

## A CONTRIBUTION TO THE FLORA OF QESHM ISLAND, IRAN

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Qeshm island with an area of 1445 km<sup>2</sup> is the largest island in the Persian Gulf situated alongside the Hormozgan province coast, stretching from Bandar Abbas to the Khamir port. Of the vegetation in the island, one can mention the mangrove forest on the northern shores of the island in Laft and Tabl districts, halophyte plant associations and psamophyte-halophyte vegetation on the eroded terraces and the dry woodlands. In this paper 314 native species in the island are listed of which 74 species have, as yet, not been recorded in any other Qeshm documents. Classification based on biological types indicates that the therophytes and chamaephytes make up the largest percentage of the plants. From the chrological point they also exhibit the largest percentage of Saharo-Sindian elements.

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*Key words.* Flora, Qeshm, Iran.

مقدمه‌ای بر فلور جزیره قشم

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جزیره قشم بزرگترین جزیره خلیج فارس با وسعت ۱۴۴۵ کیلومتر مربع در راستای سواحل استان هرمزگان از بندر عباس تا بندر خمیر قرار دارد. از رویشهای اصلی آن می‌توان به جنگلهای مانگرو در سواحل شمالی جزیره در مناطق لاف و طبل، جوامع هالوفیت، رویشهای شن‌رست - نمک دوست، رویشهای تراسهای در حال فرسایش و درخت‌زارهای خشک اشاره کرد. در این مقاله حدود ۳۱۴ گونه بومی جزیره قشم لیست شده است که تعداد ۷۴ گونه آن تا کنون در دیگر منابع موجود برای جزیره ذکر نشده است. تقسیم‌بندی تیپهای بیولوژیکی مؤید آن است که تروفیتها و کامفیتها بالاترین درصد را داشته و از نظر کورولوژی نیز عناصر صحرا - سندی بالاترین در صد را دارند.

## Introduction

Qeshm is the largest island in the Persian Gulf situated near the straits of Hormoz south of Bandar Abbas. The Qeshm island with its unique natural characteristic is geographically situated at 55 to 57 degrees longitudinally and 25 to 27 latitudinally. Its surface area is 1445 km<sup>2</sup>, its circumference is about 262 km and its length is about 122 km. One third of the island is flat and the rest is more or less mountaineous. Altitude varies from 0 to 397 m above sea level. The dominant weather is tropical and the temperature throughout the year always stays a few degrees above zero. The island's climate is characterized by a long warm season, often extraordinary hot, high relative humidity, and a short temperate season. According to statistical data collected by the weather station in recent years (table 1), the warm humid weather starts in early March and ends in November.

Despite its uniform climate, the island has a variety of plant associations and plant habitats whose pattern of distribution is influenced by the soil, physiography, availability of water, and the extent of the soil salinity. The island's major vegetation are as follows: mangrove forests, halophyte vegetation, psammophyte-halophyte vegetation, vegetation on the eroding terraces and the arid woodlands (Ghahreman & al., 2000).

Till now there has not been no comprehensive studies concerning the island's vegetation and flora. Kunkle (1977) listed some plants from the island. In Flora Iranica (Rechinger 1968-1998) 74 species recorded from the island, collected by various botanists. In this paper, the island's plants are listed and their locations are cited. The biological types of the species and their chorology have been classified based on their presence in Iran and the island.

## Materials and Methods

This paper is part of the Qeshm island flora and vegetation project which has carried out during 1992-1997 (Hamzeh'ee 1995) (Ghahreman, Hamzeh'ee and Attar 2000). To conduct the research, plants in the island were collected during the four seasons in different years and were then transferred to Tehran University Central Herbarium. The collected plant species were named based on the regional Floras such as Flora Iranica (Rechinger 1963-1998), Flora of Iran in colour (Ghahreman 1978-2002), Flora of Iran (Assadi & al. 1988-2004), Flora Palaestina (Zohary 1966-1986), and Saudi Arabia (Collenette 1985). Biological types have been determined on the basis of the Raunkier classification (Raunkier 1934) and the species chorology using Leonard studies on the central and southern deserts in Iran (Leonard 1981-1989, 1993). In the Leonard studies (1989) the Saharo-Sindian region in Iran is given a number of subdivisions called ,Arabo-Sindian, Nubo-Sindian, Irano-Sindian. In this paper these subdivisions have been disregarded in favore of a general division called Saharo-Sindian. Plant specimens marked by an asterisk taken from the literatures and two asterisks are the first report from the island. Based on ecological factors 35 different habitats were recognized in the island (table 2). The habitats of species are shown in table 3. In this table, abbreviations of life forms and chorological types are presented. The abbreviations are shown in tables 5 and 6. The pluri-regional species three phytogeographic regions. The specimens were collected by A. Ghahreman, F. Attar and B. Hamzeh'ee.

## Results and discussion

Floristic list of the Qeshm Island is presented in table 3. In the list, 314 species and subspecies of vascular plants in 202 genera and

Table 1. Climatic informations of Turian station.

Clima. Param.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Relative humidity%	72	72	73	76	71	72	73	75	76	74	76	76
Min. temp. (C°)	8	9	12	15.5	20	24	27	28.5	27	21	15	10.5
Max. temp. (C°)	25	25	28	31	37	40	40	39	38	36.5	33	28
Mean temper. (C°)	17	17	20	23.5	28	32	33	34	32.5	29	24	19
Absol. Max. temp. (C°)	38	37	36	41	46	45	45	46	42	42	39	38
Absol. Min. temp. (C°)	0	0	+1	+1	7	13	18	17	21	10	+1	+1
Evapor. (mm)	76	80	98	126	149	162	170	168	155	128	109	91

Table 2. List of plant habitats

1. Margin of roads, salt inlands and in the disturbed areas with heavy soil and moderately low water table.
2. Flat plains with low water table.
3. Flat plains and ruderal outskirts with low water table.
4. Woodlands occurring on high coastal sands and sandy hills.
5. Low-lying woodland in lowlands of seasonal rivers and floodways surrounded by terraces and eroding hills.
6. Intertidal zone.
7. Seasonal rain channels and on the eroding hills.
8. River basins and seasonal rain channels.
9. Pure and spotty stands in lowlands where water collect.
10. Gradually slanted hills and sandy uneven lands with low water table.
11. Completely sandy lands with low and moderately low water table.
12. Areas surrounded by terraces with relatively low water table.
13. Low -lying, flat lands reaching low eroding hills and somewhat salty areas within the inland with very low water table.
14. Sandy lands and gradually slanted hills with low water table.
15. Coastal salt marsh as high as saline lands inside the island with relatively high water table.
16. Flat lands as far as low coastal hills creating pure stands which appears as patches with low water table.
17. Lowlands where rain water collected and on the banks of the seasonal ponds.
18. Uneven completely sandy coastal lands and low sandy hills with relatively low water table.
19. Natural woodlands , in sandy flat plains.
20. Clumps of trees and bushes alongside seasonal river basins.
21. Eroding hills and rocky places with low water table.

22. Low-lying open fields, lands surrounded by eroding terraces with high to relatively low water table.
23. Eroding hills and dense sandy terraces with very low water table.
24. Low-lying lands with high water tables and low-elevation hills and lands with light to somewhat heavy soil texture.
25. Lowlands between eroding terraces and flat plains with somewhat high water table.
26. Low-lying areas with moderately high water table.
27. Low and salty lands near the sea coast and as far as saline inlands with low water table.
28. Sea coast and low sandy hills.
29. Damaged areas and low sandy hills with low water table.
30. Low salty coastal areas with high water table.
31. Around the villages and in abandoned lands with relatively low water table.
32. Sandy areas near the shores with relatively low water table which is little higher in some areas.
33. Ruderal places and roadsides.
34. Weedy gardens and wet places or farmlands.
35. Bukhu mountains.

58 families are recognized. Of this number, 74 species are reported in the island for the first time. The plant families in Qeshm consist of five families of monocots, 51 families of dicots, and one family of Chlamidospermes. The largest families are the *Gramineae* (*Poaceae*) with 48 species, followed by *Papilionaceae*, *Compositae* (*Asteraceae*) and *Chenopodiaceae*, each with 36, 27 and 21 species respectively. Families consisting of up to eight species are presented in table 4. In terms of biological types, the therophytes and chamaephytes make up the highest percentage, which is indicative of high floristic adaptation to the island's desert and semi-desert like arid climate (table 5). Chorologically, plants of Saharo-Sindian region are more frequent (table 6).

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Table 3. Floristic list of Qeshm island.

(Lf.=Life form; Chor. = Chorotype; Hab.=Habitat; Loc.=Location; \* = Taken from the literatures; \*\* = First report from the island; s.n.=unnumbered

Species	Lf.	Chor.	Hab.	Loc.
<b>Acanthaceae</b>				
<i>Blepharis persica</i> (Burm.) O. Kuntze	Hem	SS	4,7,10,19,23	Qeshm to Dargahan, 21.5.95, 19210
<b>Aizoaceae</b>				
<i>Aizoon canariense</i> L.	Th	SS-SM	1,3,4,5,7,8,9,2,16, 17,18,19,12,23,24, 25,26,27	Ramchah, 5.4.93, 16451
<i>A. hispanicum</i> L.**	Th	SS	34	Jijian, 1.2.96, 16585
<i>Mesembrianthemum nodiflorum</i> L.	Th	SS-M	4	Dargahan road, 14.4.93, 16337
<i>Zaleya govindia</i> (Buch.-Ham. ex G. Don) N. C. Nair	Th	SS	34	Chahuy-e Sharghi, 18.5.97, 21361
<b>Amaranthaceae</b>				
<i>Aerva persica</i> (Burm.f.) Merr. var. <i>persica</i>	Ch	SS	4,19,31	Shah-Shahid, 20.7.95, 18010; near Basaido, 5.4.93, 16324; Tabl, 15.6.94, 19799
<i>Amaranthus graecizans</i> L. var. <i>graecizans</i>	Th	Plur	34	Qeshm city, 18.5.97, 20513
<i>A. lividus</i> L. *	Th	Trop- SubTrop	-	Without exact locality (based on G. Kunckel- 1977).
<b>Apocynaceae</b>				
<i>Nerium indicum</i> Mill. *	Ph	M-IT-SS	-	Without exact locality (based on G. Kunckel-1977, in a rocky ravine)
<b>Asclepiadaceae</b>				
<i>Calotropis procera</i> (Willd.) R. Br in Aiton	Ph	SS-IT	4,19,31	Giahdan, 14.3.93, 16579
<i>Glossonema varians</i> (Stocks) Benth.	Hem	SS	10,16,18,20,22	Shah-Shahid, 19.5.95, 18140; Shah-Shahid, 2.9.94, 19790
<i>Leptadenia pyrotechnica</i> (Forssk.) Decne.	Ph	SS-Sa- SM	-	Without exact locality (based on G. Kunckel-1977, in central part of island)
<i>Pentatropis spiralis</i> (Forssk.) Decne.	Ch	SS	35	2 km to Kaboli from Shah-Shahid, 9.6.94, 18014
<i>Pergularia tomentosa</i> L. **	Ph	SS-Sa- SM	33	Near Basaidu, 21.5.94, 9639
<i>Periploca aphylla</i> Decne in Jacquem. Subsp. <i>aphylla</i>	Ph	SS-SM	23	Giahdan, 16312, 5.4.93; Chahuy-e Sharghi, 12.2.96, 19573
<b>Avicenniaceae</b>				
<i>Avicennia marina</i> (Forssk.) Vierh.	Hel	Trop	6	Tabl, 2.4.93, 20350

Table 3. Continued.

**Boraginaceae**

<i>Arnebia decumbens</i> (Vent.) Coss & Kral.	Th	SS-IT	33	Konar-Siah, 5.4.93, 16328
Subsp. <i>decumbens</i> **				
<i>Echiochilon kotschyi</i> (Boiss. & Hohen.) I. M. John. *	Ch	SS	21	Without exact locality (based on G. Kunckel-1977)
<i>E. persicum</i> (Burm. f.) I.M.John.	Ch	SS	21	Chahuy-e Sharghi, 21.5.97, 19717
<i>Gastrocotyle hispida</i> (Forssk.) C.B. Clarke in Hook.	Th	SS-IT	4,21	Giahdan, 12.2.96, 19458; Ramchah, 4.4.93, 16520
<i>Heliotropium bacciferum</i> Forssk. subsp. <i>bacciferum</i>	Ch	SS-Sa-SM	2,4,10,14,18,3,31	Dargahan to Jijian, 12.2.96, 19543; Salakh, 11.6.94, 18069
<i>H. brevilimbe</i> Boiss.	Hem	IT-SS	21	Salakh, 5.2.,1993, 19964; Ramchah, 2.4.1995, 19965
<i>H. dolosum</i> De Not. *	Ch	M-IT	-	Without exact locality (based on G. Kunkle-1977, northern and southern coast).
<i>H. lasiocarpum</i> Fisch. & C.A.Mey. **	Th	IT-SS	33	Chahuy-e Sharghi, 15.3.94, 19740; Ramkan, 18.5.97, 20515; Shah- Shahid, 21.5.97, 19963
<i>H. ramosissimum</i> (Lehm. ) DC.	Ch	SS-IT	4	Dargahan to Jijian, 12.2.96, s.n.
<i>H. remotiflorum</i> Rech.f. & H. Riedl	Ch	SS	4	Salakh,11.6.94, s.n.
<i>Moltkiopsis ciliata</i> (Forssk.) I.M.John.	Ch, (Th)	SS	4,18,29	Shah-Shahid, 12.2.96, 19455; Keno, 4.4.93, 19534
<i>Sericostoma pauciflorum</i> Stocks & Wight.	Ch	SS	7,10	Giahdan, 14.3.93, 16334
<i>Sericostoma pauciflorum</i> Stocks & Wight. var. <i>qeshmense</i> Ghahreman & Attar	Ch	SS	33	
<b>Caesalpiniaceae</b>				
<i>Cassia italica</i> (Mill.) F.W.Andrews	Ch	Trop	7,16,18	Qeshm city, 13.3.93, 16554A
<b>Capparidaceae</b>				
<i>Capparis cartilaginea</i> Decne.	Ch	SS	21	Shah-Shahid, terraces of near sea, 254.93, 18001
<i>C. spinosa</i> L. var. <i>mucronifolia</i> (Boiss.) Hedge & Lamond	Ch	SS	21,16	Bagh-e Bala, 11.6.94, 18012
<i>Cleome brachycarpa</i> Vahl ex DC.	Hem	SS-IT	7,23	Ramkan to Suza, 18.5.97, 20518; Kaboli, 2.2.96, 19730; Shah- Shahid to Ramchah, 2.5.95, 19214
<i>C. dolichostyla</i> Jafri **	Th	SS-IT	8,9,21	Qeshm city, 5.4.94, 19801; Namakdan, 11.6.94, 18063
<i>C. oxypetala</i> Boiss. **	Hem	SS	33	Near Holor, 2.2.96,19501

Table 3. Continued.

**Caryophyllaceae**

<i>Gypsophila pilosa</i> Huds. **	Th	SS-IT	34	Qeshm city, 18.5.97, 20522
<i>Silene arabica</i> Boiss.	Th	SS		Flora Iranica, No. 163
<i>Silene villosa</i> Forssk.	Th	SS	18,29	Keno, 4.4.93, 16531
<i>Vaccaria hispanica</i> (Miller)Rauschert **	Th	SS-IT	33	Qeshm city, 18.5.97, 20514
<b>Chenopodiaceae</b>				
<i>Anabasis setifera</i> Moq. **	Ch	SS	1,2,3,5,7,23	Around zeynabi, 18.5.97, s.n.
<i>Atriplex leuococlada</i> Boiss.	Ch	SS	1,2,3,4,5,8,26	Shah-Shahid,5.4.93, 16516
<i>Atriplex</i> sp.	Ch	-	33	Basaido, 11.6.94, 18059
<i>Beta vulgaris</i> L.	Th	Plur		Qeshm city, 12.2.96, 19460
<i>Bienertia cycloptera</i> Bge. **	Th	SS	2,15,17,8,12,23,24, 25	Chahuy-e sharghi, 12.6.94; Borke khalaf; Tula to Dargahan; 11.6.94,s.n.
<i>Chenopodium album</i> L. subsp. album	Th	Plur	34	Dargahan, 13.3.97, 16578
<i>Ch. Murale</i> L.	Th	Plur	4,5,19,20,8,12,24	Qeshm city, 20.3.95, 19593
<i>Cornulaca monacantha</i> Del.	Ch	SS	3,10,12,14	Basaido, 3.6.94, 20532;Basaido,11.6.94,18064
<i>Halocharis sulphurea</i> Moq. **	Th	SS-IT	33	Qeshm city, 12.2.96, 19454
<i>Halocnemum strobilaceum</i> (Pall.) M. B.	Ch	IT-SS-M	26	Dulab, 11.6.94, 18060; Dargahan, 13.3.1993 ,16327
<i>Halopeplis perfoliata</i> (Forssk.) Bunge ex Aschers. In Schweinf.	Ch	SS	30	Laft, 13.3.93, 16335
<i>Haloxylon salicornicum</i> (Moq.) Bunge ex Boiss.	Ph	SS	4,11,19,23,3,31	Shah-Shaid,4.4.93, 16543
<i>Kochia prostrata</i> (L.) Schrad **	Ch	SS-IT	4,16,23	Khalesi dam, 5.5.94, 19479; Basaidu, 4.4.93, 16572; Hamun, 18.5.97, 19574
<i>Salicornia europaea</i> L.	Th	Plur	6	Laft, 3.5.94, 18145; 5km to Qeshm city from Tula, 8.5.97, 20539
<i>Salsola drummondii</i> Ulbrich in Engl. & Prantl **	Ch	SS	2,4,5,13,18,19,8,24, 25,16,26	Shib Deraz, 10.9.93, 19742
<i>S. imbricata</i> Forssk.	Ch	SS	8	Shah-Shaid, 5.4.93, 16544
<i>S. tomentosa</i> (Moq.)Spach in Kotschy **	Ch	SS-IT	2,4,5,7,23,3,26	Shib Deraz, 10.9.93, 20344
<i>Seidlitzia rosmarinus</i> Ehrenb. ex Boiss. **	Ch	SS	8	Dulab, 11.6.94, 18061
<i>Suaeda aegyptiaca</i> (Hasselq.) Zohary	Th	SS	4,2,19,8,12,24,16	Ramkan, 7.5.93, 19724
<i>S. maritima</i> (L.) Dumort. **	Th	Plur	13	Tabl, 6.5.93, 19796; Soheily, 10.5.92, 19721
<i>S. vermiculata</i> Forssk. ex J.F.Gmel	Ch	SS-SM	2,8,27	Laft, 9.1994, 19744; Dargahan, 13.3.93, 16326
<b>Cistaceae</b>				
<i>Helianthemum lippi</i> (L.) Pers.	Ch	SS	2,4,7,10,12,14,17,3, 18,21,16,23,24,27	Bukhu Mt., 12.2.96, 19599; Giahdan, 14.3.93, 16314

Table 3. Continued.

<i>H. salicifolium</i> (L.) Mill. *	Th	ES-M-IT	-	Without exact locality (based on Kunkle-1977)
<b>Compositae (Asteraceae)</b>				
<i>Carthamus oxyacantha</i> M.B. **	Th	SS-IT	33	Ramkan, 18.5.97, 20538
<i>Centaurea pseudosinaica</i> Czertp.	Th	SS	33	Bagh-e Bala, 29.4.95, 18165; between Holor and Ramchah, 11.6.94, 18009
<i>Crepis sancta</i> (L.) Babcock subsp. <i>sancta</i> **	Th	SS-M-IT	4	Laft-e kohnh; Basaidu; Tabl to Salakh, 29.2.95, s.n.
<i>Echinops gedrosiacus</i> Bornm.	Hem	SS-IT	7,19	Between Ramchah and Holor, 11.6.94, 18015
<i>Eclipta prostrata</i> (L.) L. *	Hel	Trop	-	Without exact locality (based on G. Kunckel-1977)
<i>Filago desertorum</i> Pomel	Th	SS-IT	4	Tabl to Konar Siah, 14.3.93, 16329
<i>Francoeuria undulata</i> (L.) Lack*	Ch	SS	-	Without exact locality (based on G. Kunckel-1977)
<i>Grantia aucheri</i> Boiss. **	Ch	SS-IT	28	Ramchah, 14.3.93, 16331
<i>Ifloga spicata</i> (Forssk.) Schultz-Bip.	Th	SS		Tabl to Konar Siah, 2.3.92, 16308
<i>Launaea capitata</i> (Spreng.) Dandy in F. W. Andrews	Th, (Hem)	SS	4	Tiab Kermu, 15.3.93, 18068; Airport, 15.3.93, 16564
<i>L. cassiniana</i> (Jaub. & Spach) Burkill **	Hem	SS	1,2,3,4,17,12,23,7,19,20,21,31	Ramchah, 5.4.93, 16511
<i>L. massauensis</i> (Fres.) Chiov.	Hem	SS	33	Qeshm city, 18.5.97, 20529
<i>L. mucronata</i> (Forssk.) Muschl.	Hem, (Th)	SS	32	Suza, 5.5.1994, 22565A
<i>L. nudicaulis</i> (L.) Hook.f. **	Hem	SS-IT	33	Qeshm city, 8.3.92, 19502
<i>L. oligocephala</i> (Hauskn. & Bornm. ex Bornm.) Bornm. **	Hem	SS	33	Between Hamun and Qeshm city, 4.5.93, 18177
<i>L. procumbens</i> (Roxb.) Ramayya & Rajagopal **	Hem	SS	32	Salakh, 12.2.96, 19576; Basaidu, 2.5.95, 18175
<i>Pentanema divaricatum</i> Cass. **	Th	SS-IT	35	Bukhu Mt., 19.5.97, 20509
<i>Platychaete glaucescens</i> (Boiss. ) Boiss.	Ch	SS	21	Bukhu Mt., 28.4.95, 18160; Shah-Shahid to Kaboli, 9.6.94, 18014
<i>Pulicaria gnaphalodes</i> (Vent.) Boiss. **	Hem	SS-IT	33	Near gas pomp, 2.5.95, 19223
<i>Reichardia glauca</i> Matthews **	Hem	SS	7,16	Near Holor, 12.2.96, 19586
<i>R. orientalis</i> (L.) Hochr.	Th	SS-IT	4,7,19,23	Dargahan, 14.3.93, 16325
<i>Senecio glaucus</i> L.	Th	SS-IT	1,2,4,15,16,17,12,24,25	Keno, 4.4.93, 16532; Ramchah, 5.4.93, 16512



Table 3. Continued.

<i>Sonchus asper</i> (L.) Hill subsp. <i>glaucus</i>	Th	SS-IT	34	Qeshm city, 18.5.97, 20525; Qeshm city, 18.5.97, 20528
<i>S. oleraceus</i> L.	Th	Plur	4	Jijian, 18.5.97, 19741
<i>S. tenerrimus</i> L.	Th	SS-M-IT	34	Nahalestan, 21.2.96, 19475
<i>Urospermum picroides</i> (L.) Desf.	Th	SS-M-IT	4	Bukhu Mt., 19.5.97, 20507
<i>Volutaria tubuliflora</i> (Murb.) Sennen	Th	SS-M	35	Bukhu Mt., 28.4.95, 18155
<b>Convolvulaceae</b>				
<i>Convolvulus arvensis</i> L. *	Th	Plur	-	Without exact locality (based on G. Kunckel-1977)
<i>C. fatmensis</i> Kze.	Th	SS	32	Near Qesh city, southern coast, 2.5.95, 19215
<i>C. glomeratus</i> Choisy in DC.	Ch	SS	16,18	Airport, 15.3.93, 16557; Shah-Shahid, 14.3.93, 19494; Suza, 12.2.96, 19590
<i>C. kotschyanus</i> Boiss.*	Ch	SS	28	Near Suza, 19590
<i>C. leptocladus</i> Boiss.	Hem	SS	2	Bagh-e Bala, 11.6.94, 18007
<i>C. pilosellaefolius</i> Desf.	Hem	SS-IT	3,4,5,10,2,12,16,18,23,29	Shah-Shahid, 2.6.1995, 27654A
<i>C. prostratus</i> Forssk. **	Hem	SS	4	Konar Siah, 14.3.93, 16556
<i>C. sericeus</i> Bornm. **	Hem	SS	3,4,5,10,16	Sarsu, 5.4.93, 16518
<i>Cressa cretica</i> L.	Hem, (Th)	Pan	5,15,17	Suza, 27.4.95, 18142
<b>Cruciferae (Brassicaceae)</b>				
<i>Anastatica hierochuntica</i> L.	Th	SS	2,3,4,5,9,10,11,12,23,24,25,16	Tabl to Konar Siah, 14.4.93, 16319
<i>Diplotaxis harra</i> (Forssk.) Boiss. **				
<i>Erucaria hispanica</i> (L.) Druce	Th	SS-M-IT	5	Ramchah, 5.4.93, 16513
<i>Eruca sativa</i> Miller	Th	Pal2	34	Giahdan, 14.5.93, s.n.
<i>Farsetia heliophila</i> Bge. ex Coss.	Ch	SS	4,7,18,16,23	Chahuy-e Sharghi, 21.5.93, 18003
<i>Sinapis arvensis</i> L. **	Th	SS-M-IT	33	Near Qeshm city, 12.2.96, 19474
<b>Cucurbitaceae</b>				
<i>Citrullus colocynthis</i> (L.) Schrad.	Hem	Pal 1	32	Between Holor and Ramchah, 11.6.94, 18025
<b>Cuscutaceae</b>				
<i>Cuscuta epithymum</i> Murr. In L.	Par	Plur	4	Ramkan, 12.2.96, 19491
<b>Cyperaceae (Monocotyledones)</b>				
<i>Bolboschoenus maritimus</i> (L.) Palla. in W. D. Koch **	Hem	Cosm	17	Borkeh Khalaf, 20.4.95, 18153; Sarsu, 5.4.93, 16539
<i>Cyperus conglomeratus</i> Rottb. subsp. <i>conglomeratus</i>	Ge.r	Pal2	2,4,5,7,8,10,12,16,18,12,22	Sarsu, 25.3.94, 16539

Table 3. Continued.

<i>C. rotundus</i> L.	Ge.r	Cosm	3,4,10,11,12,27	Borkeh Khalaf, 20.4.95, 18136
<b>Ephedraceae (Chlamydosperme)</b>				
<i>Ephedra foliata</i> Boiss. ex C. A. Méy. **	Ph	SS-IT	20,16,22	Shah -Shahid, 9.4.95, 18130
<i>E. strobilacea</i> Bge.*	Ph	IT	-	Without exact locality (based on Kunkle-1977, northern and western part)
<b>Euphorbiaceae</b>				
<i>Andrachne telephioides</i> L.	Ch	SS-M-IT	20	Southern road, near Shah-Shaid, 15.3.93, 19567
<i>Chrozophora hierosolymitana</i> Spreng	Th	SS-IT	33	Shib-Deraz, 14.4.93, 16318
<i>Ch. tinctoria</i> (L.) Juss.	Th	SS-M-IT	33	Soheily, 18.5.97, 20505
<i>Euphorbia densa</i> Schrenk subsp. <i>densa</i> *	Th	IT	-	Without exact locality (Kunkle-1977, western part)
<i>E. falcata</i> L.	Th	SS-M-IT		Bukhu Mt., 12.2.96, 19592
<i>E. larica</i> Boiss.	Ch	SS	34	Without exact locality (based on G. Kunckel-1977)
<i>E. turcomanica</i> Boiss. **	Th	SS-IT		Qeshm city, 18.5.97, 20512
<b>Frankeniaceae</b>				
<i>Frankenia pulverulenta</i> L.	Th	Plur	5,17,29	Between Tomban and Mesen, 12.6.94, 18005
<b>Geraniaceae</b>				
<i>Erodium ciconium</i> (Jusl.) L'Her	Th	SS-M-IT	4	Jijian, 12.2.96, s.n.
<i>E. cicutarium</i> (L.) L' Her	Th	Pal 1	4	Qeshm city, 25.2.94, 19755
<i>E. laciniatum</i> (Cav.) Willd.	Th	SS	4	Ramchah, 5.4.93, 19525
<i>E. malacoides</i> (L.) L'Her. ex Aiton	Th	Plur	4	Borkeh Khalaf, 20.4.95, 18137
<i>E. neuradifolium</i> Del. ex Godron	Th	SS	4	Near Shah- Shahid, 12.2.96, s.n.
<i>E. pulverulentum</i> (Cav.) Willd. **	Th	SS	4	Shah-Shahid, 12.2.96, 19577
<i>Geranium dissectum</i> L. *	Th	ES-M-IT	4	Without exact locality (based on G. Kunckel-1977)
<i>G. mascatense</i> Boiss.	Th	SS	4,20,31	Tula, 14.5.94, s.n.
<i>G. trilophum</i> Boiss. **	Th	SS	35	Bukhu Mt., 12.2.96, 19477
<i>Monsonia heliotropioides</i> (Cav.) Boiss.	Hem	SS	2,4,7,10,12,18,19,2 3,24	Tabl to Konar Siah, 14.3.93, 16565
<b>Gramineae (Poaceae)</b>				
<i>Aeluropus lagopoides</i> (L.) Trin. ex Thw.	Ge.r	SS-M-IT	1,2,3,5,8,15,17,12,2 3,24,25,16,26,27	Mesen, 11.5.96, 27100
<i>Aristida adscensionis</i> L.	Th	Pan	2,3,4,5,12,13,16,18, 19, 21,23,,24,25	Tabl to Konar Siah, 14.3.93, 16572; Sarsu, 4.4.93, 16555
<i>Arundo dunax</i> L.	Hel	Pal2	34	Qeshm city, Park-e Shahr-dari, 4.4.93, s.n.

Table 3. Continued.

<i>Avena fatua</i> L. var. <i>fatua</i>	Th	Cosm	34	Dargahan, 13.3.93, 16315
<i>Bromus scoparius</i> L. var. <i>scoparius</i> *	Th	ES-M-IT	-	Without exact locality (based on G. Kunckel-1977)
<i>Cenchrus ciliaris</i> L.	Th	Pal 2	4,5,18,19,20	Tula, 2.5.96, 27098; Bande Haj-Ali, 19.5.97, 20502; Sarsu, 5.4.93, 26552; Qeshm city, 18.5.97, 20503
<i>C. pennisetiformis</i> Hochst & Steud. ex Steud.	Hem	SS-SM-IT	5	Tabl to Konar Siah, 14.3.93, 16586
<i>C. setigerus</i> Vahl. **	Th	SS	2	Around Basaidu, rare, 15.3.93, s.n.
<i>Chloris barbata</i> Swartz **	Th	Trop	33	Around Qeshm city, 5.3.96, 19781
<i>Coelochyrum Piercei</i> (Benth.) Bor **	Hem	SS	4	Borke Khalaf to Suza, 15.3.93, 17622
<i>Cutandia memphitica</i> (Spreng.) *	Th	SS-IT-M		Salakh, 4.2.93, s.n.
<i>Cymbopogon olivieri</i> (Boiss.) Bor **	Hem	SS-IT		Dargahan road, 14.3.93, 16321
<i>C. parkeri</i> Stapf	Hem	SS-IT	4,20,21	Terraces above Borke Khalaf & Giahdan; Sandy hills above Jijian, 14.3.93; Tabl to Salakh; Khaledin, 15.3.93, s.n.
<i>Cynodon dactylon</i> (L.) Pers.	Ge.r	Cosm	4,8,9,19,18,31	Keno, 5.4.93, 16554
<i>Dactyloctenium aegyptiacum</i> (L.) P.Beauv.	Th	SS-M	33	Qeshm city, 6.5.96, 27097
<i>Dichanthium annulatum</i> (Forssk.) Stapf in Prain	Ge.r	SubTrop-Trop	4,9	Gavarzin, 11.6.65, 18065; Shah-Shahid, 2.5.95, 19221
<i>Echinochloa colonum</i> Link	Th	M-IT-Trop	34	Qeshm city, 18.5.97, 20504
<i>Enneapogon persicus</i> Boiss.	Ge.r	SS-IT	-	Without exact locality (based on G. Kunckel-1977)
<i>Eragrostis cilianensis</i> (All.) Vign.-Lut.	Th	SS-IT	2,3,5,4,7,8,15,17,18,19,8,12,23,27	Shah-Shahid, 4.4.93, 16550
<i>Eremopogon foveolatus</i> (Del.) Stapf	Ge.r	SS	4,9	Suza, 7.4.96, 27101
<i>Halopyrum mucronatum</i> (L.) Stapf **	Hem	SS	32	Dargahan road, 14.3.93, 16575
<i>Hordeum distichon</i> L.	Th	IT	-	Without exact locality (based on G. Kunckel-1977)
<i>H. glaucum</i> Steud.	Th	Plur	-	Without exact locality (based on G. Kunckel-1977)
<i>Hypparrhenia hirta</i> (L.) Stapf in Prain	Hem	Pal2	4,7,19,31	Sarsu, 4.4.93, 16553
<i>Imperata cylindrica</i> (L.) P. Beauv.	Hel	Plur	9	Mesen dam, 28.4.95, s.n.
<i>Lasiurus hirsutus</i> (Forssk.) Boiss.	Hem	SS	4-18-22	Suza to Mesen, 2.5.95, 19213
<i>Lolium perenne</i> L. *	Hem	Plur	-	Without exact locality (based on G. Kunckel-1977)

Table 3. Continued.

<i>L. rigidum</i> Gaudin	Th	SS-M-IT	34	Qeshm city, 18.5.97, 20500
<i>L. phleoides</i> (Vill.) Reichenb. **	Th	SS-IT	4	Keno, 5.4.93, 16549
<i>L. pumila</i> (Desf.) Bor	Th	SS-IT	4	Dargahan road, 14.3.93, 16573; Keno, 4.5.93, 16551
<i>Panicum miliaceum</i> L. **	Th	Trop	34	Qeshm city, 3.2.92, 20501
<i>Panicum turgidum</i> Forssk.	Ch	SS-Sa-SM	2,3,4,7,11,18,19,23	Sarsu, 5.4.93, 16547; Ramchah, 11.6.94, 18018
<i>Pennisetum divisum</i> (Gmel.) Henrard.	Hem-Ch	SS-SM	4,7,18,19,12,23,24	Near Basaidu, 14.3.93, 16316; Sarau, 5.4.93, 16547; Ramchah, 11.6.94, 18018
<i>Phalaris minor</i> Retz.	Th	SS-IT	4,19,31	Qeshm city, Park-e Shardari, 20.4.95, s.n.
<i>Ph. paradoxa</i> L.	Th	SS-M-IT	34	Dargahan road, 14.3.93, 16571; Borkeh Khalaf, 20.4.95, 18139
<i>Polypogon fugax</i> Nees ex Steud.	Th	IT	-	Qeshm city, in Palm-grove, 14.3.93, s.n.
<i>P. semiverticillatus</i> (Forssk.) Hyl.*	Th	M-IT	-	Without exact locality (based on G. Kunckel-1977)
<i>Saccharum ravenae</i> (L.) Murray **	Ge.r	SS-IT-M	8	Mesen, 15.5.95, 17622
<i>Schismus barbatus</i> (L.) Thell.	Th	SS-M-IT	4	Ramchah, 14.3.93, s.n.
<i>Setaria verticillata</i> (L.) P.Beauv.	Th	Cosm	34	Qeshm city, 18.5.97, 20533
<i>Sporobolus arabicus</i> Boiss.	Hem	SS	5,8	Ramchah, 11.6.94, 18017; Sarsu, 5.4.93, 16548; Rigo, 2.5.95, 19222; Dargahan road, 11.6.94, 19574
<i>Stipa capensis</i> Thunb.	Th	SS-M-IT	1,3,4,7,8,9,13,18,19,21,12,16	Rigo, 2.5.95, 19218; Giahdan, 14.3.93, 16313
<i>Stipagrostis plumosa</i> (L.) Munro ex T. Anders.	Hem	SS-IT	8,14	Pey- Posht, 12.5.96, 27099
<i>Tetrapogon villosus</i> Desf. *	Hem	SS	-	Without exact locality (Kunkle-1977, near city)
<i>Trachynia distachya</i> (L.) Link. var. <i>distachya</i>	Th	Plur	4	Dargahan road, 14.3.93, 16569
<i>Tragus berteronianus</i> Schultes	Th	SS-IT	32	Shah-Shahid, 2.5.95, 19224
<i>T. racemosus</i> (L.) All.	Th	Pal 1	2,20	Qeshm city, 18.5.97, 20337
<i>Tricholaena teneriffae</i> (L.f.) Link	Hem	SS-SM	4,22	Tula to Dargahan, 18.5.97, s.n.
<b>Hydrocharitaceae</b>				
<i>Halophila ovalis</i> (R. Br.) Hook. f. **	Hyd	Cosm	8	Khalesi dam, 6.7.95, 19500
<b>Iridaceae</b>				
<i>Gynandris sisyrrinchium</i> (L.) Parl. **	Ge.co	SS-M-IT	34	Jijian, in fields, 1.2.96, 19472
<b>Juncaceae</b>				
<i>Juncus rigidus</i> Desf.	Ge.r	SS-M-IT	9	Around Tula, 10.5.94, 20345

Table 3. Continued.

<b>Labiatae (Lamiaceae)</b>					
<i>Salvia aegyptiaca</i> L.	Ch	SS	33		Bukhu Mt., 13.2.96, 19473
<i>S. santolinifolia</i> Boiss.	Ch	SS	33		Qeshm city, 13.3.93, 16562
<b>Liliaceae</b>					
<i>Asphodelus tenuifolius</i> Cav.	Th	SS-M	4,5,19		Ramchah, 5.4.93, 16533
<i>Bellevalia saviczii</i> Woron **	Ge.b	SS	34		Jijian, 1.2.96, 19476
<b>Malvaceae</b>					
<i>Abutilon fruticosum</i> Guill & Pert.	Ch	SS	4,31		Ramchah, 5.4.93, 16521; between Salakh to Suza, 1.5.95, 18163
<i>Malva nicaeensis</i> All. *	Th	M-IT	-		Without exact locality (based on Kunkle-1977, weedy garden)
<i>M. parviflora</i> L.	Th	SS-M-IT	4		Shah-Shahid, 5.4.93, 16527
<b>Meliaceae</b>					
<i>Azadirachta indica</i> Adr. Juss.	Ph	-	34		Qeshm city, 2.9.94, 19780
<b>Menispermaceae</b>					
<i>Cocculus pendulus</i> (J. R. & G. Forst.) Diels in Engler **	Ph	SS	35		Bukhu Mt., 25.5.93, 18167
<b>Mimosaceae</b>					
<i>Acacia ehrenbergiana</i> Hayne **	Ph	SS-Sa-SM	5		Between Dustaku and Namakdan, 15.5.97, s.n.
<i>A. nilotica</i> (L.) Delile	Ph	SS	4		Band-e Haj Ali, 15.5.97, 20449
<i>A. oerfota</i> (Forssk.) Schweinf **	Ph	SS	5		Basaidu, 16.4.95, 20531; Kovei, 11.6.94, 18020
<i>A. tortilis</i> (Forssk.) Hayne **	Ph	Pal 2	4,19		Basaidu, 11.6.94, 18067
<i>Prosopis cineraria</i> (L.) Druce. **	Ph	SS	4,19		Borkeh Khalaf, 2.4.94, 19788
<i>P. farcta</i> (Banks & Sol.) Macbr. *	Ph	SS-IT-M	-		Without exact locality (based on G. Kunkle-1977, northern part)
<i>P. koelziana</i> Burkart	Ph	SS	20		Shah-Shahid to Qeshm city
<b>Molluginaceae</b>					
<i>Mollugo cerviana</i> (L.) Ser. *	Ch	SS-M-IT	-		Without exact locality (based on G. Kunkel-1977)
<b>Moraceae</b>					
<i>Ficus johannis</i> Boiss. *	Ph	IT	-		Without exact locality (based on G. Kunkel-1977)
<b>Nyctaginaceae</b>					
<i>Boerhavia diffusa</i> L. *	Th	Trop-SubTrop	-		Without exact locality (based on G. Kunkel-1977)

Table 3. Continued.

<i>Commicarpus stenocarpus</i> (Chiov.) Cuf.	Ch	IT	4,7,10,14,20,23	Terraces above Salakh, 11.6.94, s.n.
<b>Orobanchaceae</b>				
<i>Cistanche tubulosa</i> (Schrenk) R. Wight.	Par	SS-IT-SM	32	Shah-Shahid, 20.7.92, 19749
<i>Orobanche cernua</i> Lofl.	Par	SS-M-IT	34	Around Qeshm city , in cultivated trees area, 20.7.92, s.n.-
<b>Papilionaceae (Fabaceae)</b>				
<i>Alhagi graecorum</i> .....	Hem	SS	4,19,23,31	Between Tomban and Mesen, 12.6.94, 18005
<i>Argyrolobium roseum</i> (Camb.) Jaub. & Spach	Th	SS-IT	14	Giahdan, 14.3.93, 16305
<i>A. stenophyllum</i> Boiss.	Hem	SS-IT	-	Without exact locality (based on G. Kunckel-1977)
<i>Astragalus annularis</i> Forssk.	Th	SS	32	Keno, 2.2.94, s.n.
<i>A. corrugatus</i> Bertol.	Th	SS	32	Giahdan, 14.3.93, 16587
<i>A. eremophyllum</i> Boiss. var. <i>eremophyllum</i> **	Th	SS	7,8,9,23	1 km after Khaledin, s.n.
<i>A. hamosus</i> L.	Th	SS-M-IT	32	Chahuy-e Sharghi, 12.3.93, s.n.
<i>A. hauarensis</i> Boiss.	Th	SS	4,33	Around Dargahan, 5.2.94, s.n.
<i>A. tribuloides</i> Del.	Th	SS-IT	4,32	Southwest of island, 2.3.96, 19487
<i>Chesneya parviflora</i> Jaub. & Spach	Hem	SS	12	5 km to Qeshm city on the road of Tula, 3.3.95, 19588
<i>Crotalaria persica</i> (Burm.f.) Merrill.	Ch	SS	2,4,5,18,24	Sarsu, 4.4.93, 16502
<i>Hippocrepis bicontorta</i> Loisel.	Th	SS	34	Tang-e Su, 4.4.93, 16507
<i>H. bisiliqua</i> Forssk. *	Th	IT-M	-	Without exact locality (based on G. Kunckel-1977)
<i>H. unisiliqua</i> L. *	Th	IT-M	-	Without exact locality (based on G. Kunckel-1977)
<i>Indigofera intricata</i> Boiss.	Ch	SS	10,16,18,20,27,32	Keno, 4.4.93, 16508
<i>Lathyrus aphaca</i> L.	Th	IT-M	-	Without exact locality (based on G. Kunckel-1977)
<i>Lotononis platycarpus</i> (Viv.) Pic.- Serm.	Th	Pal 2	11	Suza, 14.4.94, s.n.
<i>Lotus halophilus</i> Boiss. ex Sprun.	Th	SS-M	32	Sarsu, 15.6.95, 16529
<i>L. garcinii</i> DC.	Th	SS	1,2,3,4,7,10,11,12,20	Shah Shahid, 4.4.93, 16506
<i>L. schimperi</i> Steud. in Boiss.	Th	SS	4	Dargahan road, 13.3.93, 16322

Table 3. Continued.

<i>Medicago laciniata</i> (L.) Mill.	Th	SS	1,2,3,4,5,7,12,13,15,16,18,16,23,24,25	Shah-Shahid, 2.5.95, 19217; Sarsu, 5.4.93, 16528
<i>M. polymorpha</i> L.	Th	Plur	4,5,16,30	Dargahan road, 14.3.93, 16576; Suza, 14.4.96, 27102
<i>Melilotus albus</i> Medicus	Th	Plur	34	Qeshm city, weedy gardens
<i>M. indicus</i> (L.) All.	Th	Plur	34	Qeshm city, 18.5.97, 20527; Dargahan road, 13.3.93, 16559
<i>Ononis serrata</i> Forssk.	Th	SS-M	34	Keno, 4.4.93, 16503
<i>O. sicula</i> Guss.	Th	SM-SS-IT	-	Without exact locality (based on G. Kunckel-1977)
<i>Rhynchosia schimperi</i> Hochst. **	Ch	SS	33	Qeshm city, 21.4.95, 18150
<i>Scorpiurus muricatus</i> L.	Th	IT-M	34	Qeshm city, 18.4.96, 16303
<i>Taverniera cuneifolia</i> (Roth.) Arn.	Ch	SS	-	Without exact locality (Kunkle-1977, northern side, edge of a salt swamp).
<i>T. spartea</i> (Burn.f.) DC. **	Ch	SS	4,12,18,19,12,23	Basaido, 12.2.96, 19465; Sarsu, 4.4.93, 16501
<i>Tephrosia apollinea</i> (Delile) Link	Ch	SS	1	Borkeh Khalaf, 4.4.93, 16505
<i>T. persica</i> Boiss.	Ch	SS	3,7,14,20,18	Khaledin ; Posht -Tombe to Suza; in seasonal rivers, 4.4.93, s.n.
<i>Trigonella anguina</i> Del.	Th	SS	2	Qeshm city, in palm-grove, 4.4.93, s.n.
<i>T. hamosa</i> L.	Th	SS-M	17	Khaledin, in seasonal rivers, 4.4.93, s.n.
<i>T. stellata</i> Forssk.	Th	SS-IT	4,19	Giahdan, 14.3.93, 16311
<i>T. uncata</i> Boiss. & Noe in Boiss.	Th	SS	4,16,19,22	Giahdan, 13.3.93, 16558
<b>Paronychiaceae</b>				
<i>Cometes surattensis</i> L.	Th	SS	2,3,4,7,10,12,13,18,19,12,16,23,24,25	Shah-Shahid, 5.4.93, 16537
<i>Gymnocarpus decander</i> Forssk.	Ch	SS	4,18,16,23	Tabl to Salakh, 1.2.96, 19591; Giahdan, 4.3.93, 16304
<i>Herniaria cinerea</i> DC. **	Th	SS-IT-M	33	Borkeh Khalaf, 15.4.93, s.n.
<i>H. hemistemon</i> J.Gay. in Duchartre *	Hem	SS-IT	-	Without exact locality (Kunkle-1977, NW corner)
<i>H. hirsuta</i> L.	Th	Plur	4	Khalesi dam, 12.2.96, 19601
<i>Paronychia arabica</i> (L.) DC. In Poir.	Th	SS-M	4	Basaidu, 2.5.95, 18137; Qeshm city, 18.5.97, 20510; Shah-Shahid, 5.4.93, 16509
<i>Polycarpha spicata</i> Wight & Arn.	Th	SS	4,31	Suza, 25.4.95, 18132
<i>Polycarpon tetraphyllum</i> (L.) L.	Th	ES-M	-	Without exact locality (based on G. Kunckel-1977)

Table 3. Continued.

<i>Spergula fallax</i> (Lowe.) E.H.L. Krause in Sturm	Th	SS-M	2,4,5,19	Shah-Shahid, 5.4.93, 16515
<i>Spergularia bocconi</i> (Sheele) Asch. & Graebner	Th	ES-M	-	Without exact locality (based on G. Kunckel-1977)
<i>S. diandra</i> (Guss.) Boiss.	Th	SS-IT-M	4,8,12	Shah-Shahid, 13.3.93, 16330
<i>Sphaerocoma aucheri</i> Boiss.	Ch	SS	2,5,2,11,12,13,14,20	Keno, 4.4.93, 16526; Suza, 12.2.96, 19468
<i>Telephium imperati</i> L. subsp. <i>orientalis</i> (Boiss.) Nyman*	Ch	IT-M	-	Without exact locality (based on G. Kunckel-1977)
<b>Plantaginaceae</b>				
<i>Plantago amplexicaule</i> Cav. *	Th	SS	-	Kunkle-1977; Flora Iranica - 1965
<i>P. boissieri</i> Hausskn. & Bornm.	Th	SS	1,2,3,4,7,8,9,10,11,12,16,17,18,20,23,24,25,28,29	Basaidu ; Shibderaz; Mesen to Deirestan; Tiab Kermu; 3.3.96, s.n.
<i>P. coronopus</i> L.	Th	SS-M-IT	2,32	Giahdan, 2.3.96, 19486; Sarsu, 4.4.93, 16522.
<i>P. loeflingii</i> L. *	Th	IT-M	-	Without exact locality (based on G. Kunckel-1977)
<i>P. ovata</i> Forssk.	Th	SS-IT	2,24,5,16,18,19	Giahdan, 4.4.93, 16307; Basaido, 2.3.96, 19488; Ramchah, 5.4.93, 16524
<b>Polygalaceae</b>				
<i>Polygala erioptera</i> DC.	Th	SS	32	Shah-Shahid, 20.4.95, 18154
<b>Polygonaceae</b>				
<i>Calligonum comosum</i> L'Her.	Ph	SS	5,22	Shah-Shahid, 5.4.93, 16510
<i>Emex spinosa</i> (L.) Campd.	Th	SS-M	2,4,10,12,19,20	Ramchah, 5.4.93, 16519
<i>Pteropyrum olivieri</i> Jaub. & Spach **	Ch	IT	4	Tabl to Salakh, 2.5.95, 18174
<i>Rumex conglomeratus</i> Murr.	Hem	Plur	33	Around Soheily, 18.5.97, 20516
<i>R. dentatus</i> L. *	Th	ES-IT-M	-	Without exact locality (based on G. Kunckel-1977)
<i>R. vesicarius</i> L.	Th	SS-SM		Near Dargahan, 20.2.93, 20342
<b>Portulacaceae</b>				
<i>Portulaca oleracea</i> L.	Th	Pan	33	Qeshm city, Park-e Shahr-dari, s.n.
<b>Primulaceae</b>				
<i>Anagalis arvensis</i> L.	Th	Plur	3,4,16,19,20	Shah-Shahid, 5.4.93, 16535
<b>Resedaceae</b>				
<i>Ochradenus baccatus</i> Del.	Ph	SS-SM	4,7,8,23	Terraces above Qeshm city, 5.5.93,19503, 19716



Table 3. Continued.

<i>Oligomeris linifolia</i> (Vahl.) Macbr.	Th	SS	4,16,17,31	Tabl to Konar Siah, 4.4.93, 16540
<i>Reseda aucheri</i> Boiss. subsp. <i>bracteata</i> Boiss. *	Hem	SS		Without exact locality (based on G. Kunckel-1977)
<b>Rhamnaceae</b>				
<i>Ziziphus nummularia</i> (Burm.f.) Wight & Arn.	Ph	SS	21	Borkeh Khalaf, 15.3.93, s.n.
<i>Z. spina-christi</i> (L.) Desf.	Ph	Pal 2	4,18,19,16,23	Deyrestan, 14.3.93, 16568
<b>Rosaceae</b>				
<i>Neurada procumbens</i> L.	Th	SS	1,3,4,7,10,12,16,18,19,23,24,25	Shah -shahid; Posht- Tombeh; Dorbani; Qeshm to Kaboli 14.4.94, s.n.
<b>Rubiaceae</b>				
<i>Gaillonia aucheri</i> Guill. **	Ch	SS	21	Laft-e Kohnch, 3.5.95, 18129
<i>G. hymenostephana</i> J. et Sp.	Ch	SS	4,22	Near gas pomp, 21.4.95, 19212
<i>Galium tricornutum</i> Dandy **	Th	SS-IT-M	35	Bukhu Mt., 12.2.96., 19589
<i>Oldenlandia retrorsa</i> Boiss.	Th	SS	4,19,22	Gavarzin, 7.3.95, 18019
<b>Rutaceae</b>				
<i>Haplophyllum tuberculatum</i> (Forssk.) Juss.	Hem	SS-IT	21	Borkeh Khalaf, 24.7.94, 20351
<b>Sapindaceae</b>				
<i>Dodonea viscosa</i> (L.) Jacq. **	Ph	Trop-Subtrop	35	Bukhu Mt., 28.4.95, 18176
<b>Scrophulariaceae</b>				
<i>Misopates orontium</i> (L.) Rafin. **	Th	Plur	4,5	Bukhu Mt., 12.2.69, 19584
<i>Scrophularia deserti</i> Del.	Hem	SS	4,7,19	Salakh, 27.5.96, 19754
<i>Schweinfurthia papilionaceae</i> Burm. **	Hem	SS	32	Chahuy-e Sharghi, 28.4.97, 19583
<b>Solanaceae</b>				
<i>Lycium shawii</i> Roemer & Schultes.	Ph	SS	4,5,2,12,18,8,16	Bukhu Mt., 11.6.94, 18070
<i>Solanum incanum</i> L.	Ch	SS	4,10,19,31	Shah-Shahid, 13.3.93, 16581
<i>S. nigrum</i> L. *	Th	Cosm	-	Without exact locality (based on G. Kunckel-1977)
<b>Tamaricaceae</b>				
<i>Reaumuria stocksii</i> Boiss. **	Th	SS	15	Shah Shahid, 2.3.96, 19492
<i>Tamarix aphylla</i> (L.) Karst.	Ph	SS	-	Mesen, 4.5.93, 18176a
<i>T. brachystachys</i> Bunge	Ph	SS	15	Sarsu, 28.4.95, 16517
<i>T. mascatensis</i> Bge.	Ph	SS	15	Mesen, 3.5.95, 19226
<i>T. dioica</i> Roth **	Ph	SS	88,15	Mesen dam; Mesen to Deyrestan 2.5.95; Khalesi dam; Darakuh; Gomebron to Kargah, 3.5.95, s.n.
<i>T. leptopetala</i> Bge. **	Ph	SS-IT	15	Gomberon to Kargah, 2.5.95, 18169

Table 3. Continued.

<b>Tiliaceae</b>					
Corchorus depressus (L.) Stocks	Ch	SS-IT	32		Southern coast, near Shah-Shahid, 25.6.93, 16566
Grewia tenax (Forssk.) Fiori **	Ch	SS-IT	16,23		Terraces above Salakh, 21.4.94, s.n.
<b>Umbelliferae (Apiaceae)</b>					
Ammi majus L.	Th	SS-M-IT	34		Ramkan, 18.5.97, 20530
Anethum graveolens L.	Th	-	34		Ramkan, 18.5.97, 20521
Bunium persicum (Boiss.) B. Fedtsch. *	Ge.t	IT	-		Without exact locality (based on G. Kunckel-1977)
Pimpinella barbata (DC.) Boiss. **	Th	SS-IT	2		Pey-Posht, 3.5.93, 18143
Psammogeton canescens (DC.) Vatke	Th	IT	-		Without exact locality (based on G. Kunckel-1977, central part)
Torilis leptophylla (L.) Rchb.	Th	Plur	34		Borkeh Khalaf, 11.6.94, 18021
<b>Urticaceae</b>					
Parietaria alsinifolia L. **	Th	SS	35		Bukhu Mt., 5.8.93, 19469
Forsskaolea tenacissima L.	Hem, (Ch)	SS	33		Tabl to Salakh, 6.5.92, 19595
<b>Verbenaceae</b>					
Phylla nodiflora (L.) Greene *	Hem	M-IT			Without exact locality (based on G. Kunckel-1977)
<b>Zannicheliaceae</b>					
Halodule wrightii Aschers. **	Hyd	Cosm			Hamun, 7.3.96, 19802
<b>Zygophyllaceae</b>					
Fagonia bruguieri DC. var. bruguieri	Hem	SS-SM	2		Near Jijian, 9.6.94, 18011
F. glutinosa Delile var. glutinosa **	Hem	SS	10		Laft-e Kohneh, 12.2.96, 19463.
F. indica Burm. f. var. indica	Ch	SS	10,12		Zeynabi, 10.4.96, 27096
F. indica Burm. f. var. subinermis (Boiss.) Hadidi **	Ch	SS	21		Pey-Posht, 12.4.96, 18171
F. olivieri DC. **	Hem	SS	14		Zeynabi, 5.4.93, 16536
Peganum harmala L.	Ch	SS-M-IT	33		Qeshm city, 5.1994, 28835
Tribulus longipetalus Viv. subsp. macropters (Boiss.) Maire & Ozenda & Quezel *	Th	SS	-		Without exact locality (based on G. Kunckel-1977)
T. terrestris L. **	Th	Plur	33		Qeshm city, 5.4.93, 19760
Zygophyllum hamiense Schweinf.	Ch	SS	15		Between Holor and Ramchah, 11.6.94, 18024
Z. propinquum Decne **	Ch	SS	1		Soheily, 18.5.97, 20540
Z. qatarense Hadidi**	Ch	SS	4,22,5		Qeshm to Tula & Dophori; Tula to Dargahan; Giahdan; Pey-Posht, 12.6.94, s.n.
Z. simplex L. **	Th	SS	3,22,24		After Kouni; Tula to Giahdan; Giahdan; Lafte-Kohneh to Pey-Posht, 12.6.94, s.n.

Table 4. Number of speceis in the largest families in Qeshm island.

Family	No. species	Percent
Gramineae	48	15.28
Papilionaceae	36	11.46
Compositae	27	8.60
Chenopodiaceae	21	6.69
Boraginaceae	14	4.45
Paronychiaceae	13	4.14
Zygophyllaceae	12	3.82
Geraniaceae	10	3.18
Convolvulaceae	9	2.86
Mimosaceae	7	2.22

Table 5. Chorological types of species in Qeshm island.

Chorological type	Abbreviation	Number	Percent
Saharo-Sindian	SS	125	40.32
Saharo-Sindian, Irano-Turanian	SS-IT	48	15.50
Saharo-Sindian, Irano-Turanian, Mediterranean	SS-IT-M	30	9.70
Pluriregional	Plur	24	7.74
Saharo-Sindian, Mediterranean	SS-M	10	3.22
Irano-Turanian	IT	9	2.90
Mediterranean, Irano-Turanian	M-IT	9	2.90
Saharo-Sindian, Somalo-Malesian	SS-SM	8	2.58
Tropical	Trop	6	1.93
Paleotropical 2	Pal2	8	2.58
Cosmopolitan	Cosm	8	2.58
Euro-siberian, Mediterranean, Irano-Turanian	ES-M-IT	6	1.93
Saharo-Sindian, Sahelian, Somalia-Malesian	SS-Sa-SM	5	1.61
Tropical-Subtropical	Trop-Subtrop	4	1.30
Pantropical	Pan	3	0.97
Paleotropical 1	Pal 1	3	0.97
Mediterranean, Euro-Siberian	M-ES	2	0.64
Saharo-Sindian, Somalo-Malesian, Irano-Turanian	SS-SM-IT	2	0.64

Table 6. Life form frequencies in Qeshm island.

Life form	Abbreviation	Number	Percent
Bulbose Geophyte	Ge.B	1	0.31
Chamaephyte	Ch	65	20.24
Cormose Geophyte	Ge.C	1	0.31
Helophyte	Hel	3	0.93
Hemicryptophyte	Hem	50	15.57
Hydrophyte	Hyd	2	0.62
Parasite	Par	3	0.93
Phanerophyte	Ph	29	9.03
Rhizomatous Geophyte	Ge.R	9	2.80
Therophyte	Th	157	48.90
Tuberous Geophyte	Ge.T	1	0.31

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