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Flora of Lake Seyfe Nature Reserve Area Kirsehir – Turkey

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ABSTRACT
This research encompasses flora of Lake Seyfe (Kirsehir) Nature Reserve Area. 65 families, 237 genera, 383 species, 3 sub-species, and 2 varieties were determined with the evaluation of 874 plant specimens collected during 1993-1994 in the research area. The total taxon number was 388. 52 species were endemic for Turkey. The distribution and ratios of the species in the phytogeographic regions were as follows: 104 Iranian-Turanian components (21.75%), 29 European-Siberian components (7.57%), 13 Mediterranean components (3.39%), 82 cosmopolitan components (21.40%), and 155 components with unknown phytogeographic region (40.46%).

Key Words: Lake Seyfe, flora, taxon.

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INTRODUCTION

Research on flora of Turkey started by the beginning of the 18th century with the travels of French botanist Tournefort in the Northern and Northeastern Anatolia during 1700-1702 and following it, some international botanists collected plants in Anatolia and its environs. The travel of Swedish botanist Boissier in Anatolia in 1842 was the start of research of Turkey's flora. Boissier's work titled "Flora Orientalis" is important as a major resource covering the plants of Turkey. Following Boissier, international researchers including Zohary, Sorger, Huber-Morartlı, and Mc Neill, and national researchers including Birand, Kasaplığil, Karamanoğlu, Akman, Yurdakulol, Ekim, and Ketenoğlu conducted studies on the flora and vegetation of Turkey.

The number of researches on flora of Turkey increased in this Century gradually and advanced substantially during the past 25-30 years. Especially, the work titled "Flora of Turkey and Eastern Aegean Islands" started to be published by P. H. Davis et al, in 1965 and completed as 10 volumes was the first important step taken on this path. Floristic studies in Turkey became important for Turkish botanists after starting flora publications, and studies in this field increased gradually. In parallel to floristic studies, vegetation studies increased during the past 25-30 years and the vegetation of specific areas was examined in terms of plant sociology and plant ecology, new plant colonies were defined and great steps were taken to discover vegetation of Turkey.

"Lake Seyfe Nature Reserve Area", which was selected as the research area, is in Kırşehir City limits and covers an area of 10,700 hectares. It was designated as the Nature Reserve Area on 28/6/1990 and was included in the list of the Convention on Wetlands of International Importance as per the decree of the Grand National Assembly of Turkey on 30/12/1993.

There is no detailed research conducted on the flora of the research area up until today. In the study of A. Çırpıcı titled "the areas studied in terms of flora and vegetation of Turkey", our study area was included in the group of areas never studied floristically. Lake Seyfe Nature Reserve Area is included in B5 square according to the grid system used in the work titled "Flora of Turkey" of Davis.

In this study, flora of Lake Seyfe Nature Reserve Area was determined. Hence, we believe that we have contributed to flora of Kırşehir City and Turkey.

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GENERAL INFORMATION

Lake Seyfe is located at 30km northeast of Kırşehir City, and 25 km North of Mucur County, and its altitude is 1110m. The lake and the area surrounding it is 10,700 of hectares. The area covered by the Lake ranges between 3,400 ha and 7,000 ha.

The mountainous areas surrounding Seyfe closed basin are not very high. The highest place near the research area is Kervansaray Mountain (1,679 m). The other important ridges are Kartaltepe (1,665 m), Armutlu Tepe (1,581 m) and Ayrıdağı (1,550 m).

Slightly waved prairies make up the Lake's environs. There are only a few streams located in the basin due to semi-arid climate. These streams are not continuous streams and the number of them increases with snow melting and increased rain fall during spring months. The streams diminish gradually and dry as a result of severe vaporization during summer months. The most critical water source supplying the Lake is the spring near Seyfe Village. In addition, the Lake is supplied from the bottom by underground water resources.

There are no fish living in the entire Lake in general. However, small fish species in the length of 5-6 cm including Aphanius chantra and Spirlinus sp. live in the places where the streams mix with the Lake. Despite these fish have no commercial value, they are important ecologically as the food of aquatic birds including pelicans and herns.

The Lake is special for its rich phytoplanktons and zooplanktons for feding of aquatic birds. Moreover, other species living in salty lake water are small shrimp-like crustacean (Artemia sp.) and some earthworms and fishworms. These species are the essential food sources of flamingos especially.

The most important species are aquatic birds, also called avifauna, living as dependent to the unique ecosystem formed by salty and alkaline water of Lake Seyfe.

Lake Seyfe is a reproduction, feeding and shelter environment for avifauna that is vital for not only Turkey but the world. 180 bird species were determined to exist in the Lake up until today. Considering that bird species are decreasing gradually and some species are becoming extinct due to destruction of ecologic systems throughout the world, the richness of bird species in Lake Seyfe becomes even more prominent.

Summers are warm and winters are cold in the research area. Depsite precipitation occurs in every season, it is in the form of snow during winter months in general and mostly. There was no considerable change seen in meteorologic features in the research area and its environs. The annual areal total precipitation amount was estimated as 353 mm. Precipitation in the research area increased towards North. Annual precipitation amount was 373 mm according to the 56-year observations recorded in Kırşehir observation station, which is the closest station to Lake Seyfe.

Maximum amount of precipitation is received in January and minimum amount is received in July. There is no considerable difference between winter and spring months. In the other selected three stations, maximum precipitation is received in winter months, and in Lake Seyfe Basin, maximum precipitation is received in spring months. Climatic data on the research area were received from the archives of Ankara Meteorology Directorship and the Prime Ministry, General Directorate of Turksih State Meteorologic Service publications.

It was seen that the dominant wind direction was northeast based on the data collected at Kırşehir Meteorology Observation Station. Maximum monthly wind velocity ranges between 4-5m/sec in general. Maximum wind velocity value (5m/sec) occurs in July and minimum value (3.5m/sec) occurs in November. Wind velocity is lower in winter months generally in comparison to summer months. Minimum wind effect occurs in northwest-southeast direction.

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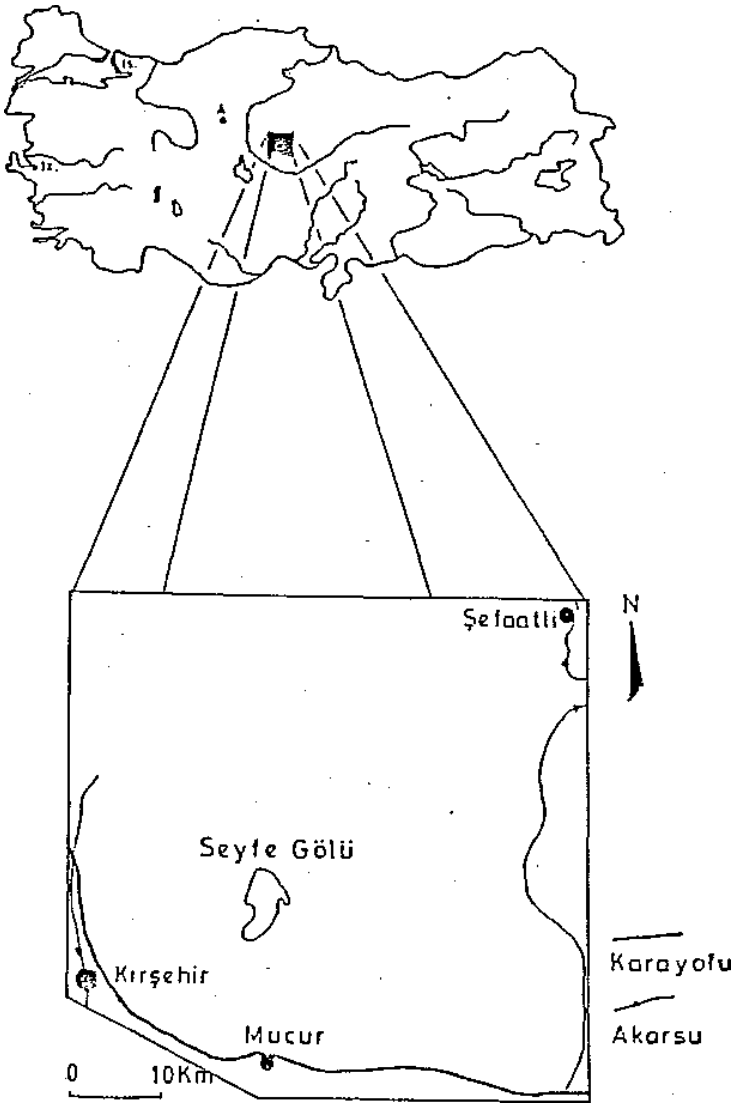
LOCATION MAP



Map 1. Location Map of the Research Area

Lake Seyfe / karayolu: highway / akarsu: stream

Research Area Vegetation

The research area is situated in Iranian-Turanian region, one of the three phytogeographic regions of Turkey, and it is included in B5 square of the grid system. Lake Seyfe is located at 16km North of Kırşehir City, Mucur County. It is the most vital wetlands of Turkey. It appears like a bowl since it is surrounded by tall mountains and hills. It is a completely closed basin. This closed basin's area is more than 925km2 and small springs and streams run to Lake Seyfe. Therefore, a lake of 35km2 of area and a bog of 25km2 of area are formed. The lake surface decreases and rises depending on precipitations. This plain is formed within a synclinal fold. This syncline was filled with volcanic and alluvial materials of

hundreds of meters of thickness during geological periods. The emerging field has a salty character since the formation contains gypsium and excessive amounts of soluble salts and the salty lake covering this field retreated.
The Central Anatolian steppe vegetation gained a secondary appearance today with long-term anthropogenic effects. Our study area was destroyed substantially with the effect of factors including over grazing, land clearing, lake ebb and flow, and the borders of homogenous and characteristic pure steppe groups shrunk.

1-Halophilic Vegetation
In the research area, halophilic vegetation is represented by plant species including Halocnemum strobilaceum, Salicornia prostrata, Salsola inermis, Panderia pilosa, Petrosimonia brachiata, Krascheninnikovia ceratoides, Camphorosma monspeliaca; Gypsophila perfoliala, Frankenia hirsuta, Limonium iconicum, and Limonium globuliferum.
Halophilic plants are wooly and succulent plants resistant to low or high salt concentration and have dull colored herbaceous leaf type.

2-Steppe Vegetation
Lands owned by Malya Agricultural Enterprises Directorate made up a section of our research area. In a large section of the Enterprise, steppe vegetation was dominant. Plants composing this vegetation were thorny, cushion form xerophytes, xerophyte weeds, chamaephytes and hemicryptophytes.
Vegetation spread over on marn limestone or gypsium-bearing layers generally.
The most prevalent species forming the steppe vegetation in our area were as follows; Alyssum desertorum var. desertorum, A.pateri subsp. pateri, Spergularia media, Gypsophila parva, Noaea mucronata subsp. mucronata, Reaumaria atlernifolia, Astragalus kirshehiricus, A.lydius, A.karamasicus, Peganum harmala, Bupleurum sulphureum, Scabiosa argentea, Anthemis wiedemanniana, Achillea wilhelmsii, Artemisia santonicum, A.taurica, Gundelia tournefortii var. tournefortii, Centaurea corduiformis subsp. carduiformis, Lappula barbata, Bungea trifida, Phlomis armeniaca, Marrubium parviflorum subsp. oligodon, Thymus sipyleus subsp. rosulans, Acantholimon acerosum var. acerosum, Secale montanum, Bromus japonicus subsp. japonicus, B.tectorum, B.tomentellus, Festuca callieri subsp. callieri, and Stipa capillata.

3-Praire Vegetation
Our research area covers a wide wetland with no incline in Karaçayır locality. This area is full of abundant number of Juncaceae, Poaceae and Cyperaceae members. Some of these are Jucus gerardi subsp. gerardi, Eleocharis uniglumis, Bolboschoenus maritimus var. maritimus, Carex otrubae, C.divisa, Dactylis glomerata subsp. hispanica, Cynodon dactylon var. villosus, and Elymus elongatus subsp. ponticus.
Furthermore, it the other wide wetlands and meadows, the following species are prevalent; Triglochin palustris, Butomus umbellatus, Alisma plantogo- aquatica, Orcbis palustris, Typha latifolia, Phragmites australis, Aeluropus littoralis, Lotus corniculatus var. corniculatus, Tetragonolobus maritimus, and Glaux maritima species.
Eyüboğlu, Ö. published previously some sections of his doctoral dissertation study conducted in Lake Seyfe Basin in 1995 and titled “Flora of Lake Seyfe Nature Reserve Area, Kırşehir-Turkey”. “New Floristic Records from Anatolia (B5)” was published in 1995; “Protection of Natural Life Chain of Lake Seyfe and its Vicinity” was published in 1996; and “Endemic Plants of Lake Seyfe Basin” was published in 1998 in various peer-reviewed journals.

LIST OF LAKE SEYFE BASIN PLANTS – FLORA

No	Family	Species	EUNIS Habitat code	Endemism	Phytogeographical Region	Endangerment statue
	PTERIDOPHYTA					
1	Equisetaceae	*Equisetum ramosissima* Desf.	E2.5	—	—	LC
	SPERMATOPHYTA					
	GYMNOSPERMAE					
2	Cupressaceae	*Thuja orientalis* L.	G3	—	—	LC
3	Pinaceae	*Cedrus libani* A. Rich.	G3		—	LC
4	Pinaceae	*Pinus nigra* Anı.	G3	—	—	LC
5	Pinaceae	*Pinus sylvestris* L.	G3		—	LC
	ANGIOSPERMAE					
	DICOTYLEDONES					
6	Acanthaceae	*Acanthus hirsutus* Boiss.	E1.2	Endemik	Ir.-Tur. ele.	LC
7	Aceraceae	*Acer negundo* L.	E4.4	—	—	LC
8	Amaranthaceae	*Amaranthus albus* L.	E4.4	—		LC
9	Apiaceae	*Bupleurum croceum* Fenzl	E4.4	—	Ir.-Tur. ele.	LC
10	Apiaceae	*Bupleurum heldreichii* Boiss. & Bal.	E4.4	Endemik	Ir.-Tur. ele.	LC
11	Apiaceae	*Bupleurum sulphureum* Boiss. & Bal.	E4.4	Endemik	Ir.-Tur. ele.	LC
12	Apiaceae	*Bupleurum turcicum* Snogerup	E2.5	Endemik	Ir.-Tur ele.	LC
13	Apiaceae	*Caucalis platycarpos* L.	11.3	—	—	LC
14	Apiaceae	*Conium maculatum* L.	E2.5	—		LC
15	Apiaceae	*Daucus carota* L.	11.3	—	—	LC
16	Apiaceae	*Echinophora tenuifolia* L. sııbsp. *sibthorpiana* (Guss.) Tutin	E4.4	—	Ir.-Tur. ele.	LC
17	Apiaceae	*Eryngium bithynicum* Boiss.	E2.5	Endemik	Ir.-Tur ele.	LC
18	Apiaceae	*Eryngium campestre* L. var. *virens* Link	E4.4	—	—	LC
19	Apiaceae	*Eryngium glomeratum* Lam.	E4.4	—	—	LC
20	Apiaceae	*Falcaria falcarioides* (Bomm. & Wolff.) Wolff.	E4.4	—	—	LC
21	Apiaceae	*Falcaria vulgaris* Bernh.	E4.4	—	—	LC
22	Apiaceae	*Ferula rigidula* DC.	E4.4	—	Ir.-Tur ele.	LC
23	Apiaceae	*Prangos melicarpoides* Boiss. var. *melicarpoides*	H5.3	Endemik	Ir.-Tur. ele.	LC
24	Apiaceae	*Turgenia latifolia* (L.) Hoffm.	E4.4	—	—	LC
25	Asclepiadaceae	*Cynanchum acutum* L. subsp. *Acutum*	E4.4	—	—	LC
26	Asteraceae	*Achillect aleppica* DC. subsp. *zederbaueri* (Hayek) Hub.-Mor.	E4.4	Endemik	Ir.-Tur. ele.	LC
27	Asteraceae	*Achillea biebersteini* Afan.	11.3	—	Ir.-Tur. ele.	LC

28	Asteraceae	*Achillea setacea* Waldst. & Kit.	E1.2		Avr. -Sib. ele.	LC
29	Asteraceae	*Achillea wilhelmsii* C. Koch	E4.4	—	Ir.-Tur. ele.	LC
30	Asteraceae	*Anthemis cretica* L. subsp, *anatolica* (Boiss.) Grierson	E4.4	—	—	LC
No	**Family**	**Species**	**EUNIS Habitat code**	**Endemism**	**Phytogeographical Region**	**Endangerment statue**
31	Asteraceae	*Anthemis tinctoria* L. var. *Tinctoria*	E4.4	—	—	LC
32	Asteraceae	*Anthemis wiedemanniana* Fisch. & Mey.	E4.4	Endemik	—	LC
33	Asteraceae	*Arctium minus* (Hill) Bernh. subsp. *pubens* (Babington) Arenes	El.2	—	Avr. -Sib. ele.	LC
34	Asteraceae	*Artemisia santonicum* L.	E4.4	—	Avr'. -Sib. ele.	LC
35	Asteraceae	*Artemisia taurica* Willd.	E4.4	—	—	LC
36	Asteraceae	*Carduus nutans* L. subsp. *Nutans*	El.2	—	—	LC
37	Asteraceae	*Centaurea carduiformis* DC. subsp. *carduiformis* var. *Caduiformis*	E4.4	—	—	LC
38	Asteraceae	*Centaurea glastifolia* L.	E4.4	—	Ir.-Tur. ele.	LC
39	Asteraceae	*Centaurea iberica* Trev.	E1.2	—	—	LC
40	Asteraceae	*Centaurea patula* DC.	E4.4	—	Ir.-Tur. ele.	LC
41	Asteraceae	*Centaurea picheri* Boiss. subsp. *extrarosularis* (Hayek & Siehe) Wagenitz	E4.4	—	—	LC
42	Asteraceae	*Centaurea solstitialis* L. subsp. *Solstitialis*	El.2	-	—	LC
43	Asteraceae	*Centaurea urvillei* DC. subsp. *stepposa* Wagenitz	E4.4		Ir.-Tur. ele.	LC
44	Asteraceae	*Centaurea virgata* Lam.	El.2	—	—	' LC
45	Asteraceae	*Chardinia orientalis* (L.) O.Kuntze	E4.4	—	Ir.-Tur. ele.	LC
46	Asteraceae	*Cichorium intybus* L.	El .2	—	—	LC
47	Asteraceae	*Cirsium creticum* (Lam.) d'Urv. subsp. *Creticum*	El .2	—	Akd. ele.	LC
48	Asteraceae	*Cirsium lappaceum* (Bieb.) Fischer subsp. *anatolicum* Petrak	11.3	—	Ir.-Tur. ele.	LC
49	Asteraceae	*Cirsium vulgare* (Savi) Ten.	E1.2	—	—	LC
50	Asteraceae	*Cisium arvense* (L.) Scop.	11.3	—	—	LC
51	Asteraceae	*Cousinia halyensis* Hub.-Mor.	E4.4	Endemik	Ir.-Tur. ele.	LC
52	Asteraceae	*Crepis foetida* L. subsp. *rhoeadifola* (Bieb.) Celak.	H3.6	—	—	LC
53	Asteraceae	*Crepis macropus* Boiss. & Heldr.	E4.4	Endemik	Ir.-Tur. ele.	LC
54	Asteraceae	*Crupina crupinastrum* (Moris) Vis.	E4.4	—	—	LC
55	Asteraceae	*Echinops ritro* L.	E4.4	—	—	LC
56	Asteraceae	*Gundelia tournefortii* L. var. *Tournefortii*	E4.4	—	—	LC
57	Asteraceae	*Helianthus annuus* L.	11.3	—	—	LC
58	Asteraceae	*Helichrysum plicatum* DC. subsp. *Plicaum*	E4.4	—	—	LC

59	Asteraceae	*Helichrysum arenarium* (L.) Moench subsp. *aucheri* (Boiss.) Davis & Kupicha	E4.4	Endemik	Ir.-Tur. ele.	LC
60	Asteraceae	*Inula oculus-christi* L.	E4.4	—	Avr. -Sib. ele.	LC
No	**Family**	**Species**	**EUNIS Habitat code**	**Endemism**	**Phytogeographical Region**	**Endangerment statue**
61	Asteraceae	*Lactuca serriola* L.	11.3	—	Avr. -Sib. ele.	LC
62	Asteraceae	*Leotodon asperrimus* (Willd.) J.Ball.	E1.2	—	Ir.-Tur. ele.	LC
63	Asteraceae	*Logfia arvensis* (L.) Holub	E4.4	—	—	LC
64	Asteraceae	*Onopordum analolicum* (Boiss.) Eig	E4.4	Endemik	Ir.-Tur. ele.	LC
65	Asteraceae	*Pilosella xcntviculoides* (A.F.Lang) Sell & West	E1.2	—	Ir.-Tur. ele.	LC
66	Asteraceae	*Scariola ovientalis* (Boiss.) Sojak	E1.2	—	Ir.-Tur. ele.	LC
67	Asteraceae	*Scolymus hispanicus* L.	E4.4	—	Akd. ele.	LC
68	Asteraceae	*Scorzonera parviflora* Jacq.	El.2	—	—	LC
69	Asteraceae	*Senecio vernalis* Waldst. & Kit.	E4.4	—	—	LC
70	Asteraceae	*Taraxacum buttleri* Van Soest	E1.2	—	—	LC
71	Asteraceae	*Taraxacum* jerotinum (Waldst. & Kit.) Poiret	E1.2	—	—	LC
72	Asteraceae	*Tragopogon latifolius* Boiss. var. *angustifolius* Boiss.	El.2	—	Ir.-Tur. ele.	LC
73	Asteraceae	*Tripleurospermum decipiens* (Fisch. & Mey) Bornm.	E1.2	—	—	LC
74	Asteraceae	*Tripleurospermum oreades* (Boiss.) Rech. var. *oreades*	E2.5	—	—	LC
75	Asteraceae	*Xanthium spinosum* L.	E4.4	—	—	LC
76	Asteraceae	*Xeranthemum annuum* L.	E4.4	—	—	LC
77	Boraginaceae	*Alkanna orientalis* (L.) Boiss. var. *Orientalis*	E4.4	—	Ir.-Tur. ele.	LC
78	Boraginaceae	*Anchusa leptophylla* Roemer & Schultes subsp. *Leptophylla*	E1.2	—	—	LC
79	Boraginaceae	*Cerinthe minör* L. subsp. *auriculata* (Ten.) Domac	E1.2	—	—	LC
80	Boraginaceae	*Echium italicum* L.	E4.4	—	Akd. ele.	LC
81	Boraginaceae	*Heliotropium lasiocarpum* Fisch. & Mey.	E4.4	—	Ir.-Tur. ele.	LC
82	Boraginaceae	*Lappula barbata* (Bieb.) Gürke	E4.4	—	Ir.-Tur. ele.	LC
83	Boraginaceae	*Lappula squarrosa* (Retz.) Dumort	11.3	—	—	LC
84	Boraginaceae	*Moltkia coerulea* (Willd.) Lehm.	E4.4	—	Ir.-Tur. ele.	LC
85	Boraginaceae	*Onosma annemim* DC.	E4.4	Endemik	Ir.-Tur. ele.	LC
86	Boraginaceae	*Onosma tauricum* Pallas ex Willd. var. *Tauricum*	E4.4	Endemik	—	LC
87	Brassicaceae	*Alyssum desertorum* Stapf. var. *Desertorum*	E4.4	—	— •	LC
88	Brassicaceae	*Alyssum pateri* Nyar. subsp. *Pateri*	E4.4	Endemik	Ir.-Tur. ele.	LC
89	Brassicaceae	*Alyssum praecox* Boiss. & Bal. var, *albiflorum* Dudley	E4.4	Endemik	Ir.-Tur. ele.	LC
90	Brassicaceae	*Alyssum sibiricum* Willd.	H5.3	—	’ —	LC

91	Brassicaceae	*Arabis nova* Vill.	E4.4	—	—	LC
92	Brassicaceae	*Camelina rumelica* Vel.	E4.4	—	—	LC
93	Brassicaceae	*Capsella bursa-pastoris* (L.) Medik,	E4.4	—	—	LC
No	**Family**	**Species**	**EUNIS Habitat code**	**Endemism**	**Phytogeographical Region**	**Endangerment statue**
94	Brassicaceae	*Cardaria draba* (L.) Desv. subsp. *chcalepensis* (L.) O.E.Schulz	E4.4	—	—	LC
95	Brassicaceae	*Cardaria draba* (L.) Desv. subsp. *draba*	E4.4	—	—	LC
96	Brassicaceae	*Descurainia sophia* (L.) Webb ex Prantl	E2.5	—	—	LC
97	Brassicaceae	*Erophila verna* (L.) Chevall. subsp. *verna*	E4.4	—	—	LC
98	Brassicaceae	*Erysimum crassipes* Fisch. & Mey.	H5.3	—	—	LC
99	Brassicaceae	*Erysimum torulosum* Hub.-Mor.	E4.4	Endemik	—	LC
100	Brassicaceae	*Lepidium cartilagineum* (J.May.)Thell.	E2.5	—	—	LC
101	Brassicaceae	*Lepidium latifolium* L.	E4.4	—	—	LC
102	Brassicaceae	*Malcolmia africana* (L.) R.Br.	E4.4	—	—	LC
103	Brassicaceae	*Rapistrum rugosum* (L.) All.	11.3	—	—	LC
104	Brassicaceae	*Sinapis arvensis* L.	E4.4	—	—	LC
105	Brassicaceae	*Sisymbrium altissimum* L.	E4.4	—	—	LC
106	Brassicaceae	*Thlaspi perfoliatum* L.	E4.4	—	—	LC
107	Campanulaceae	*Asyneuma rigidum* (Willd.) Grossh. subsp. *rigidum*	E4.4	—	Ir.-Tur. ele.	LC
108	Caryophyllaceae	*Arnaria ledebouriana* Fenzl var. *ledebouriana*	H5.3	Endemik	—	LC
109	Caryophyllaceae	*Cerastium dichotomam* L. subsp. *dichotomum*	11.3	—	—	LC
110	Caryophyllaceae	*Dianthus anatolicus* Boiss.	E4.4	Endemik	—	LC
111	Caryophyllaceae	*Dianthus balansae* Boiss.	E4.4	Endemik	—	LC
112	Caryophyllaceae	*Dianthus crinitus* Sm. var. *crinitus*	E4.4	—	—	LC
113	Caryophyllaceae	*Dianthus crinitus* Sm. var. *crossosepatalus* Boiss.	H5.3		—	LC
114	Caryophyllaceae	*Dianthus zonatus* Fenzl var. *zonatus*	E4.4	—	—	LC
115	Caryophyllaceae	*Gysophila eriocalyx* Boiss.	E4.4	Endemik	Ir.-Tur. ele.	LC
116	Caryophyllaceae	*Gysophila parva* Bark.	E4.4	Endemik	Ir.-Tur. ele.	LC
117	Caryophyllaceae	*Gysophila perfoliata* L.	D6.1	—	—	LC
118	Caryophyllaceae	*Gysophila pilosa* Hudson	E4.4	—	Ir.-Tur. ele.	LC
119	Caryophyllaceae	*Minuartia anatolica* (Boiss.) Woron. var. *arachnoidea* Mc Neill.	E4.4	Endemik	Ir.-Tur. ele.	LC
120	Caryophyllaceae	*Minuartia erythrosepala* (Boiss.) Hand.-Mazz. var. *erythrosepala*	H5.3	—	—	LC
121	Caryophyllaceae	*Minuartia hamata* (Hausskn.) Mattf.	E4.4	—	—	LC

122	Caryophyllaceae	*Minuartia hybrida* (Vill.) Schschk. subsp. *turcica* Mc Neill	E4.4	—	—	LC
123	Caryophyllaceae	*Saponaria prostrata* Willd. subsp. *prostrata*	11.3	Endemik	Ir.-Tur. ele.	LC
No	**Family**	**Species**	**EUNIS Habitat code**	**Endemism**	**Phytogeographical Region**	**Endangerment statue**
124	Caryophyllaceae	*Silene dichotoma* Ehrh. subsp. *dichotoma*	E4.4	—	—	LC
125	Caryophyllaceae	*Silene marschallii* C.A.Meyer	H3.6	—	Ir.-Tur. ele.	LC
126	Caryophyllaceae	*Silene spergulifolia* (Desf.) Bieb.	H3.6	—	Ir.-Tur. ele.	LC
127	Caryophyllaceae	*Silene vulgaris* (Moench) Garcke var. *vulgaris*	G3	—	—	LC
128	Caryophyllaceae	*Spergularia media* (L.) C.Presl	E2.5	—	—	LC
129	Chenopodiaceae	*Atriplex laevis* C.A.Meyer	E2.5	—	—	LC
130	Chenopodiaceae	*Atriplex rosea* L.	E4.4	—	—	LC
131	Chenopodiaceae	*Atriplex tatarica* L. var. *tatarica*	E4.4	—	—	LC
132	Chenopodiaceae	*Camphorosma monspeliaca* L. subsp. *monspeliaca*	E2.5	—	—	LC
133	Chenopodiaceae	*Chenopodium album* L. subsp. *album* var. *album*	E2.5	—	—	LC
134	Chenopodiaceae	*Chenopodium botrys* L.	11.3	—	—	LC
135	Chenopodiaceae	*Chenopodium foliosum* (Moench) Aschers'	E4.4	—	—	LC
136	Chenopodiaceae	*Cyathobasis fruticulosa* (Bunge) Aellen	E2.5	Endemik	—	VU
137	Chenopodiaceae	*Halimione verrucifera* (Bieb.) Aellen	E4.4	—	—	LC
138	Chenopodiaceae	*Halocnemum strobilaceum* (Pall.) Bieb.	E2.5	—	—	LC
139	Chenopodiaceae	*Kochia prostrata* (L.) Schrad.	E4.4	—	—	LC
140	Chenopodiaceae	*Krascheninnikovia ceroides* (L.) Güldenst.	E2.5	—	—	LC
141	Chenopodiaceae	*Noaea mucronata* (Forssk.) Aschers. & Schvveinf subsp. *mucronata*	E4.4	—	—	LC
142	Chenopodiaceae	*Panderia pilosa* Fisch. & Mey.	E4.4	—	—	LC
143	Chenopodiaceae	*Petrosimonia brachiata* (Pallas) Bunge	E2.5	—	1	LC
144	Chenopodiaceae	*Salicornia europaea* L. subsp. *prostrata* Pall	E2.5	—	—	LC
145	Chenopodiaceae	*Salsola inermis* Forssk.	E2.5	—	Ir.-Tur. ele.	LC
146	Chenopodiaceae	*Salsola laricina* Pall.	E2.5	—	—	LC
147	Chenopodiaceae	*Salsola stenoptera* Wageıiitz	E2.5	Endemik	Ir.-Tur. ele.	LC
148	Chenopodiaceae	*Suaeda carnosissima* Post	E2.5	—	Ir.-Tur. ele.	LC
149	Cistaceae	*Helianthemum nummularium* (L.) Miller subsp. *nummıtlarıum*	E4.4	—	—	LC
150	Cistaceae	*Helianthemum salicifolium* (L.) Miller	E4.4		—	LC
151	Convolvulaceae	*Convolvulus arvensis* L.	E1.2	—	—	LC
152	Convolvulaceae	*Convolvulus assyriacus* Griseb.	E4.4	Endemik	Ir.-Tur. ele.	LC
153	Convolvulaceae	*Convolvulus galaticus* Rostan ex Choisy	E4.4	Endemik	Ir.-Tur. ele.	LC

154	Convolvulaceae	*Convolvulus holosericeus* Bieb. subsp. *holosericeus*	E4.4	—	—	LC
155	Convolvulaceae	*Convolvulus lineatus* L.	E4.4	—	.	LC
156	Crassulaceae	*Sedum acre* L.	H3.6	—	—	LC
No	**Family**	**Species**	**EUNIS Habitat code**	**Endemism**	**Phytogeographical Region**	**Endangerment statue**
157	Crassulaceae	*Sedum album* L.	H3.6	—	—	LC
158	Cuscutaceae	*Cuscuta campestris* Yuncker	11.3	—	—	LC
159	Dipsacaceae	*Dipsctcus laciniatus* L.	E2.5	—	—	LC
160	Dipsacaceae	*Scabiosa argentea* L,	E4.4	—	—	LC
161	Dipsacaceae	*Scabiosa calocephala* Boiss.	E4.4	—	Ir.-Tur. ele.	LC
162	Dipsacaceae	*Scabiosa rotata* Bieb.	E4.4	—	Ir.-Tur, ele.	LC
163	Euphorbiceae	*Euphorbia anacampseros* Boiss. var. *anacampseros*	E4.4	Endemik	—	LC
164	Euphorbiceae	*Euphorbia arvalis* Boiss. & Heldr.	E4.4	—	Ir.Tur.ele.	LC
165	Euphorbiceae	*Euphorbia falcata* L. sıibsp. *falcata* var. *falcata*	E4.4	—	—	LC
166	Euphorbiceae	*Euphorbia macroclada* Boiss.	E4.4	—	Ir.Turi	LC
167	Euphorbiceae	*Euphorbia szovitsii* Fisch. & Mey. var. *szovitsii*	E4.4	—	Ir.Tur.	LC
168	Fabaceae	*Alhagi pseudolhagi* (Bieb.) Desv.	El.2	—	Ir.-Tur. ele.	LC
169	Fabaceae	*Astragalus angustifolius* Lam. subsp. *longidens* Hub.-Mor.	E4.4	—	—	LC
170	Fabaceae	*Astragalus condensatus* Ledeb.	H3.6	Endemik	Ir.-Tur. ele.	LC
171	Fabaceae	*Astragalus karamasicas* Boiss. & Bal.	E4.4	Endemik	Ir.-Tur. ele.	LC
172	Fabaceae	*Astragalus kırshehiricıis* Chamberlain	E4.4	Endemik	Ir.-Tur. ele.	VU
173	Fabaceae	*Astragalus lycius* Boiss.	E1.2	Endemik	Ir.-Tur. ele.	LC
174	Fabaceae	*Astragalus lydius* Boiss.	E4.4	Endemik	Ir.-Tur. ele.	LC
175	Fabaceae	*Astragalus tokatensis* Fischer	H3.6	Endemik	Ir.-Tur. ele.	NT
176	Fabaceae	*Cicer arietinum* L.	11.3	—	•	LC
177	Fabaceae	*Coronilla varia* L. subsp. *varla*	El.2	—	—	LC
178	Fabaceae	*Ebenus laguroides* Boiss. var. *laguroides*	H3.6	Endemik	Ir.-Tur. ele.	LC
179	Fabaceae	*Lathyrus aphaca* L. var. *biflorus* Post.	E1.2	—	—	LC
180	Fabaceae	*Lens culinaris* Medik.	11.3	•	—	LC
181	Fabaceae	*Lotus corniculalus* L. var. *cornicıılatus*	El.2	—	—	LC
182	Fabaceae	*Medicago sativa* L. subsp. *sativa*	11.3	—	—	LC
183	Fabaceae	*Melilotus officinalis* (L.) Desr.	El.2	—	-	LC
184	Fabaceae	*Onobrychis armena* Boiss. & Huet.	E4.4	Endemik	—	LC
185	Fabaceae	*Onobrychis montana* DC. subsp. *cadmea* (Boiss.) P.W.Ball.	11.3	—	—	LC
186	Fabaceae	*Ononis spinosa* L. subsp. *antiquorum* (L.) Briq.	E2.5	—	Akd. ele.	LC

187	Fabaceae	*Phaseolus vulgaris* L.	11.3	—	—	LC
188	Fabaceae	*Tetragonolobus maritimus* (L.) Roth	El.2	—	—	LC
189	Fabaceae	*Trifolium arvense* L. var. *arvense*	El.2	—	-	LC
No	**Family**	**Species**	**EUNIS Habitat code**	**Endemism**	**Phytogeographical Region**	**Endangerment statue**
190	Fabaceae	*Trifolium campestre* Schreb.	El.2	—	—	LC
191	Fabaceae	*Trifolium physodes* Stev. ex Bieb. var. *physodes*	E1.2	—	Akd. ele.	LC
192	Fabaceae	*Trifolium repens* L. var. *macrorrhizum* (Boiss.) Boiss.	El.2	—	—	LC
193	Fabaceae	*Vicia cracca* L. subsp. *stenophylla* Vel.	E1.2	—	—	LC
194	Fabaceae	*Vicia erillea* (L.) Willd.	E1.2		—	LC
195	Frankeniaceae	*Frankenia hirsuta* L.	E2.5	—	—	LC
196	Gentianaceae	*Centaurium erythraea* Rafn subsp. *turcicum* (Velen.) Melderis	E4.4	—	—	LC
197	Geraniaceae	*Erodium cicutarium* (L.) L'Herit. subsp. *dcutarium*	E4.4	—	—	LC
198	Geraniaceae	*Geranium collinum* Steph. ex Willd,	E2.5		—	LC
199	Globulariaceae	*Globularia orientalis* L.	H3.6		Ir.-Tur. ele.	LC
200	Globulariaceae	*Globularia trichosantha* Fisch. & Mey.	H3.6	—	Ir.-Tur. ele.	LC
201	Hypericaceae	*Hypericum perforatum* L.	11.3	-	—	LC
202	Illecebraceae	*Paronychia kurdica* Boiss. subsp. *kurdica* var. kurdica	E4.4	—	—	LC
203	Juglandaceae	*Juglans regia* L.	E4.4	—	—	LC
204	Lamiaceae	*Ajuga chamaepitya* (L.) Schreber subsp. *chia* (Schreber) Arcangeli	E4.4	—	—	LC
205	Lamiaceae	*Lamium amplexicule* L.	E4.4	—	Avr. -Sib. ele.	LC
206	Lamiaceae	*Marrubium astracanicum* Jacq. subsp. *astracanicum*	E4.4	—	—	LC
207	Lamiaceae	*Marrubium parviflorum* Fisch. & Mey. subsp. *oliodon* (Boiss.) Seybold	E4.4	Endemik	—	LÇ
208	Lamiaceae	*Mentha longifolia* (L.) Hudson subsp. *typhoides* (Briq) Harley	E2.5	—	—	LC
209	Lamiaceae	*Nepeta stricta* (Banks & Sol) Hedge & Lamond var. *curvidens* (Boiss. & Bal.) Hedge & Lamond	11.3	—	Ir.-Tur. ele.	LC
210	Lamiaceae	*Phlomis armeniaca* Willd.	E4.4	Endemik	Ir.-Tur. ele.	LC
211	Lamiaceae	*Phlomis pungens* Willd. var. *hirta* Velen	E4.4		—	LC
212	Lamiaceae	*Salvia verbenaca* L.	E4.4		—	LC
213	Lamiaceae	*Sideritis montana* L. subsp. *montana*	E4.4	—	Akd. ele.	LC
214	Lamiaceae	*Stachys byzantina* C. Koclı	E4.4	—	Avr. -Sib. ele.	LC
215	Lamiaceae	*Stachys amma* (L.) L. subsp. *annua* var. *annua*	E4.4	—	—	LC

216	Lamiaceae	*Stachys lavandulifolia* Vahl var. *alavandulifolia*	H3.6	—	Ir.-Tur. ele.	LC
217	Lamiaceae	*Teucrium chamaedıys L.* subsp. *chamaedrys*	E4.4	—	Avr. -Sib. ele.	LC
218	Lamiaceae	*Teucrium polium L.*	E4.4		'	LC
No	**Family**	**Species**	**EUNIS Habitat code**	**Endemism**	**Phytogeographical Region**	**Endangerment statue**
219	Lamiaceae	*Teucrium scordium L.* subsp. *scordioides* (Schreber) Maire	E4.4	—	—	LC
220	Lamiaceae	*Thymus sipyleus* Boiss. subsp. *rosulans* (Borbas) Jalas	E4.4	—	—	LC
221	Lamiaceae	*Wiedemannia orientalis* Fisch. & Mey.	11.3	—	Ir.-Tur. ele.	LC
222	Lamiaceae	*Ziziphora taurica* Bieb. subsp. *taurica*	H3.6		Ir.-Tur. ele.	LC
223	Lamiaceae	*Ziziphora tenuior* L.	E4.4	—	Ir.-Tur. ele.	LC
224	Linaceae	*Linum austriacum* L. subsp. *austriacum*	E4.4	—	—	LC
225	Lythraceae	*Lythrum salicaria* L.	E2.5	-	Avr. -Sib. ele.	LC
226	Malvaceae	*Alcea aplerocarpa* (Fenzl) Boiss.	E4.4	Endemik	Ir.-Tur. ele.	LC
227	Malvaceae	*Malva neglecta* Wallr.	E4.4	—	—	LC
228	Moraceae	*Morus alba* L.	E4.4		—	LC
229	Moraceae	*Morus nigra* L.	E4.4	—	—	LC
230	Oleaceae	*Fraxinus angustifolia* Vahi	E4.4	—	—	LC
231	Onagraceae	*Epilobium montanum* L.	E2.5	—	Avr. -Sib. ele.	LC
232	Orobanchaceae	*Orobanche anatolica* Boiss. & Reuter	E4.4	—	—	LC
232	Papaveraceae	*Fumaria asepala* Boiss.	E4.4	—	—	LC
233	Papaveraceae	*Glacium leiocarpum* Boiss.	E4.4	—	—	LC
234	Papaveraceae	*Papaver commutatum* Fisch. & Mey.	E4.4	—	—	LC
235	Papaveraceae	*Papaver rhoeas* L.	E4.4	-	—	LC
236	Plantaginaceae	*Plantago atrata* Hoppe	E2.5	—	—	LC
237	Plantaginaceae	*Plantago holosteum* Scop.	E2.5	—	—	LC
238	Plantaginaceae	*Plantago lanceolata* L.	El.2	—	—	LC
239	Plantaginaceae	*Plantago major* L. subsp. *intermedia* (Gilib.) Lange	E2.5	—	—	LC
240	Plumbaginaceae	*Acantholimon acerosum* (Willd.) Boiss. var. *acerosum*	E4.4	—	Ir.Tur. ele.	LC
241	Polygalaceae	*Polygala pruinosa* Boiss. subsp. *pruinosa*	E2.5	—	—	LC
242	Polygonaceae	*Polygonum arenastrum* Bar.	E4.4	—	—	LC
243	Polygonaceae	*Polygonum bellardii* Ali.	E4.4	—	—	LC
244	Polygonaceae	*Polygonum polycnemoides* Jaub. & Spach	E4.4	—	Ir.-Tur. ele.	LC
245	Polygonaceae	*Rumex acetocella* L.	E4.4	—	—	LC
246	Polygonaceae	*Rumex crispus* L.	E2.5	—	—	LC
247	Primulaceae	*Anagallis arvensis* L. var. *arvensis*	E4.4	—	—	LC
248	Primulaceae	*Androsace maxima* L.	E4.4	—	—	LC

249	Primulaceae	*Androsace villosa* L.	E4.4	—	—	LC
250	Primulaceae	*Glaux maritima* L.	E2.5	—	—	LC
251	Ranunculaceae	*Adonis aestivalis* L. subsp. *aestivalis*	E4.4.	—	—	LC
No	**Family**	**Species**	**EUNIS Habitat code**	**Endemism**	**Phytogeographical Region**	**Endangerment statue**
252	Ranunculaceae	*Ceratocephalus falcatus* (L.) Pers.	E4.4	—	—	LC
253	Ranunculaceae	*Consolida glandulosa* (Boiss. & Huet) Bornm.	E4.4	Endemik	Ir.-Tur. ele.	LC
254	Ranunculaceae	*Consolida hellespontica* (Boiss.) Chater	E4.4	—	Ir.-Tur. ele.	LC
255	Ranunculaceae	*Consolida orientalis* (Gay) Schröd	E4.4	—	Ir.-Tur. ele.	LC
256	Ranunculaceae	*Nigella arvensis* L. var. *glauca* Boiss.	E4.4	—	—	
257	Ranunculaceae	*Nigella segetalis* Bieb.	E4.4	-	—	LC
258	Ranunculaceae	*Ranunculus arvensis* L.	E2.5	—	—	LC
259	Ranunculaceae	*Ranunculus constantinopolitanus* (DC.) d'Urv,	E2.5	—	—	LC
260	Ranunculaceae	*Ranunculus scleratus* L.	E2.5		—	LC
261	Ranunculaceae	*Thalictrum minus* L. var. *minus*	E2.5	—	—	LC
262	Resedaceae	*Reseda lutea* L. var, *lutea*	E4.4	—	—	LC
263	Rosaceae	*Amygdalus communis* L.	E4.4	.	—	LC
264	Rosaceae	*Cerasus duhamel* (L.) Moench	E4.4	—	—	LC
265	Rosaceae	*Cerasus vulgaris* Miller	E4.4	—	—	LC
266	Rosaceae	*Cydonia oblonga* Miller	E4.4	.	—	LC
267	Rosaceae	*Malus sylvestris* Miller	E4.4	—	—	LC
268	Rosaceae	*Potentilla recta* L.	E1.2	—	—	LC
269	Rosaceae	*Potentilla reptans* L.	E1.2	—	—	LC
270	Rosaceae	*Prunus xdomestica* L.	E4.4	—	—	LC
271	Rosaceae	*Pyrus communis* L.	E4.4	—	—	LC
272	Rosaceae	*Rosa canina* L.	E4.4	—	—	LC
273	Rosaceae	*Sanguisorba minör* Scop. subsp. *muricata* (Spach) Briq.	E1.2	—	—	LC
274	Rubiaceae	*Crucianella distachia* Boiss.	E4.4	Endemik	Avr. -Sib. ele.	LC
275	Rubiaceae	*Cruciata taurica* (Pallas ex Willd.) Ehrend.	H3.6	—	Ir.-Tur. ele.	LC.
276	Rubiaceae	*Galium aparine* L.	E1.2	—	—	LC
277	Rubiaceae	*Galium incanum* Sm. subsp. *elatius* (Boiss.) Ehrend.	H3.6	—	Ir.-Tur, ele.	LC
278	Rubiaceae	*Galium verum* L. subsp. *verum*	E1.2	—	Avr. -Sib. ele.	LC
279	Salicaceae	*Populus alba* L.	E4.4	—	Avr. -Sib. ele.	LC
280	Salicaceae	*Populus nigra* L.	E4.4	—	—	LC
281	Salicaceae	*Salix alba* L.	E4.4	—	Avr. -Sib. ele.	LC
282	Scrophulariaceae	*Bungea trifida* (Vahl) C.A.meyer	E4.4	—	Ir.-Tur. ele.	LC
283	Scrophulariaceae	*Linaria corifolia* Desf.	H3.6	Endemik	Ir.-Tur. ele.	LC

284	Scrophulariaceae	*Linaria genistifolia* (L.) Miller subsp. *confertiflora* (Boiss.) Davis	11.3	Endemik	Ir.-Tur. ele.	LC
285	Scrophulariaceae	*Linaria kurdica* Boiss. & Hohen subsp. *aucheri* (Boiss.) Davis	11.3	—	Ir.-Tur. ele.	LC
No	**Family**	**Species**	**EUNIS Habitat code**	**Endemism**	**Phytogeographical Region**	**Endangerment statue**
286	Scrophulariaceae	*Odontites aucheri* Boiss.	E2.5	.	Ir.-Tur. ele.	LC
287	Scrophulariaceae	*Verbascum armenum* L.	E4.4	—	—	LC
288	Scrophulariaceae	*Verbascum cherianthiflium* Boiss. var. *cherianthifolium*	E2.5	—	—	LC
289	Scrophulariaceae	*Verbascum vulcanicum* Boiss. & Heldr. var. *vulcanicum*	E2.5	Endemik	Ir.-Tur. ele.	LC
290	Scrophulariaceae	*Veronıca anagallis-aquatica* L.	E2.5	—		LC
291	Scrophulariaceae	*Veronica ersica* Poiret	E2.5	—	—	LC
292	Scrophulariaceae	*Veronica grisebachii* S.M.Walters	E1.2	—	Akd.ele.	LC
293	Scrophulariaceae	*Veronica multifida* L.	El.2	—	—	LC
294	Scrophulariaceae	*Veronica orientalis* Miller subsp. *nimrodi* (Richter ex Stapf) M.A.Fischer	El.2	Endemik	—	LC
295	Scrophulariaceae	*Veronica verna* L.	E2.5	—	Avr. -Sib. ele.	LC
296	Solanaceae	*Hyoscyamus niger* L.	E1.2	—	—	LC
297	Solanaceae	*Hyoscyamus reticulatus* L.	El .2	—	Ir.-Tur. ele.	LC
298	Solanaceae	*Lycium anatolicum* A. Baytop & R. Mili	E4.4	Endemik	Ir.-Tur. ele.	LC
299	Solanaceae	*Lycium depressum* Stocks	E4.4	—	Ir.Tur.	LC
300	Tamaricaceae	*Reaumuria aliernifolia* (Lab.) Britten	E4.4	—	Ir.-Tur. ele.	LC
301	Thymalaeaceae	*Thymelaea passerina* (L.) Cosson & Germ.	E4.4	—	—	LC
302	Ulmaceae	*Ulmus minör* Miller subsp. *minor*	E4.4	—	—	LC
303	Valerianaceae	*Valerianella coronata* (L.) DC.	E4.4	—	—	LC
304	Vitaceae	*Vitis vinifra* L.	E4.4			LC
305	Zygophyllaceae	*Peganum harmala* L.	E4.4	—		LC
306	Zygophyllaceae	*Tribuhıs terrestris* L.	E1.2	—		LC
307	Zygophyllaceae	*Zygophyllum fabago* L.	E4.4	—	Ir.-Tur. ele.	LC
	MONOCOTYLEDONES					
308	Alismataceae	*Alisma pIantago-aqualica* L.	D6.1		Avr. -Sib. ele.	LC
309	Butomaceae	*Butomus umbellatus* L.	D6.1	—	Avr. -Sib. ele.	LC
310	Cyperaceae	*Bolboschoenus maritimus* (L.) Palla var. *maritimus*	D6.1	—	—	LC
311	Cyperaceae	*Carex acutiformis* Ehrh.	E1.2		Avr. -Sib. ele.	LC
312	Cyperaceae	*Carex cilicica* Boiss. subsp. *cilicica*	El.2	—	Ir.-Tur. ele.	LC
313	Cyperaceae	*Carex dis/ans* L.	E2.5	—	—	LC
314	Cyperaceae	*Carex divisa* Hudson	E1.2	—	Avr. -Sib. ele.	LC
315	Cyperaceae	*Carex nigra* (L.) Reichd subsp. *dacica* (Heuffel) Soo	E1.2	—	Öksin ele.	LC
316	Cyperaceae	*Carex otrubae* Podp.	El.2		Avr. -Sib. ele.	LC

317	Cyperaceae	*Carex riparia* Curtis	El.2	—	Avr. -Sib. ele.	LC
318	Cyperaceae	*Eleocharis mitrocarpa* Steudel	El.2	—	—	LC
319	Cyperaceae	*Eleocharis uniglumis* (Link) Schultes	D6.1	—	—	LC
No	**Family**	**Species**	**EUNIS Habitat code**	**Endemism**	**Phytogeographical Region**	**Endangerment statue**
320	Cyperaceae	*Schoenoplectus lacustris* (L.) Palla	D6.1	—	—	LC
321	Cyperaceae	*Schoenoplectus supinus* (L.) Palla	D6.1	—	—	LC
322	Cyperaceae	*Scirpoides holoschoenus* (L.) Sojak	E2.5	—	—	LC
323	Juncaceae	*Juncus gerardi* Loisel subsp. *gerardi*	El.2	—	—	LC
324	Juncaceae	*Jucus heldreichianus* Marsson ex Parl. subsp. *orientalis* Snog	E1.2	—	Ir.-Tur. ele.	LC
325	Juncaginaceae	*Triglochin palustris* L.	El.2	—	—	LC
326	Iridaceae	*Iris orientalis* Miller	D6.1	—	Akd. ele.	LC
327	Liliaceae	*Allium atroviolaceum* Boiss.	11.3	—	—	LC
328	Liliaceae	*Allium cappadocicum* Boiss.	E4.4	Endemik	Ir.-Tur. ele.	LC
329	Liliaceae	*Allium cepa* L.	E4.4	—	—	LC
330	Liliaceae	*Allium pseudoflavum* Vved.	E4.4	—	Ir.-Tur. ele.	LC
331	Liliaceae	*Allium scorodoprasum* L. subsp. *rotundum* (L.) Stearn	H3.6	—	Akd. ele.	LC
332	Liliaceae	*Allium vineale* L.	E4.4	—	—	LC
333	Liliaceae	*Colchicum boissieri* Orph.	E2.5	—	Akd. ele.	LC
334	Liliaceae	*Colchicum szovitsii* Fisch. & Mey.	E2.5	—	Ir.-Tur. ele.	LC
335	Liliaceae	*Gagea villosa* (Griseb.) Duby var. *villosa*	11.3	—	Akd. ele.	LC
336	Liliaceae	*Muscari caucasicum* (Griseb.) Baker	El.2	—	Ir.Tur.	LC
337	Orchidaceae	*Orchis palustris* Jacq.	El.2	—	—	LC
338	Poaceae	*Aegilops cylindrica* Host	11.3	—	Ir.-Tur. ele.	LC
339	Poaceae	*Aegilops umbellulata* Zhukovslcy	E4.4	—	Ir.-Tur. ele.	LC
340	Poaceae	*Aeluropus littoralis* (Gouan) Parl	E1.2	—	—	LC
341	Poaceae	*Agropyron cristatum* (L.) Gaertner subsp. *pectinatum* (Bieb.) Tzvelev var. *pectinatum*	E1.2	—	—	LC
342	Poaceae	*Alopecuris arundinaceus* Poiret	E4.4	—	Avr. -Sib. ele.	LC
343	Poaceae	Apera intermedia Harkel	H3.6	—	Ir.-Tur.. ele.	LC
344	Poaceae	Bromus cappadocicus Boiss.	H3.6	—	Ir.-Tur. ele.	LC
345	Poaceae	Broımıs japonicus Thunb. Subsp. japonicus	E4.4	—	—	LC
346	Poaceae	Bromus squarrosus L.	E1.2	—	—	LC
347	Poaceae	*Bromus sterilis* L.	E4.4	—	—	LC
348	Poaceae	*Bromus tectorum* L.	E4.4	—	—	LC
349	Poaceae	*Bromus tomentellus* Boiss.	E4.4	—	Ir.-Tur. ele.	LC
350	Poaceae	*Cynodon dactylon* (L.) Pers. var. *villosus* Regel	El.2	—	—	LC

351	Poaceae	*Dactylis glomerata* L. subsp. *hispanica* (Roth) Nyman	E1.2	—		LC
352	Poaceae	*Echinaria capitata* (L.) Desf.	E4.4	—	—	LC
No	**Family**	**Species**	**EUNIS Habitat code**	**Endemism**	**Phytogeographical Region**	**Endangerment statue**
353	Poaceae	*EIymus elongatus* (Host) Runemark sıibsp. *ponticus* (Podp.) Melderis	El.2	—	—	LC
354	Poaceae	*EIymus lazicus* (Boiss.) Melderis subsp. *divaricatus* (Boiss. & Bal.) Melderis	E4.4	Endemik	Ir.-Tur. ele.	LC
355	Poaceae	*Eremopoa songarica* (Schrenk) Roshev.	El.2		Ir.-Tur. ele.	LC
356	Poaceae	*Eremopyrum triticeum* (Gaertner) Nevski	E4.4	—	—	LC
357	Poaceae	*Festuca arundinacea* Schreber subsp. *arundinacea*	E1.2	—	—	LC
358	Poaceae	*Festuca callieri* (Hackel ex St.-Yves) F. Markgraf subsp. *callieri*	E4.4	—	—	LC
359	Poaceae	*Festuca drymeja* Mertens & Koch	E1.2	—	Avr. -Sib. ele.	LC
360	Poaceae	*Festuca valesiaca* Schleischer ex Gaudin	E4.4	—	—	LC
361	Poaceae	*Hordeum bulbosum* L.	11.3	—	—	LC
362	Poaceae	*Hordeum murinum* L. subsp. *glaucum* (Steudel) Tzvelev	11.3	—	—	LC
363	Poaceae	*Koeleria cristata* (L.) pers.	E4.4	—		LC
364	Poaceae	*Lolium perenne* L.	E4.4	—	Avr. -Sib. ele.	LC
365	Poaceae	*Phleum exaratum* Hochst. & Griseb subsp. *exaratum*	El.2	—	—	LC
366	Poaceae	*Phragmites australis* (Cav.) Trin. ex Steudel	D6.1	—	Avr. -Sib. ele.	LC
367	Poaceae	*Poa bulbosa* L.	E4.4	—	—	LC
368	Poaceae	*Poa pratensis* L.	E1.2	—	—	LC
369	Poaceae	*Polypogon monspeliensis* (L.) Desf.	E4.4	—	—	LC
370	Poaceae	*Puccinellia convoluta* (Hornem.) P. Fourr.	E4.4	—	—	LC
371	Poaceae	*Puccinellia koeieana* Melderis subsp. *anatolica* Kit Tan	El.2	Endemik	—	LC
372	Poaceae	*Secale montamun* Guss.	E4.4			LC
373	Poaceae	*Stipa capillata* L.	E4.4			LC
374	Poaceae	*Stipa holosericea* Trin	E4.4		Ir.-Tur. ele.	LC
375	Poaceae	*Taeniatherum caput-medusae* (L.) Nevslci subsp. *crinitum* (Schreber) Melderis	11.3			LC
377	Poaceae	*Triticum aestivum* L.	11.3			LC
378	Poaceae	*Zea mays* L.	11.3			LC
379	Poaceae	*Zingeria biebersteiniana* (Claus) P. Smirnov subsp. *biebersteiniana*	E1.2		Ir.-Tur. ele.	LC
380	Typhaceae	*Typha latifolia* L.	D6.1			LC

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CONCLUSION AND DISCUSSION

The outcomes of this research were based on the examination of 874 plant specimens collected in 2 years, field observations, and collection of literature data on the issue.

As a result of naming of the plant specimens, 237 genera belonging to 65 families, 383 species, 3 sub-species, 2 varieties, as a total of 388 taxons were determined. 52 of the identified 383 species (13.57%) were endemic.

The first ten families consisting of maximum number of species among the families which contained the identified 388 taxons were in order of; *Asteraceae, Poaceae, Fabaceae, Chenopodiaceae, Lamiaceae, Caryophllaceae, Brassiaceae, Apiaceae, Ranunculaceae,* and *Scrophulariaceae*; and the family spektrum is shown in Figure 2.

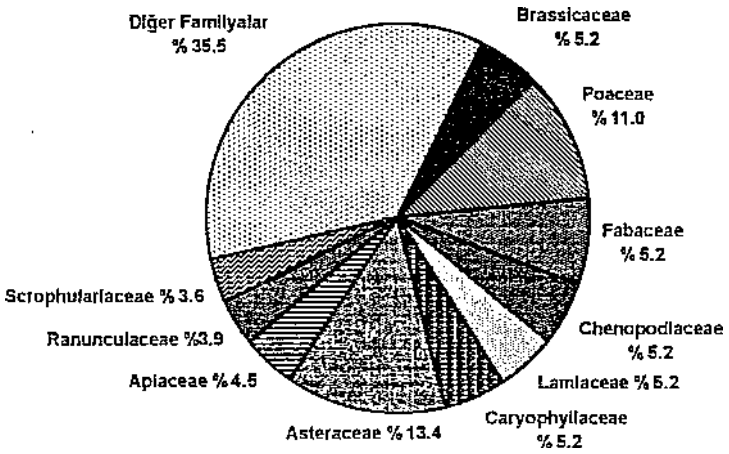

Figure 2. Spectrum of the first ten families consisting of maximum number of species

Diğer familyalar: other families

Distribution spectrum of the species of the research area according to phytogeographic regions is shown in Figure 3. Iranian-Turanian phytogeography region had 102 species, which was the maximum number of species in our area, and the others were respectively, European-Siberian region had 29 species, Mediterranean region had 13 species, cosmopolites had 82 species, and there were 123 species with unknown phytogeographic region (Figure 2).

The research area was situated in the middle of Central Anatolia and it was in Iranian-Turanian floristic region phytogeographically. Various writers indicated different borders for Iranian-Turanian region and used different names. Based on the arguments presented by some writers and collected data, the thought of dividing Iranian-Turanian region into the western and eastern sub-sections draws attention. Central Anatolian region is included in Iranian-Anatolian province, which is located in the western Iranian-Turanian sub-region of Iranian-Turanian region.

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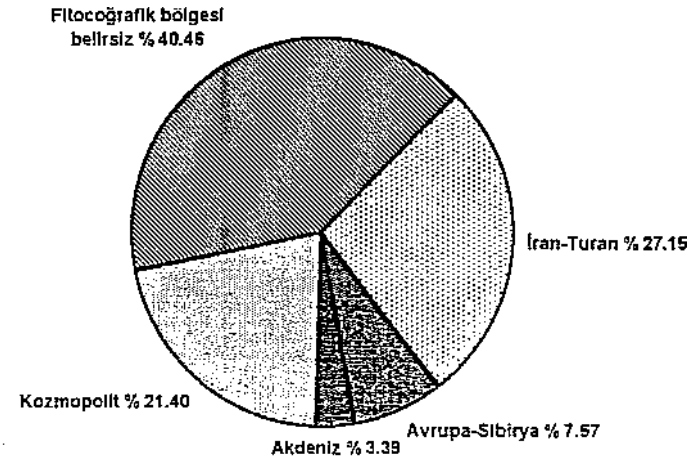

Figure 3. Spectrum of Phytogeographical Region of Species

Fitocoğrafik bölgesi belirsiz: with unknown phytogeographic region / kozmopolit: cosmopolitan / Iranian-Turanian / European/Syberian / Akdeniz: Mediterranean

Increasing bird population at Lake Seyfe draws attention of many hunters. Hunting of birds by hoaxing them in various ways and with various tools around the Lake to the level of slaugher should not be permitted absolutely. Hunting is prohibited at Seyfe Lake and its vicinity that are designated as a nature reserve area. However, there is no competent authority emerged yet to implement this prohibition.
Lake Seyfe has a rare and extremely sensitive ecosystem and the basin is remarkable for the presence of birds. These aquatic birds have global scale significance and their protection depends on the preservation of primarily the lake ecosystem. Thus, factors disrupting ecosystem of Lake Seyfe must be taken under control and the outdated insight characterizing wetlands as bogs that need to be dried and opened to agriculture must be abandoned.

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