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Medicinal Plants of Sulduz Region, West Azerbaijan Province, Iran and their Characteristics

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ABSTRACT

Plato of Iran is very rich in terms of medicinal plant diversity. Sulduz (Naghadeh) region (36:57˚ E, 45:22 N), West Azerbaijan Province, Iran, occupies an region of over 1050 km², which is more than 2.5 percent of the total region of West Azerbaijan province. The altitude of region is between 1000–2100 m. The systematic study of flora especially in virgin regions has its own special challenges and excitement. Commercial collection and trade represents principle threat to individual species. The present research is concerned with the medically used plants species investigation of Sulduz region. The study aimed to find the diversity of medicinal plants in the region. Plant specimens were collected 100 times during 2009–2011 and were prepared for identification according to methods used in systematic studies. The study helped to identify 267medicinal plants species belonging to 187 genus and 74 families. After identification the specimens were also studied for life form.

Key words: Flora, Medicinal plants, Sulduz, West Azerbaijan.

INTRODUCTION

Plant identification can be challenging and even intimidating for the inexperienced. Identification of local plants and introduction of an area is very important for several reasons because it show specific species of the local area and their occurrence, species hardness, distinct species, growing season, finding new species and the effect of climatic conditions like drought and over-grazing on vegetation. On the other hand it is important to know a plant's identity to determine if it is a weed and the level of risk it poses to desired vegetation. The yield of many crops has reached a plateau due to the narrow genetic base of these crops. To widen the genetic base for further improvement, it is necessary to collect, characterize, evaluate and conserve plant biodiversity, particularly in local, underutilized and neglected crops [1,2].

Natural and wild plants have always been an important factor of healthcare throughout human long history. Since time immemorial, people have gathered some plants and animals resources for their vital needs from nature. It seems likely that up to 80 percent of the world's population rely chiefly on so-called traditional medicine for primary health care; in many developing countries the majority of the population depend on traditional remedies. This is partly due to poverty, but also because traditional systems are more culturally acceptable, and are able to meet psychological needs in away western medicine does not. Medicinal plants therefore play an important role in health care systems of developing countries. The percentage of the people using alternative therapies once a year, has reached about 48.5% in Australia. It is important to be aware of alternative therapies popularity throughout the industrialized world [3,4].

Iran with an area of more than 1.6 million square km^2 is the sixteenth largest country in the world, placed in the Middle East and surrounded by the Armenia, Azerbaijan and Caspian Sea, Turkmenistan on the north, Afghanistan and Pakistan on the east, Oman Sea and Persian Gulf on the south and Iraq and Turkey on the west. Geographically, the country is located in southwestern Asia between 25-40° North latitude and 45-63° East longitude. Variations in climate and presence of numerous mountains, lakes, rivers, and natural springs have created a unique country. This country is situated among three main phytochoria including Euro-Siberian (boreal), Irano-Turanian and Saharo-Sindian or Saharo-Arabian and influenced by the introgression of Somalia-Masaei and Mediterranean species. The country in terms of topography, climate, vegetation and geographical features is one of the most important and unique countries in the Middle East. Flora of Iran includes 8000species of which almost 1700 are endemic, belonging to 1450 genera and 150 families.These families include 124 dicotyledons, 22 monocotyledons and 4 gymnosperms. The beginning of floristic studies in Iran can be dated to 1684 when the German Physician and traveler Engelbert Kaempfer (1651-1716) coming via the southern Caucasus, visited Rasht, Shiraz and Persian GOLF coast. Upon return to Europe, he took with him a large collection of Iranian plants gathered in the said areas. Then after, until 1977, about 41 European botanists or amateur plant collectors, collected Iranian plant species. In the 20th century, Rechinger [13] studied the flora of Iran and the results are published under the title of Flora Iranian since 1963. Very little has been published on the plant communities of this area. Pooyan and Rashed Mohassel worked on vegetation [2,5,6].One of the most extensive areas for speciation in holarctic kingdom is located in Iran [7]. A fundamental role of government conservation agencies is to set priorities for the conservation and management of biodiversity. To evaluate the status of biodiversity and to determine how current conservation efforts can be improved, biodiversity monitoring is crucial [5,8].The nature and quality of vegetation cover is an important factor for soil conservation through its role in reducing the erosive impact of precipitation degraded areas in semi-arid regions [9].

Administratively, Iran consists of 31 provinces. West Azerbaijan province is principally a mountainous region with a continental climate, but mild because of its proximity to sea [2]. Very few papers have been written about the medicinal plants in West Azerbaijan province, probably because the greater part of that population does not live far from the cities. It is believed that this study will be a good source for future studies and contribute to the Flora of West Azerbaijan province, Iran. The main objectives of the submitted work were to study the taxonomical structure and life form of medicinal plants in the region.

Study Region

Location and Topography

Sulduz (36:57º E, 45:22ºN), is a district of West Azerbaijan province located on the north west of Iran and surrounded by Urmia city and Urmia Lake from the north, Mahabad city from the south, Miyandoab city from the east, Piranshahr city from the west, and Oshnaviyeh city (Bordering Turkey and Iraq) from North West. Sulduz takes its name from watery and flat in Azery. The altitude is 100 m at the footand 2100 m at the summit of the mountain. This region is phytochorially located in Irano-Turanian [10].

Climate

The annual average temperature is 11.3-13.71°C, the summer average is 22.76°C, and the winter average is 2.45°C. The cold month are December-January (-0/3°C) and the warm is July-August (24.21°C). Average precipitation is 326.43 mm [10].

MATERIALS AND METHODS

The study has been carried out in mountains and valleys of Sulduz region, West Azerbaijan, Iran; the area 1050 km², which is more than 2.5 percent of the total region of the province. Five numbers of any species were collected 100 times, during 2009 – 2011 and were prepared for identification according to methods used in systematic studies. The dried plant specimens have been transferred to laboratory and after providing herbarium labels were identified in the Herbariums of Biology Department, Urmia University, West Azerbaijan, using available literature such as the Colored Flora of Iran [11], Flora of Turkey and the East Aegean Island [12], Flora Iranica [13] and Flora of Iran [14,15] and comparing with identical specimens in herbarium. The identification was also checked in the herbarium of Urmia Research Institute of Forest & Rangelands, Ministry of Agriculture.

Figure 1- The location of West Azerbaijan, Iran

Nomenclature follows mostly after Flora Iranica and Flora of the Golestan National [13,16]. The life forms were determined using Raunkier's method [17] and the chorology of species is based on Zohary [18] and Takhtajan [19].

RESULTS AND DISCUSSION

In this study the total of 267 species of medicinal plants has been identified from the mountains and valleys of the region which belongs to 187 genus and 74 families; After identification the specimens were also studied life form. According to the results,the family Asteraceae with 21 genus and 31 species is the most abundant family in the region; followed by families of Lamiaceae (14 genus and 29 species), Fabaceae (13 genus and 22 species) and Rosaceae (9 genus and 11 species), respectively (Table-1; Fig-2; Fig-3). The list of all species collected in the region is shown in Table-1. Similar type study is conducted in various parts of the world [20]. Presumably uncontrolled grazing caused the maximum number of Asteraceae species [21]. Since the studied area is at risk due to early and excessive grazing, the maximum number of Asteraceae species is justifiable.

Life Form

Life Form hemicryptophytes make up 34% (92 species) of the vegetation and are the dominant 1 in the studied region, followed by therophytes, cryptophytes, phanerophytes and Chamaephytes with 30%, 18%,11% and 7% respectively (Fig-4; Fig-5). Most of medicinal species with a narrow distribution are severely threatened; therefore, the protection and management needs to be considered.

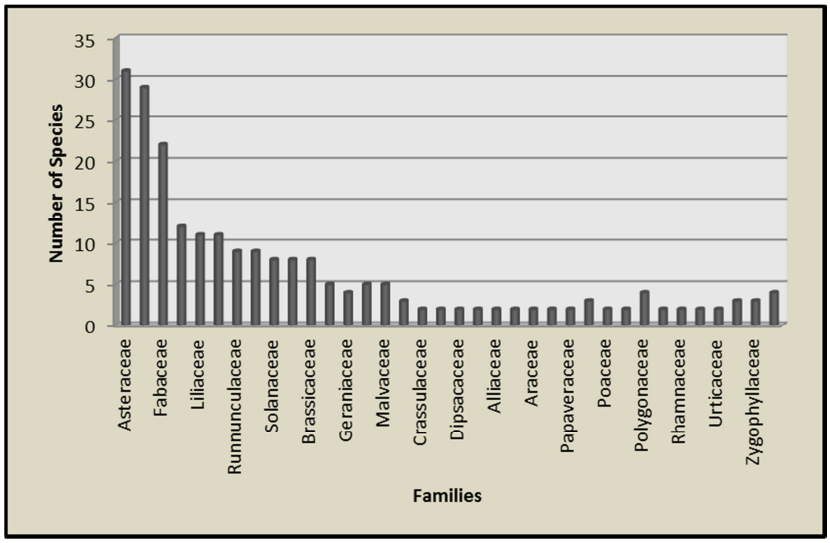

Figure 2 – Number of species from every botanical family used for the treatment diseases in the Sulduz Region

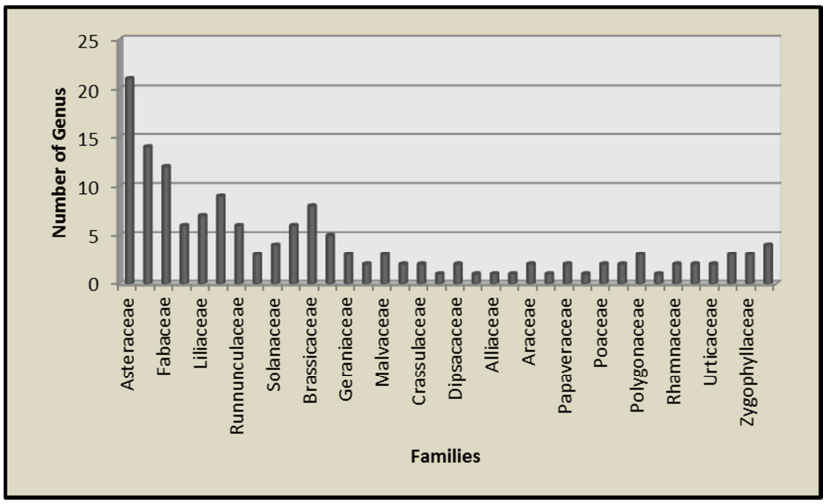

Figure 3– Number of genus from every botanical family used for the treatment diseases inthe Sulduz Region

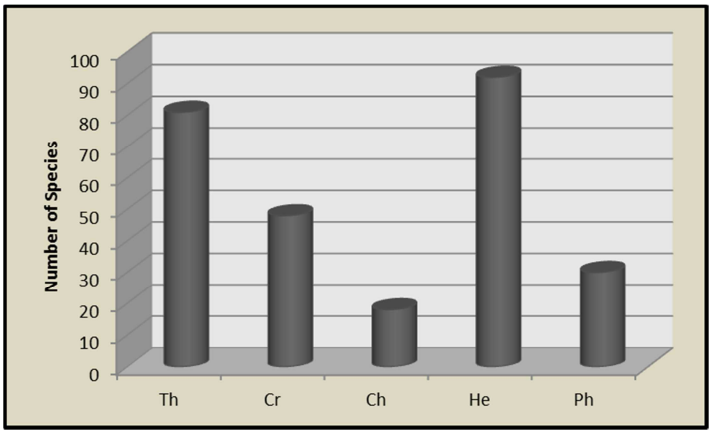

Figure 4– Number of species belonging to different life forms in the Sulduz Region

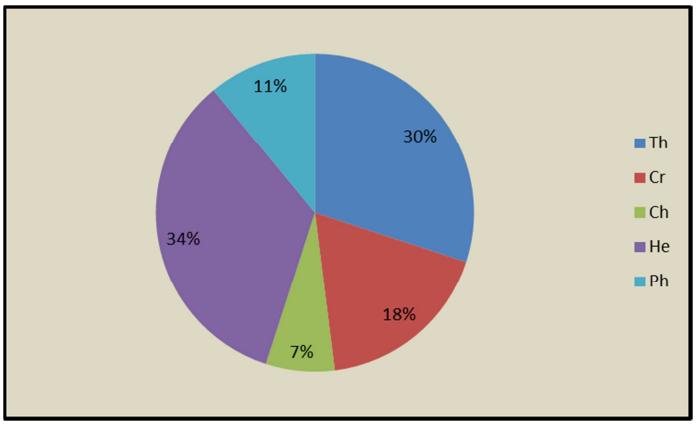

Figure 5– Percentage of species belonging to different life forms in the Sulduz Region

Table 1- List of medicinal plants species in the Sulduz region and their life form

The medicinal plants	Family	Life Form
1- *Ophioglossum volgatum* L.	Ophioglossaceae	Cr (ge)
2- *Ceterach officinarum* DC.	Aspleniaceae	Cr (ge)
3- *Equisetum arvense*L.	Equisetaceae	He
4- *Equisetum ramosissmus*Desf.	Equisetaceae	He
5- *Ephedra procera* Fisch.	Ephedraceae	Ph (na)
6- *Ephedra major*Host.	Ephedraceae	Ph (na)
7- *Alisma lanceolatum* with.	Alismaceae	Cr (he)
8- *Allium akaka* L.	Alliaceae	Cr (ge)
9- *Allium hirtifolium* Boiss.	Alliaceae	Cr (ge)
10- *Ungernia flava* Boiss. Hauss Kn.	Amaryllidaceae	Cr (ge)
11- *Arum conophalloides ky. ex. Schot*	Araceae	Cr (ge)
12- *Biarum straussi Engl.*	Araceae	Cr (ge)
13- *Butomus umbellatus* L.	Butomaceae	Cr (he)
14- *Colchicum Kotschyi* Boiss.	Colchicaceae	Cr (ge)
15- *Colchicum sp*	Colchicaceae	Cr (ge)
16- *Merendera sobolifera* Fisch. & C. A. Mey.	Colchicaceae	Cr (ge)
17- *Crocus haussKnechtii* Boiss.	Iridaceae	Cr (ge)
18- *Crocus biflorus* Miller.	Iridaceae	Cr (ge)
19- *Iris aucheri* (Bajer) Sealy	Iridaceae	Cr (ge)
20- *Iris iberica* Hoffm.	Iridaceae	Cr (ge)
21- *Iris* reticulate M.B.	Iridaceae	Cr (ge)
22-*Ixioliriontataricum*(pall.)Roem.et Schut	Ixioliriaceae	Cr (ge)
23-*Bellevalia logistyla* (Miscz.) Grossh.	Liliaceae	Cr (ge)
24- *Bellevaliasarmatica*(pall) woron (pall. ex Georgi)	Liliaceae	Cr (ge)
25- *Eremurus spectabilis* M.B	Liliaceae	Cr (ge)
26- *Fritillaria imperialis* L.	Liliaceae	Cr (ge)
27- *Fritillaria persica* L.	Liliaceae	Cr (ge)
28- *Muscaria racemosum*(L.) *Mill.*	Liliaceae	Cr (ge)
29- *Ornithogalum orthophyllum* Ten.	Liliaceae	Cr (ge)
30- *Ornithogalum persicum* Hauss K.ex Bornm.	Liliaceae	Cr (ge)
31- *Ornithogalum umbellatum* L.	Liliaceae	Cr (ge)
32- Puschkinia scilloides Ad.	Liliaceae	Cr (ge)
33- *Scilla persica* Hausskn.	Liliaceae	Cr (ge)
34- *Orchis palustris* Jaca.	Orchidaceae	Cr (ge)
35- *Avena sterilis* L.	Poaceae	Th
36- *Cynodon dactylon* (L.) pers.	Poaceae	Cr (ge)
37- *Potamogeton nodosus* Poir.	Potamogetonaceae	Cr (he)
38- *Potamogeton crispus* L.	Potamogetonaceae	Cr(hy)
39- *Sparganium erectum* L.	Typhaceae	Cr (he)
40- *Amaranthus blitoides* S.Watson	Amaranthaceae	Th
41- *Amaranthus retrofexus* L.	Amaranthaceae	Th
42- *Aristolochia bottae* Jaub. & Spach	Aristolochiaceae	He
43-*Dianthusorientalis*Adam*var.brachyodontus* (Boiss. et Huet) Boiss.	Caryophyllaceae	He
44- *Herniaria cinerea DC.*	Caryophyllaceae	Th
45- *Paronychia Kurdica* Boiss.	Caryophyllaceae	Th
46-*Vaccariagrandiflora*(Fisch.exDC. Jaub. & spach)	Caryophyllaceae	Th
47- *Atriplex nitens* Schkuhr.	Chenopodiaceae	He
48- *Ceratocarpus arenarius* L.	Chenopodiaceae	Th
49- *Kochia prostrate*	Chenopodiaceae	Ch
50- *Salicornia europaea* L.	Chenopodiaceae	Th
51- *Salsola kali* L.	Chenopodiaceae	Th
52- *Juglans region* L.	Juglandaceae	Ph (ms)
53- *Ficus carica* L.	Moraceae	Ph (na)
54- *Ficus carica* L.*subs.Rupestris*	Moraceae	Ph (na)
55- *Plantanus orientalis* L.	Plantanaceae	Ph (mr)
56- *Polygonom avicolare* L.	Polygonaceae	Th
57- *Rheum rabes* L.	Polygonaceae	He
58- *Rumex caucasicus* Rech. f.	Polygonaceae	He
59- *Rumex dentatus* L.	Polygonaceae	He
60- *Salix alba* L.	Salicaceae	Ph (ms)
61- *Celtis caucasica* Willd.	Ulmaceae	Ph (mr)
62- *Parietaria judaica* L.	Urticaceae	Cr (ge)
63- *Urtica dioica* L.	Urticaceae	Cr (ge)
64- *Pistacia atlantica* Desf.	Anacardiaceae	Ph (mr)
65- *Berberis integerrima* Bga	Berberidaceae	Ph (mr)
66-*AlyssumlinifoliumSteph.etWilld.Var.linifolium*	Brassicaceae	Th
67- *Capsella bursa-pastoris* (L.)	Brassicaceae	Th
68- *Cardaria draba* (L.) Desv	Brassicaceae	Cr (ge)
69- *Descurainia sophia* (L.) Schur	Brassicaceae	Th
70-*Isatiscappadicica* Desv.*subsp.Cappadicica*	Brassicaceae	He
71- *Lepidium perfoliatuml* L.	Brassicaceae	Th
72- *Nasturtium officinale* (L.) R. Br.	Brassicaceae	He

73- *Sinapis arvensis* L.	Brassicaceae	Th
74- *Capparis spinosa* L.	Capparidaceae	He
75- *Cornus australis* C.A.Mey	Cornaceae	Ph (mr)
76- *Rosularia persica* (Boiss.) Berger	Crassulaceae	He
77- *Sedum album* L.	Crassulaceae	He
78- *Elaeagnus angustifolia* L.	Elaeagnaceae	Ph (ms)
79- *Chrozophora tinctoria* (L.) Rafin .	Euphorbiaceae	Th
80- *Fumaria asepala* Boiss.	Fumariaceae	Th
81- *Biebersteinia multifida* DC.	Geraniaceae	Cr (ge)
82- *Erodium oxyrrhynchum* M.B.	Geraniaceae	Th
83- *Geranium Lucidum* L.	Geraniaceae	Th
84- *Geranium tuberosum*L.	Geraniaceae	Th
85- *Hypericum perforatum* L.	Hypericaceae	He
86- *Linum usitatissimum* L.	Linaceae	Th
87- *Lythrum salicaria* L.	Lythraceae	He
88- *Abutilon theophrasti* Medicus	Malvaceae	He
89- *Alcea kurdica* (Schecht.) Alef.	Malvaceae	He
90- *Althaea officinalis* L.	Malvaceae	He
91- *Malva neglecta* L.	Malvaceae	Th
92- *Malva sylvestris* L.	Malvaceae	Th
93- *Epilobium montanum* L.	Onagraceae	Cr (ge)
94- *Oxalis stricta*	Oxalidaceae	Th
95 -*Hypecoum pendulum* L.	Papaveraceae	Th
96- *Papaver dubium* L.	Papaveraceae	Th
97- *Alhagi camelorum* Fisch	Fabaceae	Ch
98- *Astragalus raddei* N.	Fabaceae	Ch
99- *Coronilla varia* L.	Fabaceae	He
100- *Glycyrrhiza glabra* L.*var.glabra*	Fabaceae	He
101- *Glycyrrhiza glabra* L.*var.glandulifera*	Fabaceae	He
102- *Lathyrus aphaca* L.	Fabaceae	Th
103- *Lotus corniculatus* L.	Fabaceae	Th
104- *Lotus gebelia* Vent.	Fabaceae	Ch
105- *Lotus pedunculatus*	Fabaceae	Th
106- *Medicago denticulate* Willd.	Fabaceae	He
107- *Medicago lupulina* L.	Fabaceae	He
108- *Medicago orbicularis* (L.) Bartalini	Fabaceae	He
109- *Medicogo radiate* L.	Fabaceae	Th
110- *Medicago rigidula* (L.) All.	Fabaceae	Th
111- *Medicago sativa* L.	Fabaceae	He
112- *Melilotus officinalis* (L.) Desr.	Fabaceae	Th
113- *Ononis spinosa* L.	Fabaceae	Th
114- *Sophora alopecuroides* L.	Fabaceae	He
115-*Trifoliumrepens*L.*var.macrorrhizm* [Boiss.] Boiss.	Fabaceae	He
116- *Trigonella arcuata* C.A.Mey.	Fabaceae	He
117- *Trigonella unsata* Boiss. et Noe	Fabaceae	He
118- *Vicia sativa* L.	Fabaceae	Th
119- *Bongardia chrysoganom* (L.) Boiss.	Podophyllaceae	Cr (ge)
120- *Leontice leontopetalum* L.	Podophyllaceae	Cr (ge)
121- *Portulaca oleracea* L.	Portulaceae	Th
122- *Paliurus spina-christi* Miller	Rhamnaceae	Ph (mr)
123- *Rhamnus pallasii* Fisch.et C.A.Meyer	Rhamnaceae	Ph (mr)
124- *Adonis aestivalis* L.	Ranunculaceae	Th
125-*Consolidaanthoroidea*(Boiss.) Schrod.	Ranunculaceae	Th
126- *Ficaria kochii* (Ledeb.)Iranshahr& Rech . *f* .	Ranunculaceae	He
127- *Nigella oxypetala* Boiss.	Ranunculaceae	Th
128- *Ranunculus arvensis* L.	Ranunculaceae	Th
129- *Ranunculus trichophyllus* chaix.	Ranunculaceae	He
130- *Thalictrum isopyroides* C.A.Mey.	Ranunculaceae	He
131- *Thalictrum minus* L.	Ranunculaceae	He
132- *Thalictrum sultanobadense* Stapf	Ranunculaceae	He
133- *Reseda lutea* L.	Resedaceae	Th
134-*Amygdaluslycioides*.Spach *var.lycioides*	Rosaceae	Ph(na)
135- Amygdalus orientalis Duh.	Rosaceae	Ph(na)
136-*CerasusMicrocarpa*(C.A. Mey) Boiss.	Rosaceae	Ph(ms)
137-*CrataegusmonogynaJacq.var.dolichocarpa*	Rosaceae	Ph(mr)
138- *Crataegus pentagyna* Waldst. & Kit. ex Willd.	Rosaceae	Ph(mr)
139- *Cotoneaster nummularius* Fisch	Rosaceae	Pa (na)
140- *Malus miller*	Rosaceae	Pa (mr)
141- *Potentilla reptans* L.	Rosaceae	He
142- *Poterium sanguisorba* L.	Rosaceae	He
143-*Rubusanatolicus* (Focke) Focke ex Hausskn.	Rosaceae	Ph(na)
144- *Rosa canina*	Rosaceae	Ph (na)
145- *Haplophyllum buxbaumii* (Poir). G.	Rutaceae	Ch
146- *Myricaria germanica* (L.) Desv.	Tamaricaceae	Ph (na)
147- *Tamarix ramosissima* Ledeb.	Tamaricaceae	Ph (mr)

148- *Daphne mucronata* Royle	Thymelaceae	Ph (na)
149- *Bupleurum gerardii* All.	Apiaceae	Th
150- Bupleurum semicompsitum	Apiaceae	Th
151- *Daucus carota* L.	Apiaceae	Th
152- *Eryngium billardieri* F. Delaroche	Apiaceae	He
153-*Eryngiumpyramidale*Boiss. & Haussk.	Apiaceae	He
154-*Falcariafalcarioides*(Bornm.& Wolf.)	Apiaceae	He
155- *Falcaria vulgaris* Bernh	Apiaceae	He
156- *Smyrnium cordifolium* Boiss.	Apiaceae	Th (He)
157- *Viola odorata* L.	Violaceae	Cr (ge)
158- *Violaarvensis* DC.	Violaceae	Th
159- *Viola tricolor* L.	Violaceae	Th
160- *Peganum harmala* L.	Zygophyllaceae	Ch
161- Tribulus terrestris L.	Zygophyllaceae	Th
162- *Zygophyllum fabago* L.	Zygophyllaceae	Ch
163- *Achillea filipendula* Lam.	Asteraceae	He
164- *Achillea vermicularis* Trin.	Asteraceae	He
165- *Acroptilon repens* (L.) DC.	Asteraceae	Th
166- *Anthemis tinctoria* L.	Asteraceae	He
167- Arctium lappa L.	Asteraceae	He
168- Artemisia sp	Asteraceae	He
169- Carthamus lanatus L.	Asteraceae	Th
170-Carthamus lanatus L.*subsp. Turkestanicas* (M.Pop) Hanelt	Asteraceae	Th
*171-Centaureabehen*L.*var.kurdica*	Asteraceae	He
172- Centaurea solstitialis L.	Asteraceae	Th
173- Cichorium intybus L.	Asteraceae	He
174- Cirsium arvense (L.)Scop.	Asteraceae	Th
175- Cirsium hygrophilum Boiss.	Asteraceae	He
176- Cirsium palustre	Asteraceae	He
177- Cnicus benedictus L.	Asteraceae	Th
178- Crupina crupinastrum [Moris.] Vis.	Asteraceae	Th
179- Echinops ritro L.	Asteraceae	He
180- Gundelia tournefortii L.	Asteraceae	He
181- Helichrysum oligocephalum DC.	Asteraceae	Ch
182- Helichrysum pallasii (Spreng.) Ledeb.	Asteraceae	Ch
183- Lactuca scarioloides Boiss.	Asteraceae	Th
184- Lactuca serriola L.	Asteraceae	Th
185- Scorzonera laciniata L.	Asteraceae	He
186- Senecio molis Wild	Asteraceae	He
187- Senecio vulgaris L.	Asteraceae	Th
188- Taraxacum montanum (C. A. Mey.) DC.	Asteraceae	He
189- Tragopogon marginatus Boiss.	Asteraceae	He
190- Tragopogon pterocarpus DC.	Asteraceae	He
191-Tripleurospermum disciforme (C. A. Mey) Schultz - Bip	Asteraceae	Th
192- Xanthium spinosum L.	Asteraceae	Th
193- Xanthium spinosum L.	Asteraceae	Th
194- Anchusa arvensis (L.) M. B.	Boraginaceae	Th
195- Anchusa arvensissubsp orienthalis	Boraginaceae	Th
196- Anchusa italica Retz.	Boraginaceae	He
197- Anchusa italica Retz.*var.italica*	Boraginaceae	Th
198- Asperugo procumbens L.	Boraginaceae	Th
199- Cerinthe minor L.	Boraginaceae	He
200- Echium italicum L.	Boraginaceae	He
201- Echium italicum L.*var italicum*	Boraginaceae	He
202- Heliotropium europaeum L.	Boraginaceae	Th
203- Heliotropium lasiocarpum Fisch. & Mey.	Boraginaceae	Th
204- Lithospermum arvensis L.	Boraginaceae	Th
205- Lithospermum tenuiflorum L.fil.	Boraginaceae	Th
206- Lonicera iberica M.B.	Caprifoliaceae	Ph (na)
207- Convolvulus arvensis L.	Convolvulaceae	Cr (ge)
208- Bryonia diocia Jacq.	Cucurbitaceae	He
209- Bryonia monoica Aitch. & Hemsl.	Cucurbitaceae	He
210- Cuscuta epithymum Murr.	64-Cuscutaceae	Th
211- Cephalaria syriaca (L.) Schrad	Dipsacaceae	Th
212- Dipsacus sylvestris Huds.	Dipsacaceae	He
213- Centaurium pulcellum (Swartz) Druce	Gentianaceae	Th
214- Eremostachys macrophylla Montbr . & Auch.	Lamiaceae	He
215-Eremostachys macrophylla Montbr . & Auch.	Lamiaceae	He
*216-Lamiumamplexicaule*L.*var. amplexicaule*	Lamiaceae	Th
217- Lycopus europaeus L.	Lamiaceae	Cr (ge)
218- Marrubium vulgare L.	Lamiaceae	Cr (ge)
219- Mentha langifulia (L.) Hudson	Lamiaceae	Cr (ge)
220- Nepeta rasemosa Lam.	Lamiaceae	He
221- Phlomis herba-Venti L.	Lamiaceae	He
222- Phlomis olivier Benth.	Lamiaceae	He

223- Salvia aristata Aucher ex Benth.	Lamiaceae	He
224- Salvia atropatana Bunge	Lamiaceae	Ch
225- Salvia ceratophylla L.	Lamiaceae	He
226- Salvia multicaulis Vahl	Lamiaceae	He
227- Salvia nemorosa L.	Lamiaceae	He
*228-Salviasuffraticosa*Montbr.etAuch.*Var .hetero chroma* Ghohreman	Lamiaceae	Ch
229- Salvia syriaca L.	Lamiaceae	Cr (ge)
230- Salvia trichoclada Benth.	Lamiaceae	He
231-Scutellaria condensatasubsp. Pycnotricha (Rech.F.) Rech.f.	Lamiaceae	Ch
232- Scutellaria pinnatifida A. Hamilt.	Lamiaceae	Ch
233- Sideritis montana L.	Lamiaceae	Th
234- Stachys lavandulifolia Vahl.	Lamiaceae	Ch
235- Stachys pubescens Ten.	Lamiaceae	He
236- Teucrium orientale L.*subsp.Orientale*	Lamiaceae	Ch
237- Teucrium polium L.	Lamiaceae	Ch
238- Teucrium scordium L.	Lamiaceae	Cr (ge)
*239-Thymusmigricus*Klokov&Desj.-host.	Lamiaceae	Ch
240- Ziziphora capitata L.	Lamiaceae	Th
241- Ziziphora clinopodoides Lam.	Lamiaceae	Ch
242- Ziziphora tenuir L.	Lamiaceae	Th
243- Fraxinus angustifolia Vahl. Enum.	Oleaceae	Ph (ms)
*244-Fraxinusexcelsior*L.*subsp. excelsior*	Oleaceae	Ph (ms)
245- Plantago lanceolata L.	Plantaginaceae	He
246- Plantago major L.	Plantaginaceae	He
247- Plantago maritima L.	Plantaginaceae	He
249- Plumbago europea L.	Plumbaginaceae	He
248- Galium odoratum	Rubiaceae	He
*250-Scrophularianervosa*Benth. Subsp.Nervosa	Scrophulariaceae	He
251- *Scrophularia striata* Boiss.	Scrophulariaceae	He
252-*Verbascumagimofolium*(C.Koch) Hub.-Mor	Scrophulariaceae	He
253- *Verbascum phoeniceum* L.	Scrophulariaceae	He
254- *Verbascum sinuatum* L.	Scrophulariaceae	He
255- *Verbascum speciosum* Suhrader	Scrophulariaceae	He
256- *Veronica acrothea* Bornm .et Gauba	Scrophulariaceae	He
257- *Veronica boloba* Schreb	Scrophulariaceae	Th
258- *Veronica persica* ltort.	Scrophulariaceae	Th
259- *Datura innoxia* Miller	Solanaceae	Th
260- Datura stramonium L.	Solanaceae	Th
261- Hyoscyamus arachnoideus	Solanaceae	He
262- Hyoscyamus niger L.	Solanaceae	He
263- Hyoscyamus posillus L.	Solanaceae	Th
264- Hyoscyamu reticulates L.	Solanaceae	He
265- Lycium depressum Stocks	Solanaceae	Ph (na)
266- Solanum nigrum L.	Solanaceae	Th
267- Verbena officinalis L.	Verbenaceae	He

CONCLUSION

The systematic study of flora especially in virgin regions has its own special challenges and excitement. To widen the genetic base for further improvement, it is necessary to collect, characterize, evaluate and conserve plant biodiversity, particularly in local, underutilized and neglected crops. Medicinal plants are important parts of this richness. Commercial collection and trade represents principle threat to individual species. Any future action on conservation and drug should cover medicinal plants. Several tasks that should be carried out to ensure that medicinal plants are conserved efficiently for the future and that where medicinal plants are taken from the nature, they are taken on a basis that is sustainable. Conservation Policy to an ethic of sustainable existing, and explains how to integrate plant conservation with growth and development. It is indicated that particularly relevant to the issue of medicinal plants, which in many regions of the world are being extremely depleted due to over-exploitation and loss of habitats, resulting in absence of important medicines and so dropping options for the future demands. Nowadays many medicinal plants face extinction or severe genetic loss. For most of the endangered medicinal plant species no conservation operation has been taken. There is very little material of the plants in gene banks. Also, too much emphasis has been put on the potential for discovering new wonder drugs, and too little on the many difficulties involved in the use of traditional drugs by native populations. In many countries, there is not even a comprehensive catalog of medicinal plants. Much of the information on their use is held by traditional societies, whose very existence is now under threat. Little of this knowledge has been recorded in a systematic manner.

In the light of the article related organizations can decide that it would be timely to collaborate in convening a session on the conservation of medicinal plants, bringing together leading specialists in different fields to exchange views on the difficulties, determine priorities and make recommendations for achievement. The best way was to start and orchestrate a process for each government to prepare a national strategy for the conservation and

sustainable use of its medicinal plants. A national strategy is also a good way to secure the involvement and continued contribution of the different disciplines involved.

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