serik, 330292, 4101477, 23.04.2007, 360, NNE, 9; **63**: Serik, 330381, 4101472, 23.04.2007, 351, E, 5; **64**: Serik, 330279, 4101455, 23.04.2007, 367, E, 10; **65**: Serik, 330265, 4101434, 23.04.2007, 371, EES, 15; **66**: Serik, 330286, 4101697, 23.04.2007, 357, EEN, 10; **67**: Serik, 330302, 4101711, 23.04.2007, 358, NE, 13; **68**: Serik, 330327, 4101703, 23.04.2007, 357, EEN, 13; **69**: Serik, 330344, 4101712, 23.04.2007, 357, NNE, 13; **70**: Serik, 330375, 4101712, 23.04.2007, 350, NE, 12, **71**: Manavgat, 361772, 4086581, 24.04.2007, 331, WWN, 24; **72**: Manavgat, 361773, 4086567, 24.04.2007, 319, WWN, 27; **73**: Manavgat, 361694, 4086459, 24.04.2007, 310, NNW, 23; **74**: Manavgat, 361685, 4086462, 24.04.2007, 304, NW, 21; **75**: Manavgat, 361612, 4086458, 24.04.2007, 286, N, 20; **76**: Manavgat, 361808, 4086718, 24.04.2007, 300, WWN, 20; **77**: Manavgat, 361794, 4086685, 24.04.2007, 300, NW, 25; **78**: Manavgat, 361774, 4086662, 24.04.2007, 300, NW, 25; **79**: Manavgat, 361756, 4086646, 24.04.2007, 301, NNW, 25; **80**: Manavgat, 361640, 4086650, 24.04.2007, 227, NNW, 13; **81**: Serik, 330615, 4105389, 23.04.2007, 236, NE, 14; **82**: Serik, 330645, 4105371, 23.04.2007, 237, NNE, 10; **83**: Serik, 330678, 4105370, 23.04.2007, 236, N, 12; **84**: Serik, 330714, 4105364, 23.04.2007, 232, NNE, 5; **85**: Serik, 330688, 4105436, 23.04.2007, 220, N, 3; **86**: Serik, 330678, 4105503, 23.04.2007, 273, NNE, 15; **87**: Serik, 330662, 4105506, 23.04.2007, 252, EEN, 13; **88**: Serik, 330710, 4105470, 23.04.2007, 250, NNE, 10; **89**: Serik, 330777, 4105254, 23.04.2007, 240, EEN, 10; **90**: Serik, 330791, 4105308, 23.04.2007, 225, NE, 25.