

Floristic study of suggested hunting-prohibited area of Dorodzan dam (Central Zagros, Iran)

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The hunting-prohibited area of Dorodzan dam is located at Fars province (Iran). The area is about 30,000 hectares and its vascular flora has been studied during 2011–12. In the present study, a total of 1876 plant specimens were collected and 529 taxa, belonging to 345 genera and 76 families were identified. The life form rates of the taxa are as follows: therophytes (40.6%), hemicryptophytes (30.92%), cryptophytes (13.47%), chamaephytes (8.91%), and phanerophytes (6.07%), respectively. Large families in terms of number of genera and species are *Asteraceae* (76 species), *Fabaceae* (48 species), *Poaceae* (45 species), *Lamiaceae* (38 species), *Brassicaceae* (27 species), *Apiaceae* (24 species), *Caryophyllaceae* (21 species), and *Boraginaceae* (17 species). The richest genera are *Astragalus* (21 species) *Cousinia*, *Centaurea*, *Euphorbia*, *Scorzonera*, and *Silene* (seven species each), *Allium*, *Cyperus*, and *Nepeta* (six species each). Among biogeographical regions, the main phytogeographical affinity of the species, was Irano-Turanian (55.59%). In addition, 80 taxa (15.12%) were considered as endemic to Iran.

Keywords: Fars, flora, life form, hunting-prohibited area, Marvdasht**مطالعه فلوربستیکی منطقه پیشنهادی شکار ممنوع سد درودزن (زاگرس مرکزی)**

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خلاصه

منطقه شکار ممنوع سد درودزن در استان فارس قرار دارد. مساحت این منطقه حدود ۳۰۰۰۰ هکتار مربع است و فلور آن بین سال‌های ۹۰–۱۳۸۹ مطالعه گردید. در این مطالعه جمعاً ۱۸۷۶ نمونه گیاهی، متعلق به ۵۲۹ آرایه شامل ۳۴۵ جنس و ۷۶ تیره بررسی گردید. طیف شکل‌های زیستی به صورت یک‌ساله (۴۰/۶٪)، همی کریپتوفیت (۳۰/۹۲٪)، ژئوفیت (۱۳/۴۷٪)، کامه‌فیت (۸/۹۱٪) و فانروفیت (۶/۰۷٪) تقسیم‌بندی شدند. تیره‌های بزرگ براساس تعداد آرایه عبارت بودند از کاسنیان (۷۶ گونه)، باقلاییان (۴۸ گونه)، چمنیان (۴۵ گونه)، نعناعیان (۳۸ گونه)، کلمیان (۲۶ گونه)، چتریان (۲۳ گونه)، میخکیان (۲۱ گونه) و گاوزبانان (۱۷ گونه). جنس‌های با گونه‌های پرشمار شامل گون (۲۱ گونه)، هزارخار، گل‌گندم، فریون، سنگ اسبی و مگس‌گیر (هر کدام هفت گونه)، پیاز، اویارسلام و پونه‌سا (هر کدام شش گونه) بودند. عناصر ایران-تورانی با در برداشتن (۵۵/۵۹٪)، عمده‌ترین نوع پراکنش جغرافیایی منطقه را به خود اختصاص دادند. همچنین، ۸۰ آرایه (۱۵/۱۲٪) انحصاری ایران در نظر گرفته شد.

واژه‌های کلیدی: فارس، فلور، فرم زیستی، مرودشت، منطقه شکار ممنوع

Introduction

Iran, with approximately 8100 plant species (Ghahremaninejad *et al.* 2017), is one of the centers of diversity and morphological variation in some genera and families. The high species richness is correlated with geographic and habitat diversity influenced by three biogeographical regions, i.e. the Irano-Turanian, Euro-Siberian, and Saharo-Sindian (Zohary 1973). The mountains and foothills of Zagros belong to the Irano-Turanian region. The mountains are divided to three parts and begins in NW Iran and extend the whole length of the western, and SW Iranian plateau ultimately terminates at the Strait of Hormoz (Persian Gulf). Most of the habitats in the Zagros mountains are covered by pure or mixed stands of open xerophytic cold-resistant deciduous oak woodlands. The woodlands grow together with many plants such as *Prunus*, *Pistacia*, *Cretageus*, *Pyrus*, *Fraxinus*, and *Acer* (Sagheb Talebi *et al.* 2013). The Central Zagros, with ca. 2.5 million hectares, includes main part of Chaharmahal and Bakhtiari, Kohgiluyeh and Boyer-Ahmad, Fars (Eqlid and Marvdasht), and Esfahan (Semirum) provinces (Fig. 1). The region with more than 2000 plant species comprises of most valuable Zagros mountains elements as hotspot of biological diversity in Anatolian-Iranian area (Zehzad *et al.* 2017). Zagros mountains region is considered to be one of the origins of agricultural and horticultural activities in the world (Sheikh-Hassani *et al.* 2011, Ghahremaninejad *et al.* 2021). The suggested hunting-prohibited area of Dorodzan dam mainly consists of mountainous habitat located at Central Zagros including Dorodzan dam (previously called Sang-e Dokhtaran or Darius dam). The area with 30,000 hectares is located at NW Marvdasht (Persepolis), at the north of Fars province between 30° 4'–30° 19' N, 52° 13'–52° 35' E. The nearest cities to the area

are Marvdasht at 43 km NW, Sepidan (Ardakan) at 52 km W, Shiraz, and Sadra at 74 km and 58 N from the study area, respectively (Fig. 2). The area is placed in Mediterranean pluviseasonal-continental (Djamali *et al.* 2011), with the highest precipitation from late autumn to early spring with a summer drought. The difference in altitude between the lowest area (ca. 1620 m) in southern and eastern parts and the highest area in the northern mountain (ca. 2645 m a.s.l.) is about 1025 m a.s.l.

More information on the flora of Zagros is helpful for future studies such as migration and delimitation of phytogeographical groups. Moreover, with increasing finding of new species in the Central Zagros (e.g., Lidén 2007, Zeraatkar *et al.* 2016, Al-Shehbaz 2017), the data are needed to improve objectivity in assessing the conservation status of the species.

Materials and Methods

A total of 1876 plant specimens were collected from the area, during 2011–12. The exact coordinates and elevation of collection sites were recorded by a commercial GPS (Garmin). The plants were dried and consequently labeled for providing herbarium specimens. Nomenclature of the vascular plants is based on APG IV (2016), except *Chenopodiaceae* following Hernández-Ledesma *et al.* (2015). The chorology and identification of species are mainly determined using distribution data in relevant Floras and literatures e.g., Rechinger (1963–2015), Assadi *et al.* (1988–2021), and Townsend *et al.* (1966–88). The life forms were classified according to Raunkiaer (1934). The voucher specimens are deposited at the Tehran herbarium (T), Shiraz University herbarium (HSHU), and Chaharmahal and Bakhtiari Agricultural and Natural Resources Research and Education Center (D) (Table 3) (Herbarium acronyms follows Thier 2021+).



Fig. 1. Position of the studied area in Central Zagros marked with an asterisk (adapted from Zehzad *et al.* 2017).

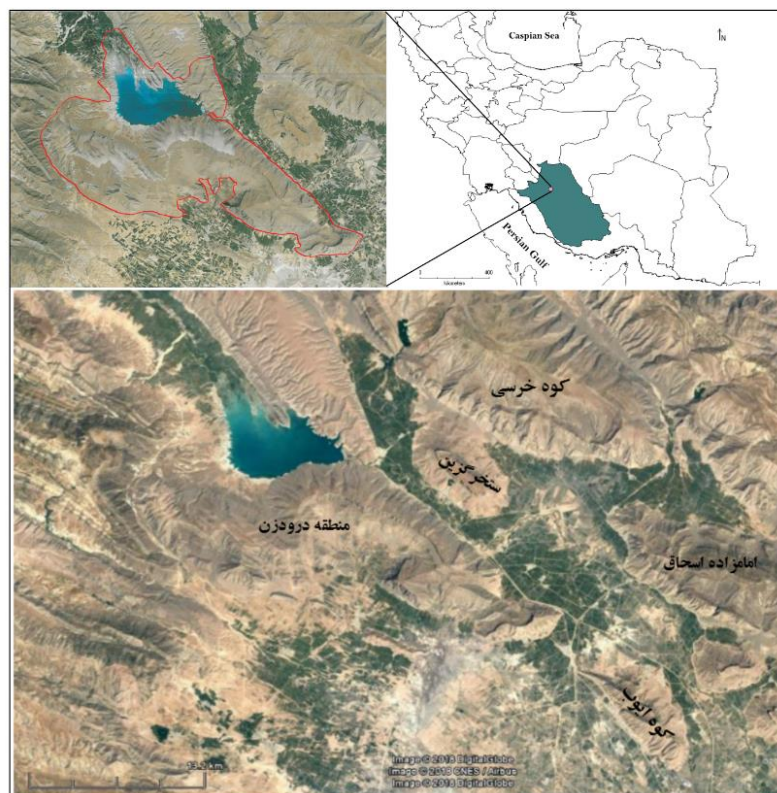


Fig. 2. Location of the studied area in Fars province and Iran (red boundaries show map of the studied area).

Results

Five hundred, twenty-nine plant taxa were collected from the study area, which belong to 345 genera and 76 families (Table 3). Angiosperms include dicots with 434 species, 276 genera, and 59 families followed by monocots with 90 species, 60 genera, and 15 families. Gymnosperms embrace two species, one genus, and one family while pteridophytes are represented by five species, four genera, and four families. Large families in terms of number of genera and species are *Asteraceae* (76 species), *Fabaceae* (48 species), *Poaceae* (45 species), *Lamiaceae* (38 species), *Brassicaceae* (27 species), *Apiaceae* (24 species), *Caryophyllaceae* (21 species), and *Boraginaceae* (17 species) (Table 1). *Astragalus* (21

species), *Cousinia*, *Centaurea*, *Euphorbia*, *Scorzonera*, and *Silene* (seven species each), *Allium*, *Cyperus*, *Acantholimon*, and *Nepeta* (six species each) are among the most species-rich ones (Table 2). Life form spectrum of the area is dominated by therophytes (40.6%) and hemicryptophytes (30.92%) followed by cryptophytes (13.47%), chamaephytes (8.91%), and phanerophytes (6.07%). The chorological affinities of species were as follows: Irano-Turanian (55.59%), Irano-Turanian and Mediterranean (9.67%), Irano-Turanian, Euro-Siberian & Mediterranean (7.5%), Irano-Turanian & Sahara-Sindian (6.45%), pluriregional- more than three regions (6.07%), cosmopolite (5.12%), and Irano-Turanian & Euro-Siberian (4.17%) (Fig. 3).

Table 1. List of the most species-rich vascular plant families in the area

Family	No. of genera	No. of species
<i>Asteraceae</i>	47	76
<i>Fabaceae</i>	15	48
<i>Poaceae</i>	33	45
<i>Lamiaceae</i>	17	38
<i>Brassicaceae</i>	23	26
<i>Apiaceae</i>	19	23
<i>Caryophyllaceae</i>	12	21
<i>Boraginaceae</i>	12	17

Table 2. List of richest vascular plant genera in the area

Genus	No. of species	Genus	No. of species
<i>Astragalus</i>	21	<i>Amaranthus</i>	4
<i>Cousinia</i>	7	<i>Bromus</i>	4
<i>Euphorbia</i>	7	<i>Convolvulus</i>	4
<i>Scorzonera</i>	7	<i>Echinops</i>	4
<i>Silene</i>	7	<i>Salvia</i>	4
<i>Allium</i>	6	<i>Medicago</i>	4
<i>Cyperus</i>	6	<i>Papaver</i>	4
<i>Nepeta</i>	6	<i>Phlomis</i>	4
<i>Plantago</i>	5	<i>Ziziphora</i>	4
<i>Polygonum</i>	5	<i>Fritillaria</i>	4

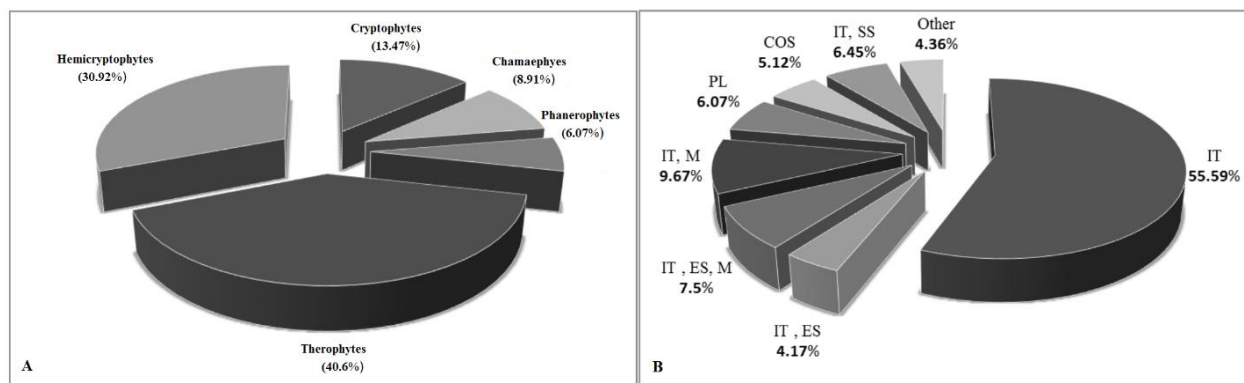


Fig. 3. The life form (A) and chorological affinities (B) of the species in the studied area.

Discussion

High plant diversity within a limited area is due to many factors mainly because of the biogeographic position of the area. The area is located at the end of Central Zagros adjacent to Southern Zagros (Fig. 1). Most the plant records belong to the eastern and southern areas while reports from the central, western as well as northern parts are still awaited. In addition, weedy and ruderal species around fields, villages, Kor River margin, and the lake margin have increased the plant species richness of the area.

The high percentage of therophytes (214 species, 40.6%), and hemicyptophytes (163 species, 30.92%) demonstrates the adaptation of the plants to fields and arid habitats through annually completing their life cycle and avoid harsh winter, respectively. However, most of the annual plants related to ruderal species in foothills have adverse effects on the diversity. Also, there are distinct diverse about the phanerophyte in the area. The main vegetation of the area is characterized by open shrublands viz. *Prunus scoparia* (Spach) C.K. Schneid., growing together with *Acer monspessulanum* L. subsp. *persicum* (Pojark.) Rech.f., *Crataegus aronia* (L.) Bosc. ex DC., *Ficus* spp., *Fraxinus rotundifolia* subsp. *persica* (Boiss.) Azadi, *Pistacia* spp., *Prunus elaeagnifolia* C.K. Schneider, *P. microcarpa* (Boiss. & Hausskn.) Schneider, *Convolvulus leiocalycinus* Boiss., *Rhamnus pallasii* Fisch. & C.A. Mey. subsp. *iranica* (Hausskn. in Bornm.) Browicz & J. Zielinski, *Daphne mucronata* Royle., and *Lonicera nummulariifolia* Jaub. & Spach whereas the

most western part partly contains *Quercus brantii* in margins and high altitudes mixed with *Acer monspessulanum* subsp. *persicum*, *Phlomis elliptica* Benth., *Prunus elaeagnifolia*, *P. scoparia*, *Pistacia atlantica* Desf., and *Daphne mucronata* (Figs 4 & 5). The semi-dense shrublands are replaced by very scattered scrubs e.g., *Prunus eburnea* (Spach) Aitch., *P. lycioides* (Spach) C.K. Schneid., *Ficus carica* L., and *Convolvulus leiocalycinus* along with thorn-cushion formations in the south area where it is close to southern Zagros flora (Fig. 5). Except for a very small and interesting patch in Kuh Kheresi hunting-prohibited area (between Darreh Bad and Galeh Zan villages), no other woodlands of *Quercus brantii* occur in east of the area. The patch represents the easternmost station of *Q. brantii* for the total range of *Q. brantii* in Iran (Fig. 2).

The presence of small patch of *Prunus scoparia* community in the eastern area (known as Cham-e Smaeel, between Hesamabad and Jeshnian villages), and also presence of the same communities in foothills of Kuh Kheresi hunting-prohibited area attached to trees and shrubby vegetations, have been dominated the plains in the past. The shrubs and subshrubs viz. *Convolvulus leiocalycinus*, *Acer monspessulanum* subsp. *persicum*, *Prunus elaeagnifolia*, *P. microcarpa*, *P. scoparia*, *Pistacia atlantica*, *Rhamnus pallasii*, and *Lonicera nummulariifolia* together with some thorn-cushion formations e.g., *Astragalus rhodosemius* Boiss. & Hausskn., *A. myriacanthus* Boiss., and *Acantholimon asphodelinum* Mobayen occur in foothills to the

uppermost elevation zones of the area, while *Prunus eburnea*, *P. lycioides*, *Crataegus aronia*, *Ficus* spp., *Acantholimon flexuosum* Boiss. & Hausskn., and *A. festucaceum* (Jaub. & Spach) Boiss. are limited to the foothills (1620–1770 m a.s.l.).

Astragalus adscendens Boiss. & Hausskn., *Brossardia papyracea* Boiss., and *Dorema aucheri* Boiss. that are common in highlands of Fars province were observed in small patches of Mount Zaneh peak (2400–2645 m a.s.l.). The peak is also a dominant in subalpine umbelliferous vegetation [e.g., *Prangos ferulacea* (L.) Lindl.].

The floristic composition of the area shows dominance of the *Asteraceae*, *Fabaceae*, and *Poaceae* families, and some genera such as *Astragalus*, *Cousinia*, *Centaurea*, *Euphorbia*, *Scorzonera*, *Acantholimon*, *Silene*, and *Allium* which are typical of Iranian floras including several xerophytic taxa. Eighty taxa (15.12%) are endemic to Iran. Most endemic species are chasmophytes listed in genera with a high number of endemic species within the Iranian flora (e.g., *Dionysia*, *Acantholimon*, *Scrophularia*, *Nepeta*, *Astragalus*, *Silene*, and *Echinops* (Jalili & Jamzad 1999). Some of the endemic species viz. *Satureja bachtiarica* Bunge, *Alcea laxiflora* Riedl., *Dorema*

aucheri Boiss., and *Allium jesdianum* Boiss. are harvested as edible and medicinal plants.

narrow endemic species such as *Verbascum austroiranicum* Hub.-Mor, *Crataegus persica* A. Pojak., *Silene persepolitana* Melzh., *Campanula persopolitana* Ky. in Boiss., *Hyoscyamus bornmuelleri* Khatamsaz, and *Astragalus penetratus* Maassoumi have fairly distributed in the area that already reported few times. In addition, there are no other reports of new species except for those recently discovered in the area (Tavakkoli *et al.* 2014, Ranjbar *et al.* 2017, Assadi & Zeraatkar 2020, Zeraatkar & Ghahremaninejad 2020).

The whole region as well as the Kuh Kheresi hunting-prohibited area, have attractive and rich floras in Dorodzan area. There are also some important habitats of the largest carnivorous mammal in Iran such as brown bear. Unfortunately, not only overgrazing takes place in the two areas but also fire, road construction, mining, oak woodlands and almonds diseases, gathering medicinal and edible species, extending the agricultural fields, are among the main threats to the biodiversity of the area.

Acknowledgements

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Table 3. Check list of vascular plants of the area. Chorology: IT (Irano-Turanian), M (Mediterranean), ES (Euro-Siberian), SS (Sahara-Sindian), PL (pluriregional), COS (cosmopolitan). Life form: Th (therophyte), Hem (hemicryptophyte) Ch (chamae-phyte), Ph (phanerophyte), Cr (cryptophyte), and endemic species (marked with asterisks)

No.	Taxa	Life form	Chorotype	Herbarium No.
	<i>Alismataceae</i>			
1	<i>Alisma lanceolatum</i> With.	Cr	COS	12598 (T), s.n. (HSHU)
	<i>Amaranthaceae</i>			
2	<i>Amaranthus albus</i> L.	Th	PL	12601 (T), s.n. (HSHU)
3	<i>A. chlorostachys</i> Willd.	Th	IT, M, SS	12588 (T), s.n. (HSHU)
4	<i>A. graecizans</i> L.	Th	IT, M, SS	12581 (T), s.n. (HSHU)
5	<i>A. retroflexus</i> L.	Th	PL	12580 (T), s.n. (HSHU)
	<i>Amaryllidaceae</i>			
6	<i>Allium atrovioleaceum</i> Boiss.	Cr	IT, ES	12500 & 12804 (T), s.n. (HSHU)
7	<i>A. austroiranicum</i> R.M. Fritsch*	Cr	IT	12419 & 12152 (T), s.n. (HSHU)
8	<i>A. iranikum</i> (Wendelbo) Wendelbo subsp. <i>iranikum</i>	Cr	IT	12515 (T), s.n. (HSHU)
9	<i>A. jesdianum</i> Boiss. & Buhse*	Cr	IT	12418 (T), s.n. (HSHU)
10	<i>A. scabriscapum</i> Boiss. & Kotchy	Cr	IT	12432 & 12433 (T), s.n. (HSHU)
11	<i>A. stamineum</i> Boiss.	Cr	IT	12428 & 12445 (T), s.n. (HSHU)
13	<i>A. subnotabile</i> Wendelbo*	Cr	IT	s.n. (HSHU), s.n. (D)

Table 3 (contd)

14	<i>Narcissus tazetta</i> L.	Cr	M	12687 (T), s.n. (HSHU)
15	<i>Sternbergia clusiana</i> (Ker.-Gawl) Sperng.	Cr	IT	12695 (T), s.n. (D)
Anacardiaceae				
16	<i>Pistacia atlantica</i> Desf. subsp. <i>mutica</i> (Fisch. & C.A. Mey.) Rech.f.	Ph	IT	12265 (T), s.n. (HSHU)
17	<i>P. khinjuk</i> Stocks	Ph	IT	12257 & 12264 (T), s.n. (HSHU)
18	<i>Apium nodiflorum</i> (L.) Lag.	Th	COS	12556 (T), s.n. (HSHU)
19	<i>Bifora testiculata</i> (L.) Spreng.	Th	IT	
20	<i>Bunium caroides</i> (Boiss.) Hausskn. ex Bornm.	Cr	IT	12287 (T), s.n. (HSHU)
21	<i>B. cylindricum</i> Drude	Cr	IT	12375 (T), s.n. (HSHU)
22	<i>B. persicum</i> (Boiss.) B. Fedtsch.	Cr	IT	12311 (T), s.n. (HSHU)
23	<i>Bupleurum leucocladum</i> Boiss.	He	IT	12496 (T), s.n. (HSHU)
24	<i>Bupleurum gerardii</i> All.	Th	IT, M	12363 (T), s.n. (HSHU)
25	<i>Chaerophyllum macropodium</i> Boiss.	He	IT	12312 (T), s.n. (HSHU)
26	<i>Dorema aucheri</i> Boiss.*	He	IT	12671 (T), s.n. (HSHU)
27	<i>Ducrosia anethifolia</i> (DC.) Boiss.	Th	IT	12469 & 12696 (T), s.n. (HSHU)
28	<i>Echinophora platyloba</i> DC.*	He	IT	12613 & 12697 (T), s.n. (HSHU)
29	<i>Elaeosticta nodosa</i> Boiss.*	Cr	IT	12478 (T), s.n. (HSHU)
30	<i>Eryngium billardieri</i> F. Delaroché	He	IT	12528 & 12698 (T), s.n. (HSHU)
31	<i>Ferula ovina</i> (Boiss.) Boiss.	He	IT	12505 (T), s.n. (HSHU)
32	<i>Johrenia paucijuga</i> (DC.) Bornm.	Cr	IT, ES	12699 & 12380 (T), s.n. (HSHU)
33	<i>Malabaila porphyrodiscus</i> Stapf & Wettst.*	He	IT	12362 & 12700 (T), s.n. (HSHU)
34	<i>Prangos ferulacea</i> (L.) Lindl.	He	IT	12408 & 12701 (T), s.n. (HSHU)
35	<i>Scandix iberica</i> M. Bieb.	Th	IT	12186 (T), s.n. (HSHU)
36	<i>S. stellata</i> Banks. & Soland.	Th	IT, M	12487 (T), s.n. (HSHU)
37	<i>Smyrniolobos cordifolium</i> Boiss.	Cr	IT	12417 (T), 12702 (T), s.n. (HSHU)
38	<i>Thecocarpus meifolius</i> Boiss.*	Cr	IT	12443 (T), s.n. (HSHU)
39	<i>Torilis leptophylla</i> (L.) Reichen	Th	IT, M, ES	12190 (T), s.n. (HSHU)
40	<i>Turgenia latifolia</i> (L.) Hoffm.	Th	IT, M, ES	12247 (T), s.n. (HSHU)
41	<i>Zosima absinthifolia</i> (Vent) Link.	Th	IT	12286 (T), s.n. (HSHU)
Apodanthaceae				
42	<i>Pilosyles haussknechtii</i> Boiss.	Ch	IT	12444 (T), s.n. (HSHU)
Araceae				
43	<i>Arum conophalloides</i> Kotschy ex Schott.	Cr	IT	12361 & 12805 (T), s.n. (HSHU)
44	<i>Bellevalia saviczii</i> (Lindl.) Kunth.	Cr	M, SS	12069 (T), s.n. (HSHU)
45	<i>Muscari neglectum</i> Guss.	Cr	IT, ES, M	12103 (T), s.n. (HSHU)
46	<i>Ornithogalum cuspidatum</i> Bertol.	Cr	IT	12150 (T), s.n. (HSHU)
47	<i>O. narbonense</i> L.	Cr	IT, M	12104 (T), s.n. (HSHU)
Aspleniaceae				
48	<i>Asplenium ceterach</i> L.	Cr	PL	12094 (T), s.n. (HSHU)
Asteraceae				
49	<i>Achillea wilhelmsii</i> C. Koch.	He	IT, ES, SS	12236 (T), s.n. (HSHU)
50	<i>Aegopordon berardioides</i> Boiss.	He	IT	12314 (T), s.n. (HSHU)
51	<i>Anthemis austroiranica</i> Rech.f., Aellen & Esfand.*	Th	IT	12226 (T), s.n. (HSHU)
52	<i>A. odontostephana</i> Boiss.	Th	IT, SS	12128 (T), s.n. (HSHU)
53	<i>Atractylis cancellata</i> L.	Th	IT, ES, SS	12830 (T), s.n. (HSHU)
54	<i>Bidens tripartita</i> L.	Th	PL	12557 (T), s.n. (HSHU)
55	<i>Calendula persica</i> C.A. Mey.	Th	IT, SS	12502 (T), s.n. (HSHU)
56	<i>Carduus pycnocephalus</i> L.	Th	ES, SS	12141 (T), s.n. (HSHU)
57	<i>Carthamus lanatus</i> L.	Th	IT, ES	12487 (T), s.n. (HSHU)
58	<i>C. oxyacantha</i> M. Bieb.	Cr	IT, ES, M	12525 (T), s.n. (HSHU)
59	<i>Centaurea aucheri</i> (DC.) Wagenitz subsp. <i>aucheri</i> *	Th	IT	12372 (T), s.n. (HSHU)
60	<i>C. benedicta</i> (L.) L.	Th	IT	s.n. (D)

Table 3 (contd)

61	<i>Centaurea bruguierana</i> (DC.) Hand.-Mazz. subsp. <i>belangerana</i>	Th	IT, SS	12452 (T), s.n. (HSHU)
62	<i>C. depressa</i> M. Bieb.	He	IT	12310 (T), s.n. (HSHU)
63	<i>C. iberica</i> Trev. ex Spreng.	Ch	IT, ES	12468 (T), s.n. (HSHU)
64	<i>C. intricata</i> Boiss. subsp. <i>intricata</i>	Ch	IT	12486 (T), s.n. (HSHU)
65	<i>C. solstitialis</i> L. subsp. <i>solstitialis</i>	Th	IT	12337 (T), s.n. (HSHU)
66	<i>C. virgata</i> Lam.	Ch	IT, ES, M	12235 (T), s.n. (HSHU)
67	<i>Cephalorrhynchus microcephalus</i> (DC.) Schchian.	Cr	IT	12678 (T), s.n. (HSHU)
68	<i>Chardinia orientalis</i> (L.) O. Kunt.	Th	IT	12120 (T), s.n. (HSHU)
69	<i>Cichorium intybus</i> L.	Th	IT	12509 (T), s.n. (HSHU)
70	<i>Cirsium arvense</i> (L.) Podl. var. <i>arvense</i>	Th	PL	12609 (T), s.n. (HSHU)
71	<i>C. congestatum</i> Fisch. & C.A. Mey.	He	IT	12529 (T), s.n. (HSHU)
72	<i>C. spectabile</i> DC.*	He	IT	12413 (T), s.n. (HSHU)
73	<i>Conyza bonariensis</i> (L.) Cronquist	Th	COS	12578 (T), s.n. (HSHU)
74	<i>C. canadensis</i> (L.) Cronquist	Th	COS	12592 (T), s.n. (HSHU)
75	<i>Conyzanthus squamatus</i> (Sperng.) Tamasch.	Th	PL	12637 (T), s.n. (HSHU)
76	<i>Cousinia bornmulleri</i> C. Winkl.*	He	IT	12683 (T), s.n. (HSHU)
77	<i>C. cylindracea</i> Boiss.*	He	IT	12493 (T), s.n. (HSHU)
78	<i>C. gracilis</i> Boiss.*	He	IT	12683 (T), s.n. (HSHU)
79	<i>Crepis kotschyana</i> (Boiss.) Boiss.	Th	IT	12302 (T), s.n. (HSHU)
80	<i>C. sancta</i> (L.) Babcock. subsp. <i>sancta</i>	Th	IT	12234 (T), s.n. (HSHU)
81	<i>Crupina crupinastrum</i> (Moris.) Vis.	He	IT, M	12231 (T), s.n. (HSHU)
82	<i>Echinops farsicus</i> Rech.*	He	IT	12830 (T), s.n. (HSHU)
83	<i>E. macrophyllus</i> Boiss. & Hausskn.*	He	IT	12834 (T), s.n. (HSHU)
84	<i>E. persepoltanus</i> Rech.*	He	IT	12832 (T), s.n. (HSHU)
85	<i>E. ritrodes</i> Bunge*	He	IT	12831 (T), s.n. (HSHU)
86	<i>Filago eriocephala</i> Guss.	Th	IT, M	12188 (T), s.n. (HSHU)
87	<i>Francoeuria undulata</i> (L.) Lack	He	IT	12640 (T), s.n. (HSHU)
88	<i>Garhadiolus angulosus</i> Jaub. & Spach	Th	IT, SS	12119 (T), s.n. (HSHU)
89	<i>Gundelia tournefortii</i> L.	He	IT	12355 (T), s.n. (HSHU)
90	<i>Helichrysum glanduliferum</i> Sch. Bip.	He	IT	12376 (T), s.n. (HSHU)
91	<i>H. leucocephalum</i> Boiss.*	He	IT	12656 (T), s.n. (HSHU)
92	<i>H. oligocephalum</i> DC.	He	IT	12662 (T), s.n. (HSHU)
93	<i>Helminthotheca echioides</i> (L.) Holub.	Th	IT, ES, SS	12584 (T), s.n. (HSHU)
94	<i>Inula britannica</i> L.	He	PL	12546 (T), s.n. (HSHU)
95	<i>Lactuca serriola</i> L.	He	IT, ES, M	12611 (T), s.n. (HSHU)
96	<i>Matricaria aurea</i> (Loefl.) Sch. Bip.	Th	IT, SS, ES	12105 (T), s.n. (HSHU)
97	<i>Onopordum leptolepis</i> DC.	He	IT, SS	12449 (T), s.n. (HSHU)
98	<i>Outreya carduiformis</i> Jaub. & Spach	He	IT	12402 (T), s.n. (HSHU)
99	<i>Pentanema multicaule</i> Boiss.*	He	IT	12492 (T), s.n. (HSHU)
100	<i>Phagnalon nitidum</i> Fres.	Ch	IT	12316 (T), s.n. (HSHU)
101	<i>Picnomon acarna</i> (L.) Moench.	Th	IT, M	12524 (T), s.n. (HSHU)
102	<i>Picris strigosa</i> M. Bieb. subsp. <i>strigosa</i> *	He	IT	12524 (T), s.n. (HSHU)
103	<i>Scariola orientalis</i> (Boiss.) Soják. subsp. <i>orientalis</i>	Ch	IT	12566 (T), s.n. (HSHU)
104	<i>Scorzonera calyculata</i> Boiss.	Cr	IT	12825 (T), s.n. (HSHU)
105	<i>S. cana</i> (C.A. Mey.) O. Hoffm	Cr	IT	12395 (T), s.n. (HSHU)
106	<i>S. luristanica</i> Rech.f.	Cr	IT	12328 (T), s.n. (HSHU)
107	<i>S. mucida</i> Rech.f.*	Cr	IT	12143 (T), s.n. (HSHU)
108	<i>S. pseudolanata</i> Grossh.	Cr	IT	12207 (T), s.n. (HSHU)
109	<i>S. ramosissima</i> DC.	Cr	IT	12694 (T), s.n. (HSHU)
110	<i>S. stenocephala</i> Boiss.	Cr	IT	12826 (T), s.n. (HSHU)
111	<i>Senecio glaucus</i> L.	Th	IT, ES, M, SS	12365 (T), s.n. (HSHU)
112	<i>Steptorrhynchus persicus</i> (Boiss.) & B. Fedtsch	Th	IT	12300 (T), s.n. (HSHU)
113	<i>S. tuberosus</i> (Boiss.) O. Fedtsch & B. Fedtsch.	Th	IT	12331 (T), s.n. (HSHU)
114	<i>Tanacetum persicum</i> (Boiss.) Mozaff.	Cr	IT	12397 (T), s.n. (HSHU)
115	<i>T. polycephalum</i> Sch. Bip. subsp. <i>polycephalum</i>	He	IT	12378 (T), 12704 (T), s.n. (HSHU)
116	<i>T. syriacum</i> Boiss.	Th	IT	12112 (T), s.n. (HSHU)
117	<i>Thevenotia persica</i> DC.	Th	IT	12538 (T), s.n. (HSHU)
118	<i>T. scabra</i> Boiss.	Th	IT	12824 (T), s.n. (HSHU)
119	<i>Tragopogon collinus</i> DC.	He	IT, ES	12126 (T), s.n. (HSHU)
120	<i>Urospermum picroides</i> (L.) Desf.	Th	IT, ES	12121 (T), s.n. (HSHU)
121	<i>Varthemia persica</i> DC.	Ch	IT	12540 (T), s.n. (HSHU)

Table 3 (contd)

122	<i>Xanthium spinosum</i> L.	Th	COS	12532 (T), s.n. (HSHU)
123	<i>X. strumarium</i> L.	Th	IT, ES	12618 & 12619 (T), s.n. (HSHU)
124	<i>Xeranthemum longipapposum</i> Fisch. & C.A. Mey.	Th	IT	12488 (T), s.n. (HSHU)
125	<i>Zoegea crinita</i> Boiss.	Th	IT	12298 & 12490 (T), s.n. (HSHU)
126	<i>Bongardia chrysogonum</i> (L.) Boiss.	Cr	IT	12111 (T), s.n. (HSHU)
127	<i>Leontice armeniaca</i> Boivin.	Cr	PL	12123 (T), s.n. (HSHU)
Biebersteiniaceae				
128	<i>Biebersteinia multifida</i> DC.	Cr	IT	12217 (T), s.n. (HSHU)
Boraginaceae				
129	<i>Alkanna frigida</i> Boiss.	He	IT	12233 (T), s.n. (HSHU)
130	<i>Anchusa aegyptiaca</i> (L.) DC.	Th	IT, SS	12325 (T), s.n. (HSHU)
131	<i>A. italica</i> Retz.	Th	IT, SS	12411 (T), s.n. (HSHU)
132	<i>Arnebia decumbens</i> (Vent.) Coss. & Kral.	Th	IT, SS	12259 (T), s.n. (HSHU)
133	<i>Asperugo procumbens</i> L.	Th	IT, ES, M	12137 (T), s.n. (HSHU)
134	<i>Heliotropium bovei</i> Boiss.	Th	IT	12573 (T), s.n. (HSHU)
135	<i>H. europaeum</i> L.	Th	IT, M, ES	12541 (T), s.n. (HSHU)
136	<i>Lappula microcarpa</i> (Ledeb.) Gurke	Th	IT	12101 (T), s.n. (HSHU)
137	<i>Moltkia coerulea</i> (Willd) Lehm.	He	IT	s.n. (D)
138	<i>Nonea suchtelenioides</i> Riedl.*	Th	IT	12148 (T), s.n. (HSHU)
139	<i>Onosma bulbotrichum</i> DC.	He	IT	12394 (T), s.n. (HSHU)
140	<i>O. chlorotrichum</i> Boiss. & Noe	He	IT	12357 (T), s.n. (HSHU)
141	<i>O. rostellatum</i> Lehm.	He	IT, SS	12313 (T), s.n. (HSHU)
142	<i>Paracaryum modestum</i> Boiss. & Hausskn. *	Th	IT	12299 (T), s.n. (HSHU)
143	<i>P. persicum</i> (Boiss.) Boiss.*	He	IT	12262 (T), s.n. (HSHU)
144	<i>Rindera lanata</i> (Lam.) Bunge	He	IT, ES	12404 (T), s.n. (HSHU)
145	<i>Rochelia persica</i> Bunge ex Boiss.	Th	IT	12274 (T), s.n. (HSHU)
146	<i>Solananthus stamineus</i> (Desf.) Wettst.	He	IT	12675 (T), s.n. (HSHU)
Brassicaceae				
147	<i>Aethionema elongatum</i> Boiss.	He	IT	12431 (T), s.n. (HSHU)
148	<i>Alyssum desertorum</i> Stapf. var. <i>desertorum</i>	Th	IT	12086 (T), s.n. (HSHU)
149	<i>A. linifolium</i> Steph. ex. Willd.	Th	COS	12088 (T), s.n. (HSHU)
150	<i>Arabis nova</i> Vill.	Th	IT, ES, M	12139 (T), s.n. (HSHU)
151	<i>Biscutella didyma</i> L.	Th	IT	12113 (T), s.n. (HSHU)
151	<i>Brossardia papyracea</i> Boiss.	He	IT	12219 (T), s.n. (HSHU)
152	<i>Capsella bursa-pastoris</i> (L.) Medik.	Th	IT	12661 (T), s.n. (HSHU)
153	<i>Cardaria draba</i> (L.) Desv.	He	IT, ES	12202 (T), s.n. (HSHU)
154	<i>Conringia perfoliata</i> (C.A. Mey.) Busch. in Komar	Th	IT	12350 (T), s.n. (HSHU)
155	<i>Descurainia sophia</i> (L.) Webb. & Berth.	Th	IT, ES, M	12203 (T), s.n. (HSHU)
156	<i>Erophila minima</i> C.A. Mey.	Th	IT	12089 (T), s.n. (HSHU)
157	<i>Eruca sativa</i> Miller	Th	IT, ES, M	12607 (T), s.n. (HSHU)
158	<i>Erysimum persepopolitanum</i> Boiss.*	Th	IT	12297 (T), s.n. (HSHU)
159	<i>E. repandum</i> L.	Th	IT	12115 (T), s.n. (HSHU)
160	<i>Fibigia macrocarpa</i> (Boiss.) Boiss.	He	IT	12168 (T), s.n. (HSHU)
161	<i>Goldbachia laevigata</i> (M. Bieb.) DC.	Th	IT, M	12178 (T), s.n. (HSHU)
162	<i>Hesperis persica</i> Boiss.	Th	IT	12654 (T), s.n. (HSHU)
163	<i>Isatis raphanifolia</i> Boiss.	Th	IT	12087 (T), s.n. (HSHU)
164	<i>Lepidium latifolium</i> L.	He	IT, ES, M	12567 (T), s.n. (HSHU)
165	<i>L. persicum</i> Boiss. subsp. <i>persicum</i>	He	IT	12360 (T), s.n. (HSHU)
166	<i>Lepidium perfoliatum</i> L.	He	IT, ES, M	s.n. (D)
167	<i>Microthlaspi perfoliatum</i> (L.) F.K. Mey.	Th	PL	12080 (T), s.n. (HSHU)
168	<i>Neotorularia torulosa</i> (Desfontaines) Hedge & J. Léonard	Th	IT	12175 (T), s.n. (HSHU)
169	<i>Peltaria angustifolia</i> DC.	Th	IT	12149 (T), s.n. (HSHU)
170	<i>Rapistrum rugosum</i> (L.) All.	Th	IT, ES, M	12586 (T), s.n. (HSHU)
171	<i>Sameraria stylophora</i> (Jaub. & Spach) Boiss.	Th	IT	12117 (T), s.n. (HSHU)
172	<i>Sinapis arvensis</i> L.	Th	IT, ES, M	12201 (T), s.n. (HSHU)
Campanulaceae				
173	<i>Campanula incanescens</i> Boiss.	He	IT	12184 (T), s.n. (HSHU)
174	<i>C. perspolitana</i> Ky. in Boiss.*	Th	IT	12412 (T), s.n. (HSHU)
Cannabaceae				
175	<i>Celtis caucasica</i> Willd.	Ph	IT	12100 (T), s.n. (HSHU)
176	<i>C. tournefortii</i> Lam.	Ph	IT, ES	12677 (T), s.n. (HSHU)

Table 3 (contd)

Capparaceae				
177	<i>Capparis parvifolia</i> L.	Ph	IT	12459 (T), s.n. (HSHU)
178	<i>C. spinosa</i> L.	Ph	PL	12534 (T), s.n. (HSHU)
Caprifoliaceae				
179	<i>Lonicera nummulariifolia</i> Jaub. & Spach	Ph	IT	12266 (T), s.n. (HSHU)
180	<i>Cephalaria dichaeophora</i> Boiss.	Th	IT	12477 (T), s.n. (HSHU)
181	<i>C. syriaca</i> (L.) Roemer & Schultes	Th	IT	12398 (T), s.n. (HSHU)
182	<i>Morina persica</i> L.	He	IT	12424 (T), s.n. (HSHU)
183	<i>Pterocephalus canus</i> Coulter ex DC.	He	IT	12655 (T), s.n. (HSHU)
184	<i>P. plumosus</i> (L.) Coulter	Th	IT, ES	12460 (T), s.n. (HSHU)
185	<i>Scabiosa flavida</i> Boiss.	Th	IT	12461 (T), s.n. (HSHU)
186	<i>S. persica</i> Boiss.	Th	IT	12284 (T), s.n. (HSHU)
187	<i>Valerianella oxyrrhyncha</i> Fisch. & C.A. Mey.	Th	IT	12116 (T), s.n. (HSHU)
Caryophyllaceae				
188	<i>Acanthophyllum bracteatum</i> Boiss.	Ch	IT	12512 (T), s.n. (HSHU)
189	<i>A. microcephalum</i> Boiss.	Th	IT	12513 (T), s.n. (HSHU)
190	<i>Bufonia oliveriana</i> Ser.	Ch	IT	12364 (T), s.n. (HSHU)
191	<i>Dianthus crinitus</i> SM.	He	IT	12481 (T), s.n. (HSHU)
192	<i>Gypsophila pallida</i> Stapf	Th	IT	12446 (T), s.n. (HSHU)
193	<i>G. persica</i> Barkoudah*	Th	IT	12218 (T), s.n. (HSHU)
194	<i>Holosteum glutinosum</i> (M. Bieb.) Fisch. & C.A. Mey.	Th	IT	12237 (T), s.n. (HSHU)
195	<i>Lepyrodiclis stellarioides</i> Schrenk ex Fish. & C.A. Mey.	Th	IT	12327 (T), s.n. (HSHU)
196	<i>Mesostemma kotschyanum</i> (Fenzl in Boiss.) Vved. subsp. <i>kotschyanum</i>	Ch	IT, M	12083 (T), s.n. (HSHU)
197	<i>Minuartia hybrida</i> (Vill.) Schischk. subsp. <i>hybrida</i>	Th	IT, M	12285 (T), s.n. (HSHU)
198	<i>Silene coniflora</i> Nees. ex Otth.	Ch	IT, M	12228 (T), s.n. (HSHU)
199	<i>S. conoidea</i> L.	Th	IT, M	12406 (T), s.n. (HSHU)
200	<i>S. eriocalycina</i> Boiss.	He	IT	12383 (T), s.n. (HSHU)
201	<i>S. gynodioica</i> Ghazanfar subsp. <i>peduncularis</i> Melzh.	He	IT	12187 (T), s.n. (HSHU)
202	<i>S. lagenocalyx</i> Fenzl.	Th	IT	12356 (T), s.n. (HSHU)
203	<i>S. persepolitana</i> Melzh.*	He	IT	12326 (T), s.n. (HSHU)
204	<i>S. spergulifolia</i> (Willd.) M. Bieb.	Ch	IT	12651 (T), s.n. (HSHU)
205	<i>Telephium eriglaucum</i> Williams*	He	IT	s.n. (D), 86096 TARI
206	<i>T. imperati</i> L. subsp. <i>orientale</i> (Boiss.) Nyman	He	IT	12229 (T), s.n. (HSHU)
207	<i>Vaccaria oxyodonta</i> Boiss.	Th	IT	12281 (T), s.n. (HSHU)
208	<i>Velezia rigida</i> L.	Th	IT, M	12513 (T), s.n. (HSHU)
Chenopodiaceae				
209	<i>Atriplex laevis</i> Ledeb.	Th	IT	12340 (T), s.n. (HSHU)
210	<i>A. leucoclada</i> Boiss.	He	IT, SS	12583 (T), s.n. (HSHU)
211	<i>Chenopodium album</i> L. subsp. <i>album</i>	Th	COS	12338 (T), s.n. (HSHU)
212	<i>Ch. murale</i> L.	Th	COS	12682 (T), s.n. (HSHU)
213	<i>C. vulvaria</i> L.	Th	IT	12599 (T), s.n. (HSHU)
214	<i>Noaea mucronata</i> (Forssk.) Asch. & Schweinf. subsp. <i>mucronata</i>	Ch	IT	12672 (T), s.n. (HSHU)
215	<i>Salsola imbricata</i> Forssk.	Th	IT	12521 (T), s.n. (HSHU)
Cleomaceae				
216	<i>Cleome iberica</i> DC.	Th	IT, ES	12494 (T), s.n. (HSHU)
217	<i>C. noeana</i> Boiss.	Th	IT, ES	12666 (T), s.n. (HSHU)
Colchicaceae				
218	<i>Colchicum persicum</i> Baker.	Cr	IT	12667 (T), s.n. (HSHU)
Convolvulaceae				
219	<i>Convolvulus acanthocladus</i> Boiss.	Ch	IT, SS	12382 (T), s.n. (HSHU)
220	<i>C. arvensis</i> L.	He	COS	12658 (T), s.n. (HSHU)
221	<i>C. leiocalycinus</i> Boiss.	Ch	IT, SS	12537 & 12727 (T), s.n. (HSHU)
222	<i>C. pilosellifolius</i> Desv.	He	IT, SS	12279 (T), s.n. (HSHU)
223	<i>Cuscuta australis</i> R.Br.	Th	IT	12491 (T), s.n. (HSHU)
224	<i>C. campestris</i> Yuncker	Th	COS	12600 (T), s.n. (HSHU)
Crassulaceae				
225	<i>Rosularia sempervivum</i> (M. Bieb.) Berger	He	IT	12409 (T), s.n. (HSHU)
226	<i>Sedum hispanicum</i> L.	Th	IT	12252 (T), s.n. (HSHU)

Table 3 (contd)

227	<i>Umbilicus intermedius</i> Boiss.	He	IT	12251 (T), s.n. (HSHU)
228	<i>U. tropaeolifolius</i> Boiss.	He	IT	12674 (T), s.n. (HSHU)
Cucurbitaceae				
229	<i>Bryonia multiflora</i> Boiss. & Heldr.	He	IT	12273 (T), s.n. (HSHU)
Cyperaceae				
230	<i>Carex pachystylis</i> J. Gay	Cr	IT, SS	12082 (T), s.n. (HSHU)
231	<i>Cyperus fuscus</i> L.	Th	PL	12559 (T), s.n. (HSHU)
232	<i>C. glaber</i> L.	Th	IT, M	12605 (T), s.n. (HSHU)
233	<i>C. longus</i> L.	He	IT, M	12543 (T), s.n. (HSHU)
234	<i>C. odoratus</i> L.	He	IT	12634 (T), s.n. (HSHU)
	subsp. <i>transcaucasicus</i> (Kük.) Kukkonen			
235	<i>C. rotundus</i> L.	He	COS	12555 (T), s.n. (HSHU)
236	<i>Fimbristylis bisumbellata</i> (Forssk.) Bubani.	He	COS	12632 (T), s.n. (HSHU)
237	<i>Pycneus flavidus</i> (Retz.) T. Koyama	Th	IT, ES, SS	12633 (T), s.n. (HSHU)
238	<i>Schoenoplectus littoralis</i> (Schrud.) Palla.	Th	COS	12542 (T), s.n. (HSHU)
	subsp. <i>thermalis</i> (Trabut) S.S. Hooper in Saldanha & Nicolson			
239	<i>Scirpoides holoschoenus</i> (L.) Soják.	He	IT, M	12507 (T), s.n. (HSHU)
	subsp. <i>australis</i> (L.) Soják			
Elaeagnaceae				
240	<i>Elaeagnus angustifolia</i> L.	Ph	IT, M	12663 (T), s.n. (HSHU)
Ephedraceae				
241	<i>Ephedra foliata</i> Boiss. ex C.A. Mey.	Ph	IT, SS	12531 (T), s.n. (HSHU)
242	<i>E. pachyclada</i> Boiss.	Ch	IT	12514 (T), s.n. (HSHU)
Equisetaceae				
243	<i>Equisetum ramosissimum</i> Desf.	Cr	PL	12627 (T), s.n. (HSHU)
Euphorbiaceae				
244	<i>Chrozophora hierosolymitana</i> Spreng.	Th	IT, SS	12528 (T), s.n. (HSHU)
245	<i>Euphorbia chamaesyce</i> L.	Th	IT, M, SS	12590 (T), s.n. (HSHU)
246	<i>E. cheiradenia</i> Boiss. & Hohen.	He	IT	12425 (T), s.n. (HSHU)
247	<i>E. densa</i> Schrenk	Th	IT	12620 (T), s.n. (HSHU)
248	<i>E. helioscopia</i> L.	Th	IT	12422 (T), s.n. (HSHU)
249	<i>E. microsciadia</i> Boiss.	He	IT	12345 (T), s.n. (HSHU)
250	<i>E. petiolata</i> Banks & Soland.	Th	IT, M	12476 (T), s.n. (HSHU)
251	<i>E. szovitsii</i> Fisch. & C.A. Mey.	Th	IT, ES	12295 (T), s.n. (HSHU)
Fabaceae				
252	<i>Alhagi pseudalhagi</i> (M.Bieb.) Desv.	He	IT	12385 (T), s.n. (HSHU)
253	<i>Astragalus adscendens</i> Boiss. & Hausskn.	Ph	IT	s.n. (D)
254	<i>A. campylorhynchus</i> Fisch. & C.A. Mey.	Ch	IT	12673 (T), s.n. (HSHU)
255	<i>A. cephalanthus</i> DC.*	Ch	IT	12386 (T), s.n. (HSHU)
256	<i>A. curviflorus</i> Boiss.*	Ch	IT	12464 (T), s.n. (HSHU)
257	<i>A. dactylocarpus</i> Boiss.	Ch	IT, SS	12064 (T), s.n. (HSHU)
258	<i>A. echidna</i> Bunge	Ch	IT	12370 (T), s.n. (HSHU)
259	<i>A. effusus</i> Bunge	He	IT	12346 (T), s.n. (HSHU)
260	<i>A. estahbanensis</i> Maassoumi & Podlech*	He	IT	12142 (T), s.n. (HSHU)
261	<i>A. fasciculifolius</i> Boiss.	Ch	IT	12679 (T), s.n. (HSHU)
262	<i>A. gossypinus</i> Fisch.	Ch	IT	12511 (T), s.n. (HSHU)
263	<i>A. griseus</i> Boiss.*	He	IT	12368 (T), s.n. (HSHU)
264	<i>A. ibicinus</i> Boiss. & Hausskn.*	He	IT	12371 (T), s.n. (HSHU)
265	<i>A. ledinghamii</i> Barneby*	He	IT	12400 (T), s.n. (HSHU)
266	<i>A. meridionalis</i> Bunge	He	IT	12366 (T), s.n. (HSHU)
267	<i>A. myriacanthus</i> Boiss.*	Ch	IT	12536 (T), s.n. (HSHU)
268	<i>A. ovinus</i> Boiss.	He	IT	12157 (T), s.n. (HSHU)
269	<i>A. penetratus</i> Maassoumi*	He	IT	12665 (T), s.n. (HSHU)
270	<i>A. pseudoibicinus</i> Maassoumi & Podlech	He	IT	12154 (T), s.n. (HSHU)
	subsp. <i>pseudoibicinus</i> *			
271	<i>A. ptychophyllus</i> Boiss.*	Ch	IT	12369 (T), s.n. (HSHU)
272	<i>A. rhodosemius</i> Boiss. & Hausskn.*	Ch	IT	12438 (T), s.n. (HSHU)
273	<i>A. susianus</i> Boiss.*	Ch	IT	12530 (T), s.n. (HSHU)
274	<i>Ebenus stellata</i> Boiss.	Ch	IT	12283 (T), s.n. (HSHU)
275	<i>Glycyrrhiza glabra</i> L.	He	IT, M	12410 (T), s.n. (HSHU)
276	<i>Halimodendron halodendron</i> (Pall.) Voss.	Ph	IT, ES	12318 (T), s.n. (HSHU)
277	<i>Lathyrus aphaca</i> L.	Th	IT, M, ES	12255 (T), s.n. (HSHU)
278	<i>L. inconspicuus</i> L.	Th	IT, M	12256 (T), s.n. (HSHU)
279	<i>Lens cyanea</i> (Boiss. & Hohen.) Alef.	Th	IT	12216 (T), s.n. (HSHU)
280	<i>Medicago coronata</i> (L.) Bartalin	Th	IT, M	12070 (T), s.n. (HSHU)
281	<i>M. radiata</i> L.	Th	IT, M	12644 (T), s.n. (HSHU)

Table 3 (contd)

282	<i>M. lupulina</i> L.	He	COS	12686 (T), s.n. (HSHU)
283	<i>M. sativa</i> L.	He	IT	12341 (T), s.n. (HSHU)
284	<i>Melilotus albus</i> Medicus	He	PL	12568 (T), s.n. (HSHU)
285	<i>N. indicus</i> (L.) All.	Th	IT	12249 (T), s.n. (HSHU)
286	<i>Onobrychis oxyptera</i> Boiss.*	He	IT	12367 (T), s.n. (HSHU)
287	<i>Ononis spinosa</i> L.	He	IT	12343 (T), s.n. (HSHU)
288	<i>Pisum sativum</i> L. subsp. <i>Sativum</i>	Th	IT, M	12261 (T), s.n. (HSHU)
289	<i>Prosopis farcta</i> (Sol. ex Russell) Macbride.	Ch	IT, SS, M	12506 (T), s.n. (HSHU)
290	<i>Trifolium fragiferum</i> L. subsp. <i>fragiferum</i>	He	IT, ES, M	12550 (T), s.n. (HSHU)
291	<i>T. resupinatum</i> L.	He	IT, ES, M	12339 (T), s.n. (HSHU)
292	<i>Vicia assyriaca</i> Boiss.	Th	IT, M	12576 (T), s.n. (HSHU)
293	<i>V. ervilia</i> (L.) Wild.	Th	IT	12227 (T), s.n. (HSHU)
294	<i>V. michauxii</i> Spreng.	Th	IT	12171 (T), s.n. (HSHU)
295	<i>V. monantha</i> Boiss.	Th	IT, M	12243 (T), s.n. (HSHU)
296	<i>V. narbonensis</i> L.	Th	IT, M	12244 (T), s.n. (HSHU)
297	<i>V. sativa</i> L.	Th	COS	12245 (T), 12268 (T), s.n. (HSHU)
298	<i>V. villosa</i> Roth.	He	IT, ES, M	12248 (T), s.n. (HSHU)
Fagaceae				
299	<i>Quercus brantii</i> Lindl. var. <i>persica</i> (Jaub. & Spach) Zohary*	Ph	IT	12077 (T), s.n. (HSHU)
Geraniaceae				
300	<i>Erodium gruinum</i> (L.) L'Her. ex Aiton	Th	IT, SS	12271 (T), s.n. (HSHU)
301	<i>E. cicutarium</i> (L.) L'Her. ex Aiton	Th	IT, ES, M	12073 (T), s.n. (HSHU)
302	<i>E. neuradifolium</i> Delile	Th	IT, SS	12071 (T), s.n. (HSHU)
303	<i>Geranium rotundifolium</i> L.	Th	IT, ES, M	12140 (T), s.n. (HSHU)
304	<i>G. stepporum</i> Davis.	Th	IT, ES, M	12182 (T), s.n. (HSHU)
Haloragaceae				
305	<i>Myriophyllum spicatum</i> L.	Cr	PL	12549 (T), s.n. (HSHU)
Hypericaceae				
306	<i>Hypericum hirtellum</i> (Spach) Boiss.	He	IT	12519 (T), s.n. (HSHU)
307	<i>H. scabrum</i> L.	He	IT	12315 (T), s.n. (HSHU)
Iridaceae				
308	<i>Gynandris sisyrinchium</i> (L.) Parl.	Cr	IT, ES	12052 (T), s.n. (HSHU)
309	<i>Iris hymenospatha</i> Mathew & Wendelbo subsp. <i>hymenospatha</i> *	Cr	IT	12051 (T), s.n. (HSHU)
Ixioliriaceae				
310	<i>Ixiolirion tataricum</i> (Pall.) Herb.	Cr	IT	12239 (T), s.n. (HSHU)
Juncaceae				
311	<i>Juncus articulatus</i> L.	He	COS	12420 (T), s.n. (HSHU)
Lamiaceae				
312	<i>Ajuga austro-iranica</i> Rech.f.	He	IT	12215 (T), s.n. (HSHU)
313	<i>A. chamaecistus</i> Ging. ex Benth. subsp. <i>euphrasioides</i> (Boiss.) Rech.f.*	Ch	IT	12320 (T), s.n. (HSHU)
314	<i>Ballota aucheri</i> Boiss.	He	IT	12321 (T), s.n. (HSHU)
315	<i>Eremostachys adenantha</i> Jaub. & Spach*	He	IT	12342 (T), s.n. (HSHU)
316	<i>E. macrophylla</i> Monter & Auch.	He	IT	12379 (T), s.n. (HSHU)
317	<i>Lallemantia iberica</i> (Stev.) Fisch. & C.A. Mey.	Th	IT, M	12330 (T), s.n. (HSHU)
318	<i>Lamium amplexicaule</i> L.	Th	COS	12427 (T), s.n. (HSHU)
319	<i>Marrubium vulgare</i> L.	He	PL	12272 (T), s.n. (HSHU)
320	<i>Mentha longifolia</i> (L.) Hudson	He	PL	12579 (T), s.n. (HSHU)
321	<i>Micromeria persica</i> Boiss.	He	IT	12430 (T), s.n. (HSHU)
322	<i>Nepeta depauperata</i> Benth. in DC.*	He	IT	12688 (T), s.n. (HSHU)
323	<i>N. glomerulosa</i> Boiss.*	Ch	IT	12280 (T), s.n. (HSHU)
324	<i>N. kotschyi</i> Boiss.*	He	IT	12232 (T), s.n. (HSHU)
325	<i>N. oxyodonta</i> Boiss.*	He	IT	12416 (T), s.n. (HSHU)
326	<i>N. pungens</i> (Bunge) Benth.	Th	IT	12241 (T), s.n. (HSHU)
327	<i>N. schiraziana</i> Boiss.*	Th	IT	12276 (T), s.n. (HSHU)
328	<i>Phlomis aucheri</i> Boiss.*	He	IT	12473 (T), s.n. (HSHU)
329	<i>P. elliptica</i> Benth.*	He	IT	12426 (T), s.n. (HSHU)
330	<i>P. olivieri</i> Benth.	He	IT	12324 (T), s.n. (HSHU)
331	<i>P. persica</i> Boiss.*	He	IT	12471 (T), s.n. (HSHU)
332	<i>Salvia hydrangea</i> DC. ex Ben	He	IT	12317 (T), s.n. (HSHU)
333	<i>S. palaestina</i> Benth.	He	IT, SS	12258 (T), s.n. (HSHU)
334	<i>S. reuterana</i> Boiss.	He	IT	12160 (T), s.n. (HSHU)
335	<i>S. syraica</i> L.	He	IT	12079 (T), s.n. (HSHU)

Table 3 (contd)

336	<i>Satureja bachtiarica</i> Bunge*	He	IT	12652 (T), s.n. (HSHU)
337	<i>Scutellaria tomentosa</i> Bertol.	He	IT	12319 (T), s.n. (HSHU)
338	<i>Stachys benthamiana</i> Boiss.*	He	IT	12415 (T), s.n. (HSHU)
339	<i>S. inflata</i> Benth.	He	IT	12322 (T), s.n. (HSHU)
340	<i>S. setifera</i> C.A. Mey.	He	IT	12497 (T), s.n. (HSHU)
341	<i>Teucrium orientale</i> L. subsp. <i>taylori</i> (Bioss.) Rech.f.	He	IT	12242 (T), s.n. (HSHU)
342	<i>T. polium</i> L.	He	IT	12516 (T), s.n. (HSHU)
343	<i>Vitex agnus-castus</i> L. var. <i>pseudo-negundo</i> (Hausskn.) Hand.-Maz.	Ph	IT	12574 (T), s.n. (HSHU)
344	<i>Ziziphora capitata</i> L. subsp. <i>capitata</i>	Th	IT, ES, M	12776 (T), s.n. (HSHU)
345	<i>Z. capitata</i> L. subsp. <i>orientalis</i> Samuelsson ex Rech.f.	Th	IT, ES, M	12275 (T), s.n. (HSHU)
346	<i>Z. clinopodioides</i> Lam. subsp. <i>pseudodasyantha</i> Rech.f.	Ch	IT	12516 (T), s.n. (HSHU)
347	<i>Z. persica</i> L.	Th	IT	12102 (T), s.n. (HSHU)
348	<i>Z. tenuior</i> L.	Th	IT	12389 (T), s.n. (HSHU)
Liliaceae				
349	<i>Fritillaria assyriaca</i> Baker.	Cr	IT	12153 (T), s.n. (HSHU)
350	<i>F. gibbosa</i> Boiss.	Cr	IT	12124 (T), s.n. (HSHU)
351	<i>F. imperialis</i> L.	Cr	IT	12093 (T), s.n. (HSHU)
352	<i>F. persica</i> L.	Cr	IT	s.n. (D)
553	<i>F. zagrica</i> Stapf*	Cr	IT	12153 (T), s.n. (HSHU)
354	<i>Gagea chomutowae</i> Pascher	Cr	IT	12824 (T), s.n. (HSHU)
355	<i>G. gageoides</i> (Zucc.) V. Ved.	Cr	IT	12161 (T), s.n. (HSHU)
356	<i>Tulipa biebersteiniana</i> Schultes & Schultes	Cr	IT, ES	12151 (T), s.n. (HSHU)
357	<i>T. biflora</i> Pall.	Cr	IT, ES	12058 (T), s.n. (HSHU)
358	<i>T. systola</i> Stapf.	Cr	IT	12125 (T), s.n. (HSHU)
Loranthaceae				
359	<i>Loranthus grewinkii</i> Boiss. & Buhse (on <i>Acer monspessulanum</i> L. subsp. <i>persicum</i> (Pojark.) Rech.f.*	Ch	IT	s.n. (D)
Lythraceae				
360	<i>Ammannia verticillata</i> (Ard.) Lam.	Th	ES, IT	12623 (T), s.n. (HSHU)
361	<i>A. multiflora</i> Roxb.	Th	IT, SS	12622 (T), s.n. (HSHU)
362	<i>Lythrum hyssopifolia</i> L.	Th	PL	12594 (T), s.n. (HSHU)
363	<i>L. salicaria</i> L.	He	PL	12636 (T), s.n. (HSHU)
Malvaceae				
364	<i>Alcea aucheri</i> (Boiss.) Alef. var. <i>lobata</i> Bornm.	He	IT	12539 (T), s.n. (HSHU)
365	<i>A. kurdica</i> (Schlecht.) Alef.	He	IT	12537 (T), s.n. (HSHU)
366	<i>A. laxiflora</i> Riedl.*	He	IT	12538 (T), s.n. (HSHU)
367	<i>Hibiscus trionum</i> L.	Th	IT, M	12591 (T), s.n. (HSHU)
368	<i>Malva neglecta</i> Wallr.	He	PL	12664 (T), s.n. (HSHU)
369	<i>M. sylvestris</i> L.	He	PL	12332 (T), s.n. (HSHU)
Moraceae				
370	<i>Ficus carica</i> L. var. <i>carica</i>	Ph	IT, M	12635 (T), s.n. (HSHU)
371	<i>F. johannis</i> Boiss. subsp. <i>johannis</i>	Ph	IT, M	12489 (T), s.n. (HSHU)
Nitrariaceae				
372	<i>Peganum harmala</i> L.	He	IT, SS, M	12282 (T), s.n. (HSHU)
Oleaceae				
373	<i>Fraxinus rotundifolia</i> Miller subsp. <i>persica</i> (Boiss.) Azadi*	Ph	IT	12423 (T), s.n. (HSHU)
Onagraceae				
374	<i>Epilobium hirsutum</i> L.	Cr	PL	12626 (T), s.n. (HSHU)
Orchidaceae				
375	<i>Ophrys sphegodes</i> Miller. subsp. <i>transhyrcana</i> (Czernjak.) Soó	Cr	IT	12075 (T), s.n. (HSHU)
376	<i>Orchis anatolica</i> Boiss.	Cr	IT	12074 (T), s.n. (HSHU)
Orobanchaceae				
377	<i>Orobanche aegyptiaca</i> Pers.	Cr	IT, SS, M	12646 (T), s.n. (HSHU)
378	<i>O. oxyloba</i> (Reut.) G. Beck in L. Koch	Cr	IT	12499 (T), s.n. (HSHU)
Papaveraceae				
379	<i>Corydalis verticillaris</i> DC. subsp. <i>verticillaris</i>	Cr	IT	12092 (T), s.n. (HSHU)
380	<i>Fumaria parviflora</i> Lam.	Th	IT, ES, M	12118 (T), s.n. (HSHU)
381	<i>Glaucium grandiflorum</i> Boiss. & Hu	Th	IT	12246 (T), s.n. (HSHU)

Table 3 (contd)

382	<i>Hypocoum pendulum</i> L.	Th	IT, M	12138 (T), s.n. (HSHU)
383	<i>Papaver argemone</i> L.	Th	IT, ES, SS	12659 (T), s.n. (HSHU)
384	<i>P. decaisnei</i> Hochst. & Steud. var. <i>patulum</i> Tavakoli & Assadi	Th	IT	12668 (T), s.n. (HSHU)
385	<i>P. dubium</i> L. subsp. <i>laevigatum</i> (M. Bieb.) Kadereit	Th	IT, SS	12305 (T), s.n. (HSHU)
386	<i>P. dubium</i> L. subsp. <i>erosum</i> (Litv.) Kadereit	Th	IT, SS	12092 (T), s.n. (HSHU)
387	<i>P. macrostomum</i> Boiss. & Huet ex Boiss.	Th	IT	12308 (T), s.n. (HSHU)
388	<i>Roemeria hybrida</i> (L.) DC. subsp. <i>hybrida</i>	Th	IT, ES, M	12306 (T), s.n. (HSHU)
389	<i>R. refracta</i> DC. var. <i>refracta</i>	Th	IT	12304 (T), s.n. (HSHU)
390	<i>R. refracta</i> DC. var. <i>alba</i> Tavakkoli & Assadi	Th	IT	54321 (T), s.n. (HSHU)
Plantaginaceae				
391	<i>Kickxia elatine</i> (L.) Dumont subsp. <i>crinite</i> (Mabille) W. Greuter	Th	IT, ES, SS	12642 (T), s.n. (HSHU)
392	<i>Linaria micrantha</i> (Cav.) Hoffm. & Link	Th	IT, SS	12353 (T), s.n. (HSHU)
393	<i>Misopates orontium</i> (L.) Rafin.	Th	IT, SS	12354 (T), s.n. (HSHU)
394	<i>Plantago atrata</i> Hoppe	He	IT, M	12582 (T), s.n. (HSHU)
395	<i>P. gentianoides</i> Sibth. & Sm.	He	IT	12630 (T), s.n. (HSHU)
396	<i>P. lanceolata</i> L.	He	IT, ES, M	12474 (T), s.n. (HSHU)
397	<i>P. major</i> L.	He	COS	12575 (T), s.n. (HSHU)
399	<i>P. psyllium</i> L.	Th	IT, SS, M	12352 (T), s.n. (HSHU)
400	<i>Veronica anagalis-aquatica</i> L.	Th	IT	12597 (T), s.n. (HSHU)
Platanaceae				
401	<i>Platanus orientalis</i> L.	Ph	IT, M	s.n. (D)
Plumbaginaceae				
402	<i>Acantholimon asphodelinum</i> Mobayen*	Ch	IT	12602 (T), s.n. (HSHU)
403	<i>A. flexuosum</i> Boiss. & Hausskn.*	Ch	IT	s.n. (D)
404	<i>A. festucaceum</i> (Jaub. & Spach) Boiss.*	Ch	IT	s.n. (D)
405	<i>A. schirazianum</i> Boiss.*	Ch	IT	12378 (T), s.n. (HSHU)
406	<i>A. saadii</i> Assadi & Zeraatkar*	Ch	IT	12678 (T), s.n. (HSHU)
407	<i>Plumbago europea</i> L.	He	IT, M	12643 (T), s.n. (HSHU)
Poaceae				
408	<i>Aegilops crassa</i> Boiss.	Th	IT	12221 (T), s.n. (HSHU)
409	<i>A. triuncialis</i> L.	Th	IT, M	12393 (T), s.n. (HSHU)
410	<i>A. umbellulata</i> Zhuk.	Th	IT	12391 (T), s.n. (HSHU)
411	<i>Alopecurus myosuroides</i> Hudson	Th	PL	12205 (T), s.n. (HSHU)
412	<i>Arrhenatherum kotschyi</i> Boiss.	Cr	IT	12504 (T), s.n. (HSHU)
413	<i>Avena fatua</i> L.	Th	IT, ES, M	12448 (T), s.n. (HSHU)
414	<i>A. ludoviciana</i> (Theli.) Eig.	Th	IT, M	12166 (T), s.n. (HSHU)
415	<i>Boissiera squarrosa</i> (Banks & Soland) Nevski	Th	IT	12209 (T), s.n. (HSHU)
416	<i>Bromus danthoniae</i> Trin. var. <i>lanuginosus</i> Rozhev.	Th	PL	12454 (T), s.n. (HSHU)
417	<i>B. sterilis</i> L.	Th	IT, M, ES	12210 (T), s.n. (HSHU)
418	<i>B. tectorum</i> L.	Th	IT, M, ES	12167 (T), s.n. (HSHU)
419	<i>B. tomentellus</i> Boiss.	He	IT	12399 (T), s.n. (HSHU)
420	<i>Calamagrostis psedophragmites</i> Koel.	He	PL	12641 (T), s.n. (HSHU)
421	<i>Cynodon dactylon</i> (L.) Pers.	He	PL	12483 (T), s.n. (HSHU)
422	<i>Digitaria sanguinalis</i> (B.) Scep. subsp. <i>sanguinalis</i>	He	PL	12548 (T), s.n. (HSHU)
423	<i>Echinochloa crus-galli</i> (L.) P. Beauv.	Th	IT, ES, M	12615 (T), s.n. (HSHU)
424	<i>Eragrostis barrelieri</i> Dov.	Th	IT, SS	12564 (T), s.n. (HSHU)
425	<i>Heteranthelium piliferum</i> (Banks & Solands) Hochst	Th	IT, SS	12208 (T), s.n. (HSHU)
426	<i>Hordeum bulbosum</i> L.	He	IT, M	12260 (T), s.n. (HSHU)
427	<i>H. spontaneum</i> C. Koch.	Th	PL	12447 (T), s.n. (HSHU)
428	<i>Imperata cylindrica</i> (L.) P. Beauv.	He	IT, M, SS	12466 (T), s.n. (HSHU)
429	<i>Lamarckia aurea</i> (L.) Moench.	Th	IT, M	12213 (T), s.n. (HSHU)
430	<i>Lolium perenne</i> L.	He	COS	12527 (T), s.n. (HSHU)
431	<i>L. pesicum</i> Boiss. & Hohen	Th	IT	12455 (T), s.n. (HSHU)
432	<i>L. rigidum</i> Gaudin	Th	IT, M	12672 (T), s.n. (HSHU)
433	<i>Lophochloa phleoides</i> (Vill.) Reichenb.	Th	SS, IT, ES	12211 (T), s.n. (HSHU)
434	<i>Melica persica</i> Kunth. subsp. <i>persica</i>	He	IT	12198 (T), s.n. (HSHU)
435	<i>Oryzopsis holciformis</i> (M. Bieb.) Hack.	Cr	IT	12197 (T), s.n. (HSHU)
436	<i>O. pubiflora</i> Hack.	Cr	IT	12199 (T), s.n. (HSHU)
437	<i>Paspalum distichum</i> L.	Cr	PL	12595 (T), s.n. (HSHU)

Table 3 (contd)

438	<i>Pennisetum divisum</i> (Gmel.) Henrard.	He	SS, IT	12196 (T), s.n. (HSHU)
439	<i>Phalaris brachystachys</i> Link.	Th	IT, M	12224 (T), s.n. (HSHU)
440	<i>P. minor</i> Retz.	Th	IT, M	12220 (T), s.n. (HSHU)
441	<i>Phragmites australis</i> (Cav.) Trin. ex Steud.	He	COS	12616 (T), s.n. (HSHU)
442	<i>Poa bulbosa</i> L.	He	IT, ES, M	12458 (T), s.n. (HSHU)
443	<i>P. sinaica</i> Steud.	He	IT	12195 (T), s.n. (HSHU)
444	<i>Polypogon fugax</i> Nees ex Steud.	Th	PL	12532 (T), s.n. (HSHU)
445	<i>Psathyrostachys fragilis</i> (Boiss.) Nevski in Komar.	He	IT	12200 (T), s.n. (HSHU)
446	<i>Saccharum ravennae</i> (L.) Murray	Cr	IT, SS	12648 (T), s.n. (HSHU)
447	<i>Setaria glauca</i> (L.) P. Beauv.	Th	IT, SS	12570 (T), s.n. (HSHU)
448	<i>S. verticillata</i> (L.) P. Beauv.	Th	PL	12533 (T), s.n. (HSHU)
449	<i>Sorghum halepense</i> (L.) Pers.	Cr	IT, M, SS	12589 (T), s.n. (HSHU)
450	<i>Stipa parviflora</i> Desf.	He	IT, M	12429 (T), s.n. (HSHU)
451	<i>Taeniatherum asperum</i> (Simonkai) Nevski	Th	IT, M	12191 (T), s.n. (HSHU)
452	<i>Vulpia persica</i> (Boiss. & Buhse) V.I. Krecz. & Bobr.	Th	IT	12212 (T), s.n. (HSHU)
Polygonaceae				
453	<i>Polygonum amphibium</i> L.	Cr	PL	12553 (T), s.n. (HSHU)
454	<i>P. aridum</i> Boiss. & Hausskn.*	Ch	IT	12181 (T), s.n. (HSHU)
455	<i>P. aviculare</i> L.	Th	COS	12173 (T), s.n. (HSHU)
456	<i>P. equisetiforme</i> Sibth.	Th	IT, M	12585 (T), s.n. (HSHU)
457	<i>P. setosum</i> Jacq.	He	IT	12614 (T), s.n. (HSHU)
458	<i>Pteroporum aucheri</i> Jaub. & Spach	Ch	IT	12440 (T), s.n. (HSHU)
459	<i>Rheum persicum</i> Los.*	He	IT	12403 (T), s.n. (HSHU)
460	<i>Rumex crispus</i> L.	He	PL	12177 (T), s.n. (HSHU)
Potamogetonaceae				
461	<i>Potamogeton pectinatus</i> L.	Cr	PL	12562 (T), s.n. (HSHU)
462	<i>P. nodosus</i> Poir.	Cr	PL	12836 (T), s.n. (HSHU)
Portulacaceae				
463	<i>Portulaca oleracea</i> L.	Th	IT, ES, M	12690 (T), s.n. (HSHU)
Primulaceae				
464	<i>Androsace maxima</i> L.	Th	IT, ES, M	12660 (T), s.n. (HSHU)
465	<i>Dionysia diapiensifolia</i> Boiss.*	He	IT	12146 (T), s.n. (HSHU)
466	<i>D. revoluta</i> Boiss. subsp. <i>canescens</i> (Boiss.) Wendelbo*	He	IT	12169 (T), s.n. (HSHU)
467	<i>Lysimachia linum-stellatum</i> L.	Th	IT, SS	12189 (T), s.n. (HSHU)
468	<i>Samolus valerandi</i> L.	Th	COS	12631 (T), s.n. (HSHU)
Pteridaceae				
469	<i>Cheilanthes acrostica</i> (Balbis) Tod.	Cr	PL	12057 (T), s.n. (HSHU)
470	<i>C. persica</i> (Bory) Mett. ex Kuhn	Cr	M, IT	12681 (T), s.n. (HSHU)
471	<i>Onychium divaricatum</i> (Poir.) Alston	Cr	ES, M, IT	11209 (T), s.n. (HSHU)
Ranunculaceae				
472	<i>Adonis aestivalis</i> L.	Th	IT	12444 (T), s.n. (HSHU)
473	<i>Anemone biflora</i> DC.	Cr	IT, M, ES	12096 (T), s.n. (HSHU)
474	<i>Ceratocephala falcata</i> (L.) Pers.	Th	IT	12062 (T), s.n. (HSHU)
475	<i>Clematis ispanhanica</i> Boiss.	Ch	IT	12081 (T), s.n. (HSHU)
476	<i>Consolida hohenackeri</i> (Boiss.) Grossh.	Th	IT	12649 (T), s.n. (HSHU)
477	<i>C. orientalis</i> (Gay) Schrod.	Th	IT, M	12480 (T), s.n. (HSHU)
478	<i>Delphinium pallidiflorum</i> Freyn.	Th	IT	12451 (T), s.n. (HSHU)
479	<i>D. saniculifolium</i> Boiss.*	Cr	IT	12344 (T), s.n. (HSHU)
480	<i>Ranunculus arvensis</i> L.	Th	IT	12495 (T), s.n. (HSHU)
481	<i>R. aucheri</i> Boiss.	Cr	IT	12098 (T), s.n. (HSHU)
482	<i>Thalictrum isopyroides</i> C.A. Mey.	Cr	IT	12078 (T), s.n. (HSHU)
Resedaceae				
483	<i>Reseda lutea</i> L.	He	IT, ES, M	12563 (T), s.n. (HSHU)
Rhamnaceae				
484	<i>Rhamnus pallasii</i> Fisch. & C.A. Mey. subsp. <i>iranica</i> (Hausskn. in Bornm.) Browicz & J. Zielinski*	Ph	IT	12206 (T), s.n. (HSHU)
Rosaceae				
485	<i>Prunus eburnea</i> (Spach) Aitch.*	Ph	IT	12065 (T), s.n. (HSHU)
486	<i>P. elaeagnifolia</i> C.K. Schneider subsp. <i>elaeagnifolia</i> *	Ph	IT	12084 (T), s.n. (HSHU)
487	<i>P. scoparia</i> (Spach) C.K. Schneid.	Ph	IT	12163 (T), s.n. (HSHU)
488	<i>Cerasus microcarpa</i> (C.A. Mey.) Boiss.	Ph	IT	12359 (T), s.n. (HSHU)
489	<i>Crataegus aronia</i> (L.) Bosc. ex DC.	Ph	IT	12294 (T), s.n. (HSHU)

Table 3 (contd)

490	<i>C. persica</i> A. Pojak.*	Ph	IT	12676 (T), s.n (HSHU)
491	<i>Rosa foetida</i> J. Herrman.	Ph	IT	12565 (T), s.n (HSHU)
492	<i>Rubus sanctus</i> Schreber	Ph	IT, M	12551 (T), s.n (HSHU)
493	<i>Sanguisorba minor</i> Scop. subsp. <i>minor</i>	He	IT, M	12289 (T), s.n (HSHU)
Rubiaceae				
494	<i>Callipeltis cucullaria</i> (L.) Stev.	Th	IT, M	12136 (T), s.n (HSHU)
495	<i>Cruciata taurica</i> (Pall. ex. Willd.) Ehrend.	He	IT	12263 (T), s.n (HSHU)
496	<i>Galium ceratopodum</i> Boiss.	Th	IT	12577 (T), s.n (HSHU)
497	<i>G. humifusum</i> M. Bieb.	He	IT, M	12135 (T), s.n (HSHU)
498	<i>G. setaceum</i> Lam. subsp. <i>decaisnei</i> Boiss.	Th	IT	12498 (T), s.n (HSHU)
499	<i>Rubia albicaulis</i> Boiss.	Ch	IT	12136 (T), s.n (HSHU)
Rutaceae				
500	<i>Haplophyllum acutifolium</i> (DC.) G. Don	Th	IT	12669 (T), s.n (HSHU)
501	<i>H. lissonotum</i> C.C. Towns.*	He	IT	12414 (T), s.n (HSHU)
Salicaceae				
502	<i>Populus nigra</i> L.	Ph	IT, ES, M	12689 (T), s.n (HSHU)
503	<i>Salix acmophylla</i> Boiss.	Ph	COS	12692 (T), s.n (HSHU)
504	<i>S. excelsa</i> S.G. Gmelin	Ph	IT	12693 (T), s.n (HSHU)
505	<i>S. wilhelmsiana</i> M. Bieb.	Ph	IT	s.n (HSHU)
Sapindaceae				
506	<i>Acer monspessulanum</i> L. subsp. <i>persicum</i> (Pojark.) Rech.f.*	Ph	IT	12055 (T), s.n (HSHU)
Scrophulariaceae				
507	<i>Scrophularia attariae</i> Ranjbar & Rahchamani*	He	IT	12162 (T), s.n (HSHU)
508	<i>S. striata</i> Boiss.	He	IT	1265 (T), s.n (HSHU)
509	<i>Verbascum austroiranicum</i> Hub.-Mor*	He	IT	12518 (T), s.n (HSHU)
510	<i>V. pseudo-digitalis</i> Nab.	He	IT	12288 (T), s.n (HSHU)
511	<i>V. sinuatum</i> L.	He	IT, ES, SS	12407 (T), s.n (HSHU)
Solanaceae				
512	<i>Datura stramonium</i> L.	Th	IT	12485 (T), s.n (HSHU)
513	<i>Hyoscyamus bornmuelleri</i> Khatamsaz*	He	IT	12056 (T), s.n (HSHU)
514	<i>H. kurdicus</i> Bornm.	He	IT	12099 (T), s.n (HSHU)
515	<i>Lycium depressum</i> Stocks. subsp. <i>depressum</i>	Ph	IT	12334 (T), s.n (HSHU)
516	<i>Physalis divaricata</i> D. Don	Th	IT,SS	12650 (T), s.n (HSHU)
517	<i>Solanum luteum</i> Miller	Th	IT,SS	12475 (T), s.n (HSHU)
Tamaricaceae				
518	<i>Tamarix leptopetala</i> Bunge	Ph	IT	12821 (T), s.n (HSHU)
519	<i>T. ramosissima</i> Ledeb.	Ph	PL	12638 (T), s.n (HSHU)
Thymelaeaceae				
520	<i>Daphne mucronata</i> Royle	Ph	IT, SS	12434 (T), s.n (HSHU)
521	<i>Diarthron vesiculosum</i> (Fisch. & C.A. Mey. ex Kar. & Kir.) C.A. Mey.	Th	IT	12508 (T), s.n (HSHU)
522	<i>Thymelaea mesopotamica</i> (C. Jeffrey) B. Peterson	Th	IT, SS	12437 (T), s.n (HSHU)
523	<i>Dendrostellera lessertii</i> (Wikster.) Van Tiegh.	He	IT	12435 (T), s.n (HSHU)
Typhaceae				
524	<i>Typha latifolia</i> L.	He	IT	12558 (T), s.n (HSHU)
Urticaceae				
525	<i>Parietaria judaica</i> L.	Ch	IT, ES, M	12097 (T), s.n (HSHU)
Verbenaceae				
526	<i>Verbena officinalis</i> L.	He	PL	12450 (T), s.n (HSHU)
Violaceae				
527	<i>Viola modesta</i> Fenzl.	Th	IT, M	12072 (T), s.n (HSHU)
528	<i>V. odorata</i> L.	Cr	IT, ES	s.n. (D)
Zygophyllaceae				
529	<i>Tribulus terrestris</i> L.	Th	PL	12587 (T), s.n (HSHU)

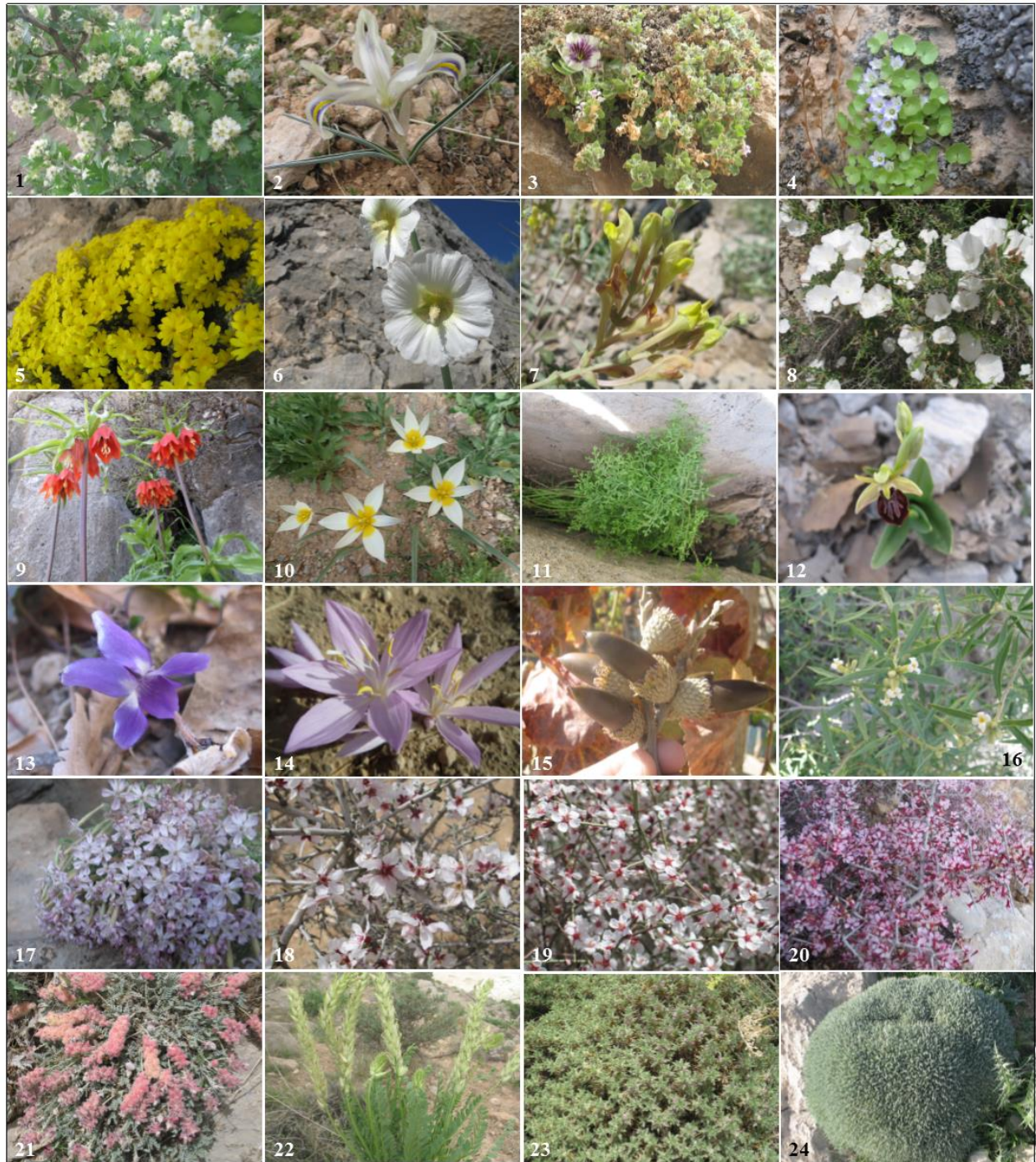


Fig. 4. Selected images of plants: 1. *Crataegus aronia*, 2. *Iris hymenospatha* subsp. *hymenospatha*, 3. *Hyoscyamus bornmuelleri*, 4. *Campanula perpusilla*, 5. *Dionysia revoluta* subsp. *canescens*, 6. *Alcea laxiflora*, 7. *Scutellaria tomentosa*, 8. *Convolvulus leiocalycinus*, 9. *Fritillaria imperialis*, 10. *Tulipa biflora*, 11. *Onychium divaricatum*, 12. *Orchis anatolica*, 13. *Viola odoraa*, 14. *Colchicum persicum*, 15. *Quercus brantii* var. *persica*, 16. *Daphne mucronata*, 17. *Silene persepolitana*, 18. *Prunus elaeagnifolia*, 19. *A. scoparia*, 20. *Prunus eburnea*, 21. *Astragalus ptychophyllus*, 22. *A. griseus*, 23. *Astragalus myriacanthus*, 24. *Astragalus curviflorus* (Photos by: A. Zeraatkar).

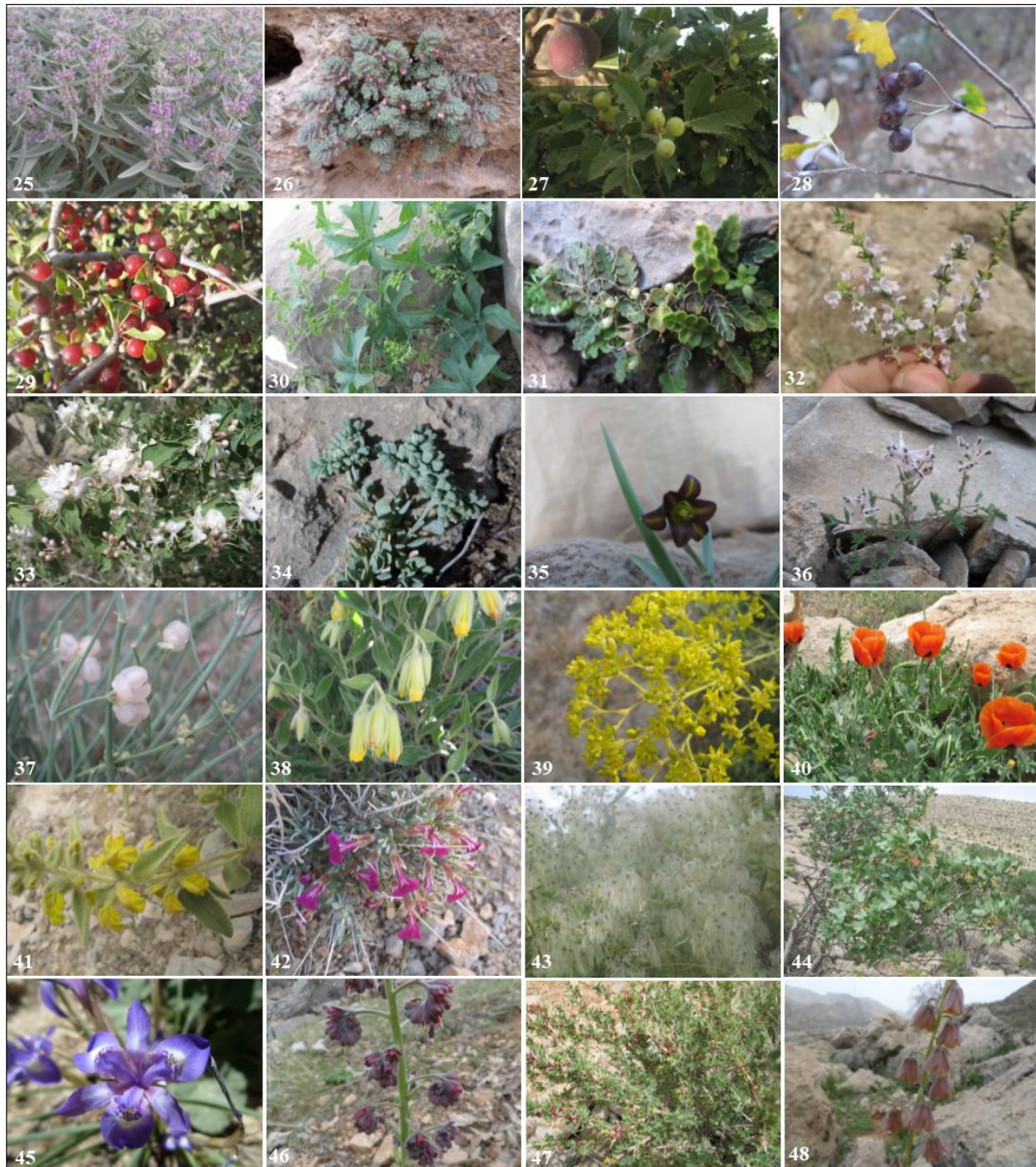


Fig. 4. (contd). 25. *Phlomis persica*, 26. *Ajuga austro-iranica*, 27. *Ficus carica* var. *carica*, 28. *Crataegus persica*, 29. *Rhamnus pallasii*, 30. *Bryonia multiflora*, 31. *Asplenium ceterach*, 32. *Satureja bachtiarica*, 33. *Lonicera nummulariifolia*, 34. *Telephium eriglaucom*, 35. *Fritillaria zagrica*, 36. *Corydalis verticillaris* subsp. *verticillaris*, 37. *Ephedra foliata*, 38. *Onosma chlorotricha*, 39. *Haplophyllum lissonotum*, 40. *Glucium grandiflorum*, 41. *Phlomis olivieri*, 42. *Ajuga chamaecistus*, 43. *Celematis isphahanica*, 44. *Pistacia atlantica* subsp. *mutica*, 45. *Gynandris sisyrynchium*, 46. *Solananthus stamineus*, 47. *Pilostyles haussknechtii*, 48. *Fritillaria persica* (Photos by: A. Zeraatkar).

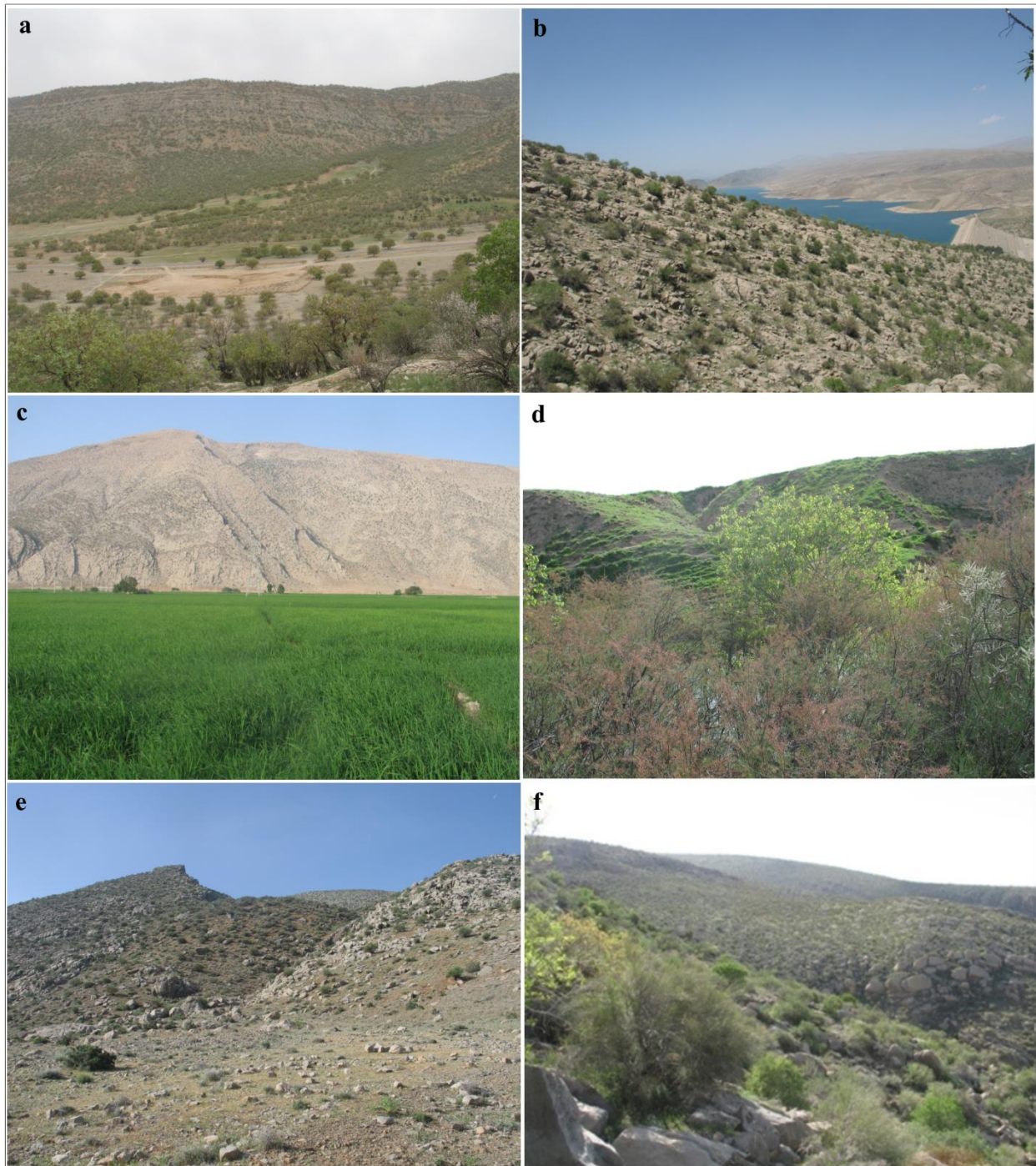


Fig. 5. Selected vegetations in the area: a. Oak woodlands (Tang-e Tir forest), b. *Amygdalus-Pistacia* community (near Dorodzan dam), c. Mount Zaneh, d. Riparian formation (near Dorodzan village), e. *Amygdalus-Astragalus-Ebenus* community (between Barezabad and Shahijan villages), f. *Prunus scoparia-Acer monspessulanum* community (near Bizjan-e bala village) (Photos by: A. Zeraatkar).

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