



## ORIGINAL ARTICLE

# The Study of Flora life form and Chorotypes of the Homel Mountain, Sardasht, West Azarbaijan Province, NW Iran

Hejraneh Azizi<sup>1</sup> and Maryam Keshavarzi<sup>2</sup>

<sup>1</sup>Faculty of Biological sciences, Shahid Beheshti University, Tehran, Iran

<sup>2</sup>Faculty of Biological sciences, Alzahra University, Tehran, Iran.

Email: [hejraneh.azizi@yahoo.com](mailto:hejraneh.azizi@yahoo.com)

### ABSTRACT

*In this survey flora of Homel mountain has been studied. The high of study area includes about 2273 meter and is located at south of sardasht. The method which used for plant collection is the same as regional floristic studies. Collected plants were recognized and determined as families, genera and species by using of indispensable references. Alphabetical list of taxa in this region was provided on the base of families, genera and species. The life form of plant species was determined by using of Raunkiers method and chorotype of plant species was determined by indispensable references. In this research 40 family, 128 genera and 174 species were identified. The largest plant family is Asteraceae with 15 genera and 24 species. The main biological forms respectively are Hemicryptophyte and Therophyte. The most extended chorotype with 66.28% is related to Irano-Turanian.*

*Key words: Floristic list; life form; plant geography; plant species; Iran.*

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### INTRODUCTION

Plant communities play a pivotal role in sustainable management by maintaining biodiversity and conserving the environment [9]. Floristic study and diversity assessments are necessary to understand the present diversity status and conservation of biodiversity. Floristic study is a necessary prerequisite for much fundamental research in tropical community ecology, such as modeling patterns of species diversity or understanding species distributions [20]. One of the challenging tasks before the ecologist is to understand the relationship between biodiversity and the functioning of ecosystems [7, 27]. Floristic studies acquire increasing importance in recent years in response to the need of developing and under developing countries to assess their plant wealth [25]. Iran with about 1.65 million square kilometer surface area has the second rich flora after Turkey in the Middle East. The rich flora and fauna and unique landscapes of Iran attracted many biologists for field studies from 1648. There are three main phytochoria including Euro-Siberian (boreal), Irano-Turanian [25] and Saharo-Sindian or Saharo-Arabian [29] and influenced by the introgression of Somalia-Masaei and Mediterranean species [24, 26, 29]. Different researches have done by floristic point of view as: Floristic study of Palang darreh-Qom [28], Band - Golestan [14], Afratakhteh- Golestan [8], Vanak-Semirom-Isfahan [18], Hashtad-pahlu-Lorestan [1], forest area of west kurdistan [2]. The floristic study of many national parks and protected areas have been conducted as National Park of Urmia Lake [5]; Dalamper-West Azarbaijan [23], Mirabad region [11], Ghasemloo (Shohada) valley forest reservoir [15]; Marakan protected region [12]. These studies are very useful for planning the protection program for management of valuable species, and conservation decisions. Plant biodiversity and phytogeography should be considered in land evaluation to have conservational decision and programs. Plant vegetation has an evitable role in protection of water resource, soil protection and improvement and climate recovery. In Iran there is a high variation in climate and topography, resulted in biodiversity of plants and animals. Present study was done in The Homel Mountain in Aalan region as a typical plant vegetation of Zagros Chain Mountains. It was not studied before and present study is the first project which try to illustrate some of its species richness.

## MATERIAL AND METHOD

The study was conducted at Homel mountain in Aalan region during the growing season from 2012 to 2014. This mountain is suitable between 36° 74' to 37° Northern latitude and 45° 48' to 50° Eastern longitude, the height is 2273 meters (Figure 1). The mean annual rainfall is 700 mm. the average maximum temperature is 14 °c in August and minimum temperature is -5°c in February. In plant specimens were collected in different seasons. The sample were transferred to the laboratory, were pressed and recognized according to the Flora of Iran [4]; Flora Iranica [22]; Flora of Iran [19]; Flora of Turkey[6], Colored flora of Iran [10]; *Astragalus* communities of Iran[16] and flora of Iran [17] in Herbarium of Alzahra University. The life forms were recognized due to Raunkier's classification [21]. The endemic species were determined according to Red data book of Iran[13].



**Figure 1: Map of Iran, Western Azerbaijan province (gray color), Homel Mountain near Sardasht is mentioned by red arrow.**

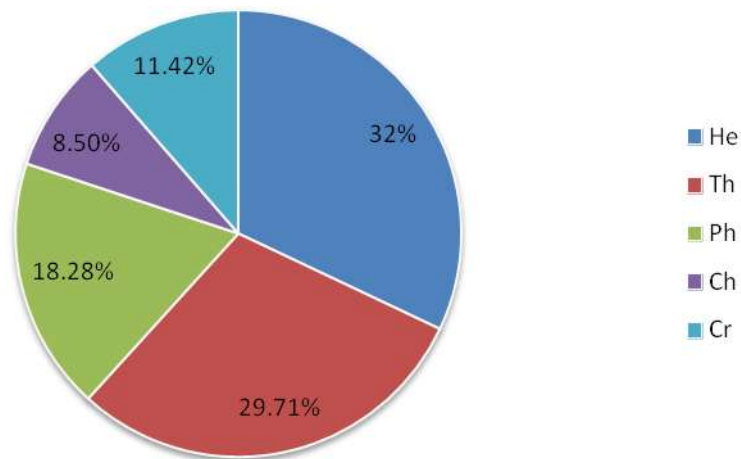
## RESULT

The result of study show that about 174 species belong to 128 genera and 40 families have been recognized. (Table 2). The main families with large number of elements in the studied region are Asteraceae with 24 sp., Poaceae With 23 sp., Rosaceae With 20 sp. and Lamiaceae With 13 sp. Respectively Among existing genera there are 94 monotypic genera, 21 genera with two species and 13 genera with three species (Table 1).

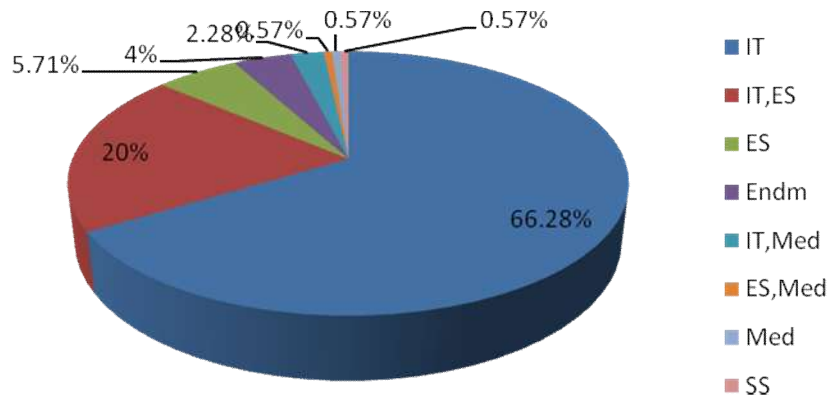
The life form spectrum of plant species are as follow: Phanerophyte: 18.28%, Chamaephyte: 8.5%, Hemicryptophyte: 32%, Therophyte: 29.71, Cryptophyte: 11.42% ( Figure 2). The phytochoria distribution of species is as mentioned in figure 3.

**Table1: Frequency of species in family**

Frequency of species	1	2	3	5	6	7	10	12	20	23	24
No. of family	18	4	7	3	1	1	2	1	1	1	1



**Fig 2:** The pie chart of percentage of life form of species Homel Mountain. He stands for Hemicryptophyte, Th for Therophyte, Ph for Phanerophyte, Ch for Chamaephyte and Cr for Cryptophytes.



**Fig3:** The pie chart of percentage of phytochoria of species Homel Mountain. IT: Irano- Turanian, ES: Euro-Siberian, Med: Mediterranean, Endm: Endemic, SS: Sahara- sindian

**Table 2: Floristic list of The Homel Mountain**

Number	Family	Species	Life form	Chorotype	Voucher number, Collection
1	Amarylidaceae	<i>Ixilirion tataricum</i> (Pall.) Herb	Cr	IT	93h1,azizi
2	Anacardiaceae	<i>Rhus coriaria</i> L.	Ch	IT	93h2,azizi
3	Apiaceae	<i>Eryngium caeruleum</i> M.Bieb.	He	IT	93h3,azizi
4	Apiaceae	<i>Ferula orientalis</i> L.	He	IT	93h4,azizi
5	Apiaceae	<i>Prangos ferulacea</i> (L.)Lindl.	He	IT	93h5,azizi
6	Apiaceae	<i>Sanicula europae</i> L.	He	IT	93h6,azizi
7	Apiaceae	<i>Scandix pectin- veneris</i> L.	He	IT	93h7,azizi
8	Asphodelaceae	<i>Eremurus stenophyllus</i> (Boiss.& Buhse)Baker	He	IT	93h8,azizi
9	Asteraceae	<i>Achillea tenuifolia</i> Lam.	Cr	IT,ES	93h9,azizi
10	Asteraceae	<i>Achillea millefolium</i> L.	Cr	IT,ES	93h10,azizi
11	Asteraceae	<i>Achillea vermicularis</i> Trin.	Cr	IT,ES	93h11,azizi
12	Asteraceae	<i>Acruptilon repens</i> L.	He	IT	93h12,azizi
13	Asteraceae	<i>Antemis tinctoria</i> L.	He	IT	93h13,azizi
14	Asteraceae	<i>Anthemis triumfettii</i> (L.)All.	He	IT	93h14,azizi

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15	Asteraceae	<i>Artimisia Vulgaris</i> L.	Ch	IT,ES	93h15,azizi
16	Asteraceae	<i>Artimisia scoparia</i> Waldst & kit	Ch	IT,ES	93h16,azizi
17	Asteraceae	<i>Carduus thoermeri</i> Weinm.	Th	IT	93h17,azizi
18	Asteraceae	<i>Carthamus lanatus</i> L.	Th	IT	93h18,azizi
19	Asteraceae	<i>Centurea virgata</i> Lam.	Th	IT	93h19,azizi
20	Asteraceae	<i>Centurea solstitialis</i> L.	Th	IT	93h20,azizi
21	Asteraceae	<i>Circium arvense</i> (L.)scop.	He	ES	93h21,azizi
22	Asteraceae	<i>Cousinia sardashtensis</i> Rech.f.	He	Endm	93h22,azizi
23	Asteraceae	<i>Cousinia urumiensis</i> Bornm.	He	IT	93h23,azizi
24	Asteraceae	<i>Cousinia tenuifolia</i> C. A. Mey ex DC.	He	Endm	93h24,azizi
25	Asteraceae	<i>Echinops orientalis</i> Trautv.	He	IT	93h25,azizi
26	Asteraceae	<i>Echinops pungens</i> Trautv.	He	IT,ES	93h26,azizi
27	Asteraceae	<i>Helichrysum oligocephalum</i> DC.	Ch	IT	93h27,azizi
28	Asteraceae	<i>Lactuca scariolooides</i> Boiss.	Th	IT,ES	93h28,azizi
29	Asteraceae	<i>Sonchus asper</i> (L.)Hill.	Th	IT	93h29,azizi
30	Asteraceae	<i>Senecio vernalis</i> Woldst. & Kit.	Th	IT	93h30,azizi
31	Asteraceae	<i>Senecio molis</i> Willd.	He	IT	93h31,azizi
32	Asteraceae	<i>Gundelia tournefortii</i> L.	He	IT	93h32,azizi
33	Boraginaceae	<i>Arnebia linearifolia</i> A. DC.	Th	IT	93h33,azizi
34	Boraginaceae	<i>Anchusa italica</i> Reiz.	Th	IT,ES	93h34,azizi
35	Boraginaceae	<i>Alkanna orientalis</i> (L.) Boiss.	Th	IT	93h35,azizi
36	Boraginaceae	<i>Echium italicum</i> L.	Th	IT	93h36,azizi
37	Boraginaceae	<i>Lappula spinocarpos</i> (Forssk)Aschers. ex Kuntze	Th	IT	93h37,azizi
38	Boraginaceae	<i>Myosotis sylvatica</i> Ehrh. ex Hoffmann	Th	IT	93h38,azizi
39	Boraginaceae	<i>Onosma bulbotrichum</i> DC.	He	IT	93h39,azizi
40	Boraginaceae	<i>Onosma elwendicum</i> Wettst.	He	IT	93h40,azizi
41	Boraginaceae	<i>Onosma sericeum</i> Willd.	He	IT	93h41,azizi
42	Boraginaceae	<i>Trichodesma incanum</i> (Bunge) A. DC.	Th) He)	SS	93h42,azizi
43	Brassicaceae	<i>Alyssum bracteatum</i> Boiss. & Bushe	He	Endm	93h43,azizi
44	Brassicaceae	<i>Capsella bursa-pastoris</i> (L.) Medik.	Th	IT	93h44,azizi
45	Brassicaceae	<i>Cardaria draba</i> (L.)Desv.	He	Med	93h45,azizi
46	Brassicaceae	<i>Descurainia Sophia</i> (L.)Schur	Th	IT	93h46,azizi
47	Brassicaceae	<i>Sisymbrium loeselii</i> L.	Th	IT	93h47,azizi
48	Caryophyllaceae	<i>Acanthophyllum microcephalum</i> Boiss.	Ch	IT	93h48,azizi
49	Caryophyllaceae	<i>Dianthus orientalis</i> Adams.	He	Endm	93h49,azizi
50	Caryophyllaceae	<i>Silene dichotoma</i> Ehrh.	Th	IT	93h50,azizi
51	Caryophyllaceae	<i>Silene spergulifolia</i> (Willd.) M.Bieb.	Th	IT	93h51,azizi
52	Caryophyllaceae	<i>Silene conoidea</i> L.	Th	IT	93h52,azizi
53	Caryophyllaceae	<i>Stellaria persica</i> Boiss.	Th	IT	93h53,azizi
54	Caryophyllaceae	<i>Vaccaria grandiflora</i> Fisch. ex DC.	Th	IT	93h54,azizi
55	Cenopodiaceae	<i>Chenopodium album</i> L.	He	IT,ES	93h55,azizi
56	Convolvaceae	<i>Convolvulus arvensis</i> L.	Cr	IT	93h56,azizi
57	Convolvaceae	<i>Convolvulus lineatus</i> L.	Cr	IT	93h57,azizi
58	Cypraceae	<i>Carex divisa</i> Huds.	Cr	IT	93h58,azizi
59	Cypraceae	<i>Scirpus lacustris</i> L.	He	IT	93h59,azizi
60	Cypraceae	<i>Cyprus fuscus</i> L.	He	IT,ES	93h60,azizi
61	Dipsacaceae	<i>Dipsacus pilosus</i> L.	Th	IT	93h61,azizi
62	Dipsacaceae	<i>Scabiosa rotate</i> M. B.	Th	IT,ES	93h62,azizi
63	Eleagnaceae	<i>Elaeagnus angustifolia</i> L.	Ph	ES	93h63,azizi
64	Euphorbiaceae	<i>Chrozophora tinctoria</i> (L.)Juss.	Ph	IT	93h64,azizi
65	Euphorbiaceae	<i>Euphorbia falcata</i> L.	Th	IT,Me d	93h65,azizi
66	Euphorbiaceae	<i>Euphorbia stricta</i> L.	Th	Es	93h66,azizi
67	Fabaceae	<i>Astragalus chartaceus</i> Ledeb.	He	IT	93h67,azizi
68	Fabaceae	<i>Astragalus chrysostachys</i> Boiss.	Ch	IT	93h68,azizi

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69	Fabaceae	<i>Astragalus tribuloides</i> DC.	Th	IT	93h69,azizi
70	Fabaceae	<i>Crotalaria persica</i> (Burm. F.)Merrill	Th	IT	93h70,azizi
71	Fabaceae	<i>Medicago rigidula</i> (L.) All.	Th	IT	93h71,azizi
72	Fabaceae	<i>Meliolotus officinalis</i> (L.)Desr.	Th	IT	93h72,azizi
73	Fabaceae	<i>Ononis spinosa</i> L.	Th	IT	93h73,azizi
74	Fabaceae	<i>Trifolium fragiferum</i> L.	Th	IT,ES	93h74,azizi
75	Fabaceae	<i>Trigonella monantha</i> C.A. Mey.	Th	IT	93h75,azizi
76	Fabaceae	<i>Trifolium repens</i> L.	He	IT.ES	93h76,azizi
77	Fumariaceae	<i>Fumaria aspala</i> Boiss.	Th	IT	93h77,azizi
78	Hypericaceae	<i>Hypericum scabrum</i> L.	He	IT	93h78,azizi
79	Juglandaceae	<i>Juglans regia</i> L.	Ph	IT,ES	93h79,azizi
80	Lamiaceae	<i>Phlomis tuberosa</i> L.	He	IT,ES	93h80,azizi
81	Lamiaceae	<i>Phlomis olivieri</i> Benth.	He	IT,ES	93h81,azizi
82	Lamiaceae	<i>Marrubium astracanicum</i> Jacq.	He	IT.Me d	93h82,azizi
83	Lamiaceae	<i>Mentha longifolia</i> (L.)Handson	Cr	Endm	93h83,azizi
84	Lamiaceae	<i>Mentha spicata</i> L.	He	ES	93h84,azizi
85	Lamiaceae	<i>Salvia multicaulis</i> Vahl.	Ch	IT	93h85,azizi
86	Lamiaceae	<i>Salvia nemorosa</i> L.	He	ES	93h86,azizi
87	Lamiaceae	<i>Scutellaria nepetifolia</i> Benth.	He	IT	93h87,azizi
88	Lamiaceae	<i>Stachys kurdica</i> Boiss. & Hohen	Ch	IT	93h88,azizi
89	Lamiaceae	<i>Stachys lavandulifolia</i> Vahl.	Ch	IT	93h89,azizi
90	Lamiaceae	<i>Satuerja laxiflora</i> C. Koch	Th	IT	93h90,azizi
91	Lamiaceae	<i>Ziziphora clinopodioides</i> Lam.	Ch	IT	93h91,azizi
92	Liliaceae	<i>Allium sativum</i> L.	Cr	IT	93h92,azizi
93	Liliaceae	<i>Colchicum steveni</i> Kunth.	Cr	ES	93h93,azizi
94	Liliaceae	<i>Muscari caucasicum</i> (Griseb.) Baker.	Cr	IT	93h94,azizi
95	Liliaceae	<i>Muscari neglectum</i> Guss.	Cr	IT	93h95,azizi
96	Liliaceae	<i>Ornithogalum arcuatum</i> Steve.	Cr	IT	93h96,azizi
97	Liliaceae	<i>Tulipa</i> sp.	Cr	IT,ES	93h97,azizi
98	Malvaceae	<i>Alcea ficifolia</i> L.	He	Endm	93h98,azizi
99	Malvaceae	<i>Malva neglecta</i> Wallr	Th	IT,ES	93h99,azizi
100	Papaveraceae	<i>Papaver chelidoniifolium</i> Boiss. & Buhse	He	IT	93h100,azizi
101	Papaveraceae	<i>Papaver tenuifolium</i> Boiss. & Hohen. ex Boiss.	He	IT	93h101,azizi
102	Papaveraceae	<i>Papaver orientale</i> L.	He	IT	93h102,azizi
103	Plantaginaceae	<i>Plantago lanceolata</i> L.	He	ES	93h103,azizi
104	Plumbaginaceae	<i>Acantholimon venustum</i> Boiss.	Ph	IT	93h104,azizi
105	Poaceae	<i>Aegilops cylindrica</i> Host.	Th	IT	93h105,azizi
106	Poaceae	<i>Agropyron intermedium</i> (Host.)P Beauv	Cr	IT,ES	93h106,azizi
107	Poaceae	<i>Alopecurus aplatus</i> Ovcz.	Th	Endm	93h107,azizi
108	Poaceae	<i>Bromus sterilis</i> L.	Th	IT	93h108,azizi
109	Poaceae	<i>Bromus tectorum</i> L.	Th	ES	93h109,azizi
110	Poaceae	<i>Bromus tomentellus</i> Boiss.	He	IT	93h110,azizi
111	Poaceae	<i>Dactylis glomerata</i> L.	He	IT,ES	93h111,azizi
112	Poaceae	<i>Festuca ovina</i> L.	He	IT	93h112,azizi
113	Poaceae	<i>Heterantherium piliferum</i> (Banks & soland.) Hochst	He	IT	93h113,azizi
114	Poaceae	<i>Hordeum bulbosum</i> L.	He	ES,Me d	93h114,azizi
115	Poaceae	<i>Hordeum marinum</i> Hudson	Th	IT	93h115,azizi
116	Poaceae	<i>Hordeum spontaneum</i> C. A.Mey.	Th	IT,Me d	93h116,azizi
117	Poaceae	<i>Leucopoa pseudosclerophylla</i> (Krivot.)Bor	He	IT	93h117,azizi
118	Poaceae	<i>Leucopoma sclerophylla</i> (Boiss.et Hohen)	He	IT	93h118,azizi

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129	Poaceae	<i>Melica jacquemontii</i> Decne ex Jacquem	Cr	IT	93h119,azizi
120	Poaceae	<i>Melica persica</i> Kunth.	Cr	IT	93h120,azizi
121	Poaceae	<i>Nardurus subulatus</i> (Banks & sol.)Bor	Th	IT	93h121,azizi
122	Poaceae	<i>Oryzopsis molinoides</i> (Boiss.) Hack. ex Pauelsen	He	IT	93h122,azizi
123	Poaceae	<i>Paspalum dilatatum</i> Poir.	Th	IT	93h123,azizi
124	Poaceae	<i>Poa bulbosa</i> L.	Cr	IT,Med	93h124,azizi
125	Poaceae	<i>Poa pratensis</i> L.	Th	IT,ES	93h125,azizi
126	Poaceae	<i>Secale montanum</i> Gass.	Th	IT	93h126,azizi
127	Poaceae	<i>Setaria glauca</i> (L.)P.Beauv.	Th	IT	93h127,azizi
128	Polygonaceae	<i>Polygonum aviculare</i> L.	Th	IT	93h128,azizi
129	Polygonaceae	<i>Rheum ribes</i> L.	Ch	IT	93h129,azizi
130	Polygonaceae	<i>Rumex scutatus</i> L.	Ch	IT	93h130,azizi
131	Ranunculaceae	<i>Ranunculus arvensis</i> L.	Th	IT	93h131,azizi
132	Resedaceae	<i>Reseda lutea</i> L.	Th	IT	93h132,azizi
133	Rosaceae	<i>Amygdalus communis</i> L.	Ph	IT	93h133,azizi
134	Rosaceae	<i>Amygdalus scoparia</i> L.	Ph	IT	93h134,azizi
135	Rosaceae	<i>Cerasus avium</i> L.	Ph	IT	93h135,azizi
136	Rosaceae	<i>Cerasus incana</i> (Pall.)Spach	Ph	IT	93h136,azizi
137	Rosaceae	<i>Cerasus microcarpa</i> (C.A.Mey)Boiss.	Ph	IT	93h137,azizi
138	Rosaceae	<i>Cotoneaster ovate</i> Pojark.	Ph	IT	93h138,azizi
139	Rosaceae	<i>Crataegus monogyna</i> Jacq	Ph	IT	93h139,azizi
140	Rosaceae	<i>Crataegus pontica</i> C. Koch	Ph	IT,ES	93h140,azizi
141	Rosaceae	<i>Cydonia oblonga</i> Mill.	Ph	IT	93h141,azizi
142	Rosaceae	<i>Cydonia vulgaris</i> L.	Ph	IT	93h142,azizi
143	Rosaceae	<i>Malus communis</i> Desf.	Ph	IT	93h143,azizi
144	Rosaceae	<i>Malus orientalis</i> Ugl.	Ph	IT,ES	93h144,azizi
145	Rosaceae	<i>Potentilla recta</i> L.	He	IT,ES	93h145,azizi
146	Rosaceae	<i>Prunus domestica</i> L.	Ph	IT,ES	93h146,azizi
147	Rosaceae	<i>Prunus spinosa</i> L.	Ph	IT,ES	93h147,azizi
148	Rosaceae	<i>Pyrus communis</i> L.	Ph	IT,ES	93h148,azizi
149	Rosaceae	<i>Pyrus glabra</i> Boiss.	Ph	IT	93h149,azizi
150	Rosaceae	<i>Pyrus salicifolia</i> Pall.	Ph	IT	93h150,azizi
151	Rosaceae	<i>Sanguisorba minor</i> Scop.	He	IT,ES	93h151,azizi
152	Rosaceae	<i>Rosa canina</i> L.	Ph	IT	93h152,azizi
153	Rubiaceae	<i>Galium verum</i> L.	He	IT	93h153,azizi
154	Salicaceae	<i>Populus alba</i> L.	Ph	IT,ES	93h154,azizi
155	Salicaceae	<i>Populus nigra</i> L.	Ph	IT,ES	93h155,azizi
156	Salicaceae	<i>Populus euphratica</i> Olivier.	Ph	IT,ES	93h156,azizi
157	Salicaceae	<i>Salix alba</i> L.	Ph	IT,ES	93h157,azizi
158	Salicaceae	<i>Salix wilhimsiana</i> M. B.	Ph	IT	93h158,azizi
159	Scrophulariaceae	<i>Linaria dalmatica</i> (L.) Mill.	He	IT	93h159,azizi
160	Scrophulariaceae	<i>Scrophularia siriata</i> Boiss.	He	IT,ES	93h160,azizi
161	Scrophulariaceae	<i>Verbascum speciosum</i> Schrad.	He	IT	93h161,azizi
162	Solanaceae	<i>Hyoscyamus pusillus</i> L.	Th	IT	93h162,azizi
163	Solanaceae	<i>Hyoscyamus muticus</i> Born.	Th	IT	93h163,azizi
164	Solanaceae	<i>Solanum nigrum</i> L.	Th	IT	93h164,azizi
165	Tymelaceae	<i>Daphne mucronata</i> Royle.	Ph	IT	93h165,azizi
166	Ulmaceae	<i>Celtis australis</i> L.	Ph	IT	93h166,azizi
167	Ulmaceae	<i>Ulmus carpinifolia</i> Borkh.	Ph	ES	93h167,azizi
168	Ulmaceae	<i>Ulmus glabra</i> Hudson.	Ph	ES	93h168,azizi
169	Urticaceae	<i>Urtica dioica</i> L.	Cr	IT,ES	93h169,azizi
170	Valerianaceae	<i>Valeriana sysimberifolia</i> Vahl.	He	IT	93h170,azizi
171	Violaceae	<i>Viola odorata</i> L.	Cr	IT	93h171,azizi
172	Vitaceae	<i>Vitis sylvestris</i> Gremlin.	Ph	IT	93h172,azizi
173	Zygophyllaceae	<i>Peganum harmala</i> L.	Ch	IT	93h173,azizi

174	Zygophyllaceae	<i>Zygophyllum fabago</i> L.	Ch	IT	93h174,azizi
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## DISCUSSION

It is concluded from the results of the study that the study area is very rich with refer to plant diversity. The presence of 40 families, 128 genera and 175 species supports this conclusion. Among all plants Hemicryptophyte with 32% is dominant and Therophyte with 29.71% is in the next order. In fact life forms of the plants indicate the possibility of adaptation of plants to environment factor especially climatic condition. The frequency of He is due to cold and temperate climate and the frequency of the plant is due to mediteranean climate. On the whole the frequency of He and Th among the plants of the region shows that the effect from two types of climate Mediterranean and cold temperate-affected them [17]. Hemicryptophyte adapted to condition of area. They adapted and developed themselves to area by using different ways such as : reserving water, using ground water, reducing their water need by loosing their leaves and reduction of vegetative growth, Therophyte adapted to the dryness of the region and shortage rainfall because these plants spend vegetative period in the form of seed [3]. the low percentage of cryptophyte, chamophyte, phanerophyte shows that they are not adapted to existence climate and edaphical situations each plant species has it s special ecological area with on known tolerance to life condition of area. There fore, the geographical distribution of plant species depending on life conditions of area and adaptation of plants to area [3].

The phytocorya distribution of plants reflects the climate condition. Considering to this fact that 66.28% of plants in forest reserve are irano- Turanian elements, so we can conclude that these regions are beong to Irano- Turanian. Because of the vicinity to Mediteraneaen and Euro- Siberian, there are elements with distribution limited to this region. The existence endemic species due to climatic climax in plants community and the diversity in Iran climate.

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