

Floristic Study for Tarhuna-Libya

Tarhuna-Libyanın Floristik Çalışması

Research Article

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ABSTRACT

A survey of plant species of Tarhuna was taken in between 2016-2017. A total number of 518 plant specimens have been collected from Tarhuna representing 41 families, 143 genera, and 222 different plant species of which 36 species are belonging to monocotyledons, 185 species belonging to dicotyledons, and 1 species belong to Gymnosperms *Ephedera alltisma*. A total of 126 plant species were reported for the first time from Tarhuna. The results of this study have shown that the dominance of the family Asteraceae with 42 species, followed by the family Fabaceae with 30 species, the family Poaceae with 27 species, and the family Lamiaceae with 11 species. *Anthemis glarosa* endemic species for Libya confined to the costal belt of Libya has been collected, identified, and reported for the first time from Tarhuna.

Key Words

Flora Libya, Tarhuna, diversity, flowering plants.

ÖZ

2016-2017 yılları arasında Tarhuna bitki türlerinin bir araştırması yapılmıştır. Tarhuna'dan 41 familya, 143 cins ve 36 türün monokotiledonlara ait olduğu 222 farklı bitki türü, dikotiledonlara ait 185 tür ve Gymnosperms *Ephedera alltisma*'ya ait 1 türden toplam 518 bitki örneği toplanmıştır. Tarhuna'dan ilk kez toplam 126 bitki türü bildirildi. Bu çalışmanın sonuçları, Asteraceae familyasının 42 türle baskın olduğunu, bunu 30 türle Fabaceae ailesinin, 27 türle Poaceae ailesinin ve 11 türle Lamiaceae ailesinin izlediğini göstermiştir. Libya'nın kıyı şeridiyle sınırlı olan Libya'ya yönelik *Anthemis glarosa* endemik türleri toplanmış, tanımlanmış ve Tarhuna'dan ilk kez rapor edilmiştir.

Anahtar Kelimeler

Libya florası, Tarhuna, çeşitlilik, çiçekli bitkiler .

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INTRODUCTION

This paper deals mainly with the flora of Tarhuna which is located about 88 km., south east of Tripoli (Capital) and occupies an area approximately 3820 km² between 32° 26'N latitude & 13° 38'E longitude, and it is about 350-500m above the sea level as measured by GPS. Tarhuna is bounded by Gharabulli to the north, Msallata & Zliten to the east, Gharian & Ben-Ghisher to the west and Beni-Walid to the south (Figures 1, 2, 3). The climate of Tarhuna follows the climate of the Mediterranean region which is cold & rainy at the winter with an average rainfall ranges between 100-300mm annually, and hot & dry at the summer with a mean of 18°C [1]. In general the scarcity of rainfall make the region arid- semiarid, such condition makes the flora of Tarhuna poor with regard to its vast area. The history of plant exploration in Libya has been done by several authors such as (2-5, 9-16). Since the flora of Tarhuna has not been studied thoroughly during the work on the flora of Libya (1975-1989). Therefore, the purpose of this survey is to have an exclusive study to its flora.

METHODS

A total number of 518 plant specimens have been collected between 2016-2017 upon various field trips about one trip per month. The collected plants were then treated by the usual herbarium procedures including pressing, poisoning, mounting, labeling, and identifying. Identification of plant species was done by using the Flora of Libya [1, 6-8]. Eventually, the identified plant specimens were deposited at the national herbarium, Botany Department, Faculty of Sciences, Tripoli University. Collection of plant specimens was done by the authores, Mahklouf, Sherif, and Betelmal [MSB].

Enumeration of the Plant Species

This enumeration includes 222 identified plant species of which 126 species were reported for the first time from Tarhuna. The new reported species are marked with an asterisk. Families and species included in this enumeration are arranged alphabetically.

1. Alliaceae



Figure 1. Map of Libya showing Location of Tarhuna.



Figure 2. Map of North-West part of Libya showing Location of Tarhuna.



Figure 3. Map of Tarhuna showing Location of study area.

1.1. *Allium roseum* L., Sp. Pl. 296. 1753.

Collection number: 828

Distribution: East Mediterranean element.- In Tarhuna: Msabha.

Fl: Mar. - April

Collectors: MSB **Collection date:** 19.05. 2016

2. Anacardiaceae

2.1. **Pistacia atlantica* Desf., Pl. Atl. 2: 364. 1799.

Collection number: 904

Synonyms: *Pistacia mutica* Fisch. & Mey., in Hoen., Enum. Pl. Talysh 102. 1837.

Distribution: Canary Islands, Mediterranean

region, N. Africa, Anatolia, Cyprus, N. E. Greece, Crimea, Caucasia, Iran, Afghanistan and Pakistan. - In Tarhuna: Terghlat.

Fl: March-April

Collectors: MSB **Collection date:** 10. 05. 2017

2.2. **Rhus tripartita* (Ucria) Grade in Bull. Orto Bot. Napoli 5: 62.1918.

Collection number: 829

Synonyms: *Rhamnus tripartita* Ucria in Roem., Arch. i. 1: 68. 1796; *Rhus oxyacantha* auct., non *Schousboe* ex Cav. Icon. 111, 36. 1794: Durand & Barratte, l.c. 61.

Distribution: Dry places in Sicily, Malta, N. Africa,

S. W. Asia. - In Taruna: Msabha.

Fl. October-June.

Collectors: MSB **Collection date:** 19. 05. 2016

3. Apiaceae

3.1. *Bubpeurum semicoposum* L., Demonstr. Pl. Hort. Upsal. 7. 1753.

Collection number: 808

Synonyms: *Bubpeurum glaucum* Robill. et Cast. In Lam. & DC., Fl. Franc. 5: 515. 1815. *B. semicoposum* var. *glaucum* (Robill. et Cast.) Paol. In Fiori et Paol., Fl. Anal. Ital. 2: 155. 1900.

Distribution: S. Europe, N. Africa, Mediterranean Islands, Balkans, Turkey, Palestine, Russia and S. W. Iran. - In Tarhuna: Arabeen and Wlaad Hammad.

Fl. March-May.

Collectors: MSB **Collection date:** 10. 05. 2017

3.2.Daucus sahariensis*** Murb., Contr. Fl. Tunisie etc. 1: 88, pl. 5. 1897.

Collection number: 853

Synonyms: *Platyspermum pubescens* Pomel, Nouv. Fl. Atl. 148. 1874, non *Daucua pubescens* Koch, 1824.

Distribution: N. Africa (Algeria, Tunisia, Libya, Egypt). - In Tarhuna: Dawoon.

Fl. April-June.

Collectors: MSB **Collection date:** 27. 04. 2017

3.3. *Daucus syrticus* Murb., Contr. Fl. Nord-Ouest Afr. 1: 87. 1897.

Collection number: 900

Distribution: N. Africa. - In Tarhuna: Arabeen.

Fl. March-April.

Collectors: MSB **Collection date:** 10.05. 2017

3.4.Ferula tingitana*** L., Sp. Pl. 247. 1753.

Collection number: 840

Distribution: S.W. Europe, N.W. Africa, Libya, Palestine & W. Syria. - In Tarhuna: Khsaya.

Fl. February-March.

Collectors: MSB **Collection date:** 27. 04. 2017

3.5. *Pithoranthus tortuosus* (Desf.) Benth & Hooker, Gen. Plant. 1 (3): 890. 1867

Collection number: 854

Synonyms: *Bubon tortuosum* Desf., Fl. Atlant. 1: 360. 1798; *Deverra tortuosa* (Desf.) DC., Prodr. 4: 143. 1830.

Distribution: N. Africa, Palestine. - In Tarhuna:

Dawoon and Terghlat.

Fl: Throughout the year.

Collectors: MSB **Collection date:** 27. 04. 2017

3.6.Thapsia garganica*** L., Mantissa 57. 1767.

Collection number: 830

Synonyms: *Thapsia decussata* Lag., Gen. et Sp. Nov. 12. 1816; *T. praealta* d'Urv., Enum. Pl. Ins. Pont. Eux. 288. 1822; *T. sylphium* Viv., Fl. Lib. Spec. 17. 1824; *T. garganica* var. *sylphium* (Viv.) Aschers.

Distribution: N. Africa (Libya). S. & S. W. Europe and Turkey. - In Tarhuna: Msabha.

Fl. April-May.

Collectors: MSB **Collection date:** 19. 05. 2016

4. Asclepiadaceae

4.1.Calotropis procera*** (Ait.) Ait. F., Hort. Kew. Ed. 2.2: 78:1811.

Collection number: 905

Synonyms: *Asclepias procera* Ait., Hort. Kew. 1: 305. 1789.

Distribution: Libya, Tropical to dry sand parts of Africa, Palestine, Abu Dhabi, W. India, Brazil, Colombia and Venezuela. - In Tarhuna: Terghlat.

Fl. Throughout the year.

Collectors: MSB **Collection date:** 12. 06. 2017

5. Asteraceae

5.1.Anacyclus monanthos*** (L.) Thell. In Mem. Soc. Nat. Hist. Cherbourg ser. 4,38:518.1911.

Collection number: 693

Synonyms: *Tanacetum monanthos* L., Mantissa 111. 1767; *Santolina terrestris* Forsk. Fl. Aegypt. 147. 1775; *Anacyclus alexandrinus* Willd., Sp. Pl. ed. 4. 3: 2173.1803; *Anacyclus alexandrinus* f. *capillifolius* Pamp., Bull. Soc. Bot. Ital. 1914: 19: 1914.

Distribution: N. Africa to Palestine. - In Tarhuna: Dawoon, Meghawsha, Sok El-Ahed, Terghlat and Whedat.

Fl. February-May

Collectors: MSB **Collection date:** 19. 03. 2016

5.2. *Anthemis glareosa* Durand & Barratte, Fl. Lib. Prodr. 130. 1910.

Collection number: 780

Distribution: Endemic to N. coastal belt of Libya. - In Tarhuna: Zurgan.

Fl. January-April.

Collectors: MSB **Collection date:** 8.04.2016

5.3. *Anthemis secundiramea* Biv., Sic. Pl. Cent. 2:10. 1806.

Collection number: 750

Synonyms: *Anthemis indurate* Delile, Descr. Egypte, Hist. Nat. 2:274t. 43.1813; Pamp., Pl. Trip. 245. 1914; Tackh., St. Fl. Egypt ed. 2, 574. 1974; *A. secundiramea* var. *indurate* (Delile) DC. Prodr. 6: 10. 1838; *A. indurate* var. *angulata* Pamp., in Bull. Soc. Bot. Ital. 1914; Keith, l.c.

Distribution: Mediterranean region. - In Tarhuna: Arabeen, Dawoon, Hejaz, Msaad, and Terghlat.

Fl. March-April.

Collectors: MSB **Collection date:** 22.03.2016

5.4. **Artemisia campestris* L., Sp. Pl. 846, 1753.

Collection number: 781

Synonyms: *Artemisia glutinosa* Gay ex Besser Tent. Abrot. 34. 1832; Pamp., l.c.; Keith, l.c.; *A. variabilis* Ten., Fl. Neap. Prodr. App. 5:28. 1835-38; Keith, l.c. 257., *A. campestris* ssp. *glutinosa* (Gay ex Besser) Batt. & Trabut. Fl. Alger. Dicot. 469. 1889; Tutin et al., 186. 1976.

Distribution: Europe, N. Africa. - In Tarhun: Dawoon, Msabha, Sok El-Ahed and Terghlat.

Fl. November-January.

Collectors: MSB **Collection date:** 8. 04.2016

5.5. **Artemisia herba-alba* Asso, Syn. Stirp. Arag. 177. 1779.

Collection number: 906

Synonyms: *Artemisia arragonensis* Lam., Encycl. Meth. Bot. 2:269. 1783; *A. inculta* Delile, Descr. Egypte, Hist. Nat. 264. 1813; Tach., l.c. 581; *A. pyromacha* Viv., Fl. Lib. Spc. 54. T. 13. 1824; *A. inculta* var. *laxiflora* (Boiss.) Tackh., l.c.

Distribution: W. Southern France, Spain. N. Africa, Syri - W. Iran. - In Tarhuna: Terghlat.

Fl. November-February.

Collectors: MSB **Collection date:** 12.06.2017

5.6. **Atractylis cancellata* L., Sp. Pl. 830. 1753.

Collection number: 751

Synonyms: *Atractylis caespitosa* auct. Non Desf.: Viv., Fl. Lib. Spec. 52. 1824.

Distribution: Mediterranean area, up to N. Iraq and W. Iran. - In Tarhuna: Arabeen, and Hejaz.

Fl. April- May.

Collectors: MSB **Collection date:** 22.03.2016

5.7. *Atractylis delicatula* Batt. Ex Chevall. In Bull. Herb. Boiss. Ser. 2.3: 773. 1903.

Collection number: 881

Distribution: N. Africa (Southern Morocco, N. Al-

geria and W. Libya). - In Tarhuna: Wlaad Hammad. **Fl.** April-May.

Collectors: MSB **Collection date:** 10.05.2017

5.8. **Atractylis serratuloides* Sieb. ex Cass., Dict. Sci. Nat. 50:56. 1827.

Collection number: 694

Synonyms: *Atractylis microcephala* Cosson & Durieu in Ann. Sci. Nat. Ser. 4.1:240. 1854.

Distribution: N. Africa. - In Tarhuna: Hejaz, Meghawsha and Terghlat.

Fl. May-June.

Collectors: MSB **Collection date:** 19.03.2016

5.9. *Calendula arvensis* L., Sp. Pl. ed. 2, 1303. 1763.

Collection number: 855

Synonyms: *Calendula sancta* L., l.c.; *C. aegyptiaca* Desf., Tabl. Ecole Bot. ed. 1, 100. 1804; *C. cristagalli* Viv., Fl. Lib. Spec. 59t. 26. 1824; *C. malvaecarpa* Pomel, Nouv. Mat. Fl. Atl. 33:1874; *C. aegyptiaca* var. *suberosa* Boiss., Fl. Or. 419. 1875.

Distribution: A Mediterranean element, S. Europe, N. Africa- Caucasus, Iran and Afghanistan. - In Tarhuna: Dawoon, Sok El-Ahed and Terghlat.

Fl. November-April.

Collectors: MSB **Collection date:** 27.04.2017

5.10. **Carduncellus eriocephalus* Boiss., Diagn. Pl. Nov. ser. 1, 10:100. 1849.

Collection number: 782

Distribution: N. Africa and Palestine. - In Tarhuna: Terghlat, Wlaad Hammad and Zurgan.

Fl. March-June.

Collectors: MSB **Collection date:** 8.04.2016

5.11. **Carduncellus pinnatus* (Desf.) DC., Prodr. 6:614. 1838.

Collection number: 842

Synonyms: *Carthamus pinnatus* Desf., Fl. Atl. 2:258 t. 229. 1799.

Distribution: N. Africa and S. Europe (Central Spain, Sicily). - In Tarhuna: Dawoon, Sok -El-Ahed and Whedat.

Fl. March-April.

Collectors: MSB **Collection date:** 27.04.2017

5.12. **Carduus argentatus* L., Mantissa Alt. 280. 1771.

Collection number: 735

Distribution: East Mediterranean element; Libya, Egypt, Palestine, Syria, Crete, Cyperus, Greece, S. Anatolia and Iraq. - In Tarhuna: Arabeen, Hejaz, Msaaed, Sok El- Ahed, Terghlat, Whedat, and Zurgan.

Fl. March-April.

Collectors: MSB **Collection date:** 22.03.2016

5.13.* *Carduus getulus* Pomel, Nouv. Mat. Fl. Atl. 2:275. 1875.

Collection number: 857

Synonyms: *Caduus pycnocephalus* acut. non L.; Ascherson in Rohlf's Kufra 528. 1881.

Distribution: N. Africa. - In Tarhuna: Dawoon and wlaad Hammad.

Fl. February-May.

Collectors: MSB **Collection date:** 27.04.2016

5.14. **Carthamus lanatus* L., Sp. Pl. 830. 1753.

Collection number: 813

Synonyms: *Carthamus creticus* L., l.c. ed. 2, 1163. *C. lanatus* var. *longifolius* Pamp. in Novu. Giorn. Bot. Ital. N.S. 31: 229. 1924.

Distribution: W. Central and S. Europe, and N. Africa. - In Tarhuna: Dawoon and Msabha.

Fl. June-November.

Collectors: MSB **Collection date:** 19.05.2016

5.15. *Centaurea dimorpha* Viv., Fl. Lib. Spec. 58. T. 24.1824.

Collection number: 783

Synonyms: *Centaurea sonchifolia* L. var *dimorpha* (Viv) DC., Prodr. 6:599. 1839.

Distribution: N. Africa. - In Tarhuna: Arabeen, Dawoon, Msaaed, Terghlat and Zurgan.

Fl. March-June.

Collectors: MSB **Collection date:** 8.04.2016

5.16. **Centaurea sphaerocephala* L., Sp. Pl. 916. 1753.

Collection number: 810

Synonyms: *Centaurea polycantha* Willd., Sp. Pl. ed. 4, 3:2312, 1803; *C. fontanesii* Spach ex Durieu in Duchartre, Rev. Bot. 2:429.1847.

Distribution: A maritime species of W.Mediterranean region. -In Tarhuna: Msaaed and Msabha.

Fl. May.

Collectors: MSB **Collection date:** 19.05.2016

5.17. **Chrysanthemum coronarium* L., Sp. Pl. 890. 1753.

Collection number: 736

Synonyms: *Matricaria coronaria* (L.) Desr. In Lam., Encycl. Meth. Bot. 3: 737.1792; *Chrysanthemum umbrosum* Willd., Sp. Pl. ed. 4, 3:2149. 1803; *Pinnardia coronaria* (L.) Less., Syn. Gen. Comp. 255. 1832

Distribution: Mediterranean region to N.W. Iran. - In Tarhuna: Sok El-Ahed, Terghlat and Whedat.

Fl. March-June.

Collectors: MSB **Collection date:** 22.03.2016

5.18.Crepis vesicaria*** L., Sp. Pl. 805. 1753.

Collection number: 856

Synonyms: *Crepis taraxacifolia* Thuill., Fl. Paris 409. 1799; *C. scariosa* Willd., Sp. Pl. ed. 4. 3: 1595. 1803; *C. marschallii* (C. A. Meyer) Schultz Bip. In Flora 23:718. 1840.

Distribution: Mediterranean region extending into east in Crimea, Cauasia and N. up to Netherland and W. Austria- In Tarhuna: Dawoon and Sok El-Ahed.

Fl. March-May.

Collectors: MSB **Collection date:** 27.04.2017

5.19. *Cynara cardunculus* L., Sp. Pl. 827.1753.

Collection number: 908

Distribution: Mediterranean region. - In Tarhuna: Terghlat.

Fl. April-May.

Collectors: MSB **Collection date:** 12.06.2017

5.20. **Echinops galalensis* Schweinf. In Ascherson & Schwein., Suppl. III. Fl. Egypte 2:762. 1889.

Collection number: 811

Distribution: N. Africa. - In Tarhuna: Msabha.

Fl. May-June.

Collectors: MSB **Collection date:** 19.05.2016

5.21. **Echinops spinosissimus* Turra, Farset, Nov. Gen. 13. 1765.

Collection number: 882

Synonyms: *Echinops bovei* Boiss., Diagn. Pl. Or. Nov. ser. 16: 19. 1845; *E. spinosus* acut. Non L. 1767.

Distribution: Mediterranean region (S. Europe & N. Africa).- In Tarhuna: Wlaad Hammad.

Fl. March-May.

Collectors: MSB **Collection date:** 10.05.2017

5.22.Filago desertorum*** Pomel, Nouv. Mat. Fl. Atl. 46. 1874.

Collection number: 841

Synonyms: *Filago spathulata* acut. Non C. Presl. 1822.

Distribution: S. Spain, N. Africa and S.W. Asia. - In Tarhuna: Arabeen, Dawoon and Wlaad Hammad.

Fl. March-April.

Collectors: MSB **Collection date:** 27.04.2017

5.23. **Filago mareotica* Delile, Descr. Egypt, Hist. Nat. 2:274. 1813.

Collection number: 909

Synonyms: *Gifolaria mareotica* (Delile) Chrtek & Holub, Preslia 35: 10. 1963.

Distribution: Africa and S. E. Spain. - In Tarhna: Terghlat.

Fl. March-April.

Collectors: MSB **Collection date:** 12.06.2017

5.24. *Filago pyramidata* L., Sp. Pl. 1199. 1753.

Collection number: 864

Synonyms: *Filago germanica* L. var. *spathulata* (C. Presl) DC., Prodr. 6:247.1838; *F. jussiaei* Cosson & Germ. In Amn. Sci. Nat. 20 (2): 284. 1846.

Distribution: S. Europe and N. Africa. - In Tarhuna: Sharshara.

Fl. March-May.

Collectors: MSB **Collection date:** 27.04.2017

5.25. *Filago ramosissima* Lange Ind. Sem. Horto Haun. 1855.24.1855; Holub in Tutinet al., l.c. 122.

Collection number: 907

Synonyms: *Filago mareotica* auct. Non Delile (1913); Durand & Barratte, l.c. 127.

Distribution: S. Spain and N. W. Africa. - In Tarhuna: Terghlat.

Fl. March.

Collectors: MSB **Collection date:** 12.06.2017

5.26. **Hedypnois cretica* (L.) Dum.Courset. Bot. Cult. 2:339. 1802.

Collection number: 784

Synonyms: *Hyoseris cretica* L., Sp. Pl. 810. 1753; *H. hedypnois* L., l.c. 809; *Hedypnois globulifera* Lam., Fl. Fr. 2: 107. 1778; Pamp. Prodr. Fl. Cir. 470. 1931.

Distribution: Mediterranean region up to W. Iran. - In Tarhuna: Zurgan.

Fl. September-March.

Collectors: MSB **Collection date:** 8.04.2016

5.27.Helichrysum lacteum*** Cosso & Durieu in Bull. Soc. Bot. Fr. 2:365.1855.

Collection number: 752

Distribution: Morocco, Algeria and Libya. - In Tarhuna: Hejaz.

Fl. March.

Collectors: MSB **Collection date:** 22.03.2016

5.28.Helichrysum stoechas*** (L.) Moench, Meth. 575. 1794.

Collection number: 804

Synonyms: *Gnaphalium stoechas* L., Sp. Pl. 853. 1753; *Helichrysum stoechas* (L.) Moench ssp. *conglobatum* (Viv.) Maire & Weiller.

Distribution: Mediterranean Europe, N. Africa and Anatolia. - In Tarhuna: Msaaed and Msabha.

Fl. April-May.

Collectors: MSB **Collection date:** 19.05.2016

5.29. *Hypochoeris glabra* L., Sp. Pl. 811. 1753.

Collection number: 722

Synonyms: *Hypochoeris minima* Cyr., Pl. Rar. Neap. 1:10. 1788; *H. arachnoidea* Desf. Ex Poiret in Lam., Encycl. Meth. Bot. 5:572. 1804.

Distribution: Europe, N. Africa. - In Tarhuna: Hejaz, Mckhalef and Zurgan

Fl. March-April.

Collectors: MSB **Collection date:** 19.03.2016

5.30.Launaea capitata*** (Sprengel) Dandy in F. W. Andrews, Fl. Pl. Sudan 3:40. 1956.

Collection number: 910

Synonyms: *Sonchus capitatus* Sprengel, Syst. Veg. 3:650. 1826; *Launaea glomerata* (Cass.) Hooker fil., Brit. India 3:416. 1881; *Launaea glomerata* f. *minima* Pamp. in Forti, Marc. e Pamp., Atti R. 1st Veneto Sc. Lett et Art; 92 (2): 236. 1932.

Distribution: Sahara-Sind element. - In Tarhuna: Whedat.

Fl. February-June.

Collectors: MSB **Collection date:** 12.06.2017

5.31. *Launaea resedifolia* (L.) Kuntze, Revis. Gen. 1:351. 1891.

Collection number: 814

Synonyms: *Scorzonera resedifolia* L., Sp. Pl. 1198. 1753; Leontodon *mucronatum* Forsk., Fl. Egypt. 144. 1775; *Launaea mucronata* (Forsk.) Muschler, Man. Fl. Egypt 2:1057. 1912; *L. resedifolia* var. *pulchella* Pamp., Agriculture Col. 22:366 t. 1 verson f. 2. 1928; l.c. 480; Keith. l.c. 599.

Distribution: N. Africa, Spain and Iran. - In Tarhuna: Msabha, Terghlat and Wlaad Hammad.

Fl. March-May.

Collectors: MSB **Collection date:** 19.05.2016

5.32. *Leontodon simplex* (Viv.) Widderin Phytion 12:209. 1967.

Collection number: 911

Synonyms: *Hieracium simplex* Viv., Fl. Lib. Spec. 50 tab. 1824. *Leontodon muelleri* (Schultz) Fiori in Fiori & Paol., Fl. Anal. It. 3:396. 1904.

Distribution: N. Africa and Europe. - In Tarhuna: Terghlat.

Fl. February-June.

Collectors: MSB **Collection date:** 12.06.2017

5.33. *Nolletia chrysocomides* (Desf.) Cass., Dict. Sci. Nat. 37:479. 1825.

Collection number: 831

Synonyms: *Conyza chrysocomides* Desf., Fl. Atl. 2:269. T. 232. 1798.

Distribution: N. Africa; (Morocco to Libya); S. Spain. - In Tarhuna: Msabha.

Fl. January- May.

Collectors: MSB **Collection date:** 19.05.2016

5.34. **Onopordeum arenarium* (Desf.) Pomel, Nouv. Mat. Fl. Atl. 20. 1874.

Collection number: 815

Synonyms: *Carduus arenarius* Desf., Fl. Atl. 2:247 t. 222. 1799; *Onopordum sibthorpiatum* Boiss. & Heldr. var. *arenarium* (Desf.) Durand & Barratte. Fl. Lib. Prodr. 141. 1910.

Distribution: N. Africa (Libya, Tunisia, Algeria). - In Tarhuna: Msabha and Terghlat.

Fl. May-June.

Collectors: MSB **Collection date:** 19.05.2016

5.35. **Phagnalon rupestre* (L.) DC., Prodr. 5:396. 1836.

Collection number: 737

Synonyms: *Conyza rupestris* L., Mantissa 113. 1767.

Distribution: Mediterranean region & S. Spain. - In Tarhuna: Khsaya, Msaaed, Msabha, Sok El-Ahedand Whedat.

Fl. February-May.

Collectors: MSB **Collection date:** 22.03.2016

5.36. **Picris asplenoides* L., Sp. Pl. 793. 1753.

Collection number: 805

Synonyms: *Crepis radicata* Forsk., Fl. Aegypt. 145. 1775; *Picris lyarata* Delile, Desct. Egypt Hist.

Nat. 259. 1813; *P. radicata* (Forsk.) Less., Syn. Gen. Comp. 134. 1832.

Distribution: N. Africa. - In Tarhuna: Arabeen, Msaaed, and Wlaad Hammad.

Fl. January-May.

Collectors: MSB **Collection date:** 19.05.2016

5.37. *Reichardia tingitana* (L.) Roth, Bot. Abh. 35.1787.

Collection number: 785

Synonyms: *Scorzonera tingitana* L., Sp. Pl. 791. 1753; *Picridium tingitanum* (L.) Desf., Fl. Atl. 2: 220. 1799; *Sonchus tingitanus* (L.) Lam., Encycl. Meth. Bot. 3:397.1792.

Distribution: N. Africa, Canary Islands, Spain, Portugal, Greece, Arabia, N. Iraq, Iran, Afghanistan and India. - In Tarhuna: Dawoon and Zurgan.

Fl. April-June.

Collectors: MSB **Collection date:** 8.04.2016

5.38. **Rhanterum suaveolens* Desf., Fl. Atl. 2:291. 1799.

Collection number: 883

Distribution: N. Africa. - In Tarhuna: Whedat and Wlaad Hammads.

Fl. March-May.

Collectors: MSB **Collection date:** 10.05.2017

5.39. *Scorzonera undulata* Vahl, Symb. Bot. 2:86. 1791.

Collection number: 695

Synonyms: *Scorzonera serrulata* Viv., Fl. Lib. Spec. 49. T. 17.1824; *S. undulate* var. *alexandrina* (Boiss.) Barratte in Bonnet & Barratte, Cat. Rais. Pl. Vas. Tunisie 262. 1896; *S. undulate* ssp. *alexandrina* (Boiss) Maire, in Jahandiez & Maire, Cat. Pl. Maroc. 3:839. 1934.

Distribution: Circum-Mediterranean region. - In Tarhuna: Dawoon, Mckalef, Meghawsha and Terghlat.

Fl. March-May.

Collectors: MSB **Collection date:** 19.03.2016

5.40. *Senecio gallicus* Chiaux in Vill., Pl. Dauph. 1:371. 1786.

Collection number: 696

Synonyms: *Senecio desfontainei* Druce, List Brit. Pl. ed. 2, 61. 1828; *S. gallicus* var. *laxiflorus* (Viv.) DC., Prodr. 6: 346. 1838.

Distribution: Mediterranean element. - In Tarhu-

na: Dawoon, Meghawsha, Shersharah and Terghlat.

Fl. January-April.

Collectors: MSB **Collection date:** 19.03.2016

5.41. **Sonchus asper* (L.) Hill. Brit. 1:47 t 34. 1769.

Collection number: 753

Synonyms: *Sonchus oleraceus* var. *asper* L., Sp. Pl. 794.1753.

Distribution: Europe, N. Africa, Sudan, Ethiopia and W. Asia. - In Tarhuna: Hejaz.

Fl. November-January.

Collectors: MSB **Collection date:** 22.03.2016

5.42. *Sonchus oleraceus* L., Sp. Pl. 794. 1753.

Collection number: 723

Synonyms: *Sonchus ciliatus* Lam., Fl. Fr. 2:87. 1778; *S. lacerus* Willd., Sp. Pl. ed.4.3:1513.1803; *S. oleraceus* var. *lacerus* (Willd.) Wallr., Sched. Grit. 432. 1822; *S. oleraceus* ssp. *lacerus* (Willd.) Clos, in Bull. Soc. Bot. Fr. 48:59. 1901; *S. oleraceus* ssp. *ciliatus* (Lam.) Zenari, in Nuovo Giorn. Bot. Ital. 31: 5. 1924.

Distribution: Europe, N. Africa and N.W. Asia. - In Tarhuna: Mckhalef and Terghlat.

Fl. Throughout the year.

Collectors: MSB **Collection date:** 19.03.2016

6. Boraginaceae

6.1.Arnebia decumbens* (Vent.) Coss. & Kral.** In Bull. Soc. Bot. Fr. 4:402. 1857.

Collection number: 884

Synonyms: *Lithospermum decumbens* Vent., Descr. Pl. Jard. Cels. 37. 1801; *Arnebia decumbens* ssp. *maccrocalyx* (Coss. & Kral.) Riedel in Rech. f. Fl. Iran. 48:160. 1967.

Distribution: N. Africa, S. Iran, and S. & C. Asia. - In Tarhuna: Arabeen and Wlaad Hammad.

Fl. February-June.

Collectors: MSB **Collection date:** 10.05.2017

6.2. *Echiochilon fruticosum* Desf., Fl. Atl. 1:167. Tab. 47. 1798.

Collection number: 786

Distribution: N. African element -Lebanon. - In Tarhuna: Zurgan.

Fl. February-June.

Collectors: MSB **Collection date:** 8.04.2016

6.3. *Echium angustifolium* Mill., Gard. Dict. ed. 8: 6. 1768.

Collection number: 754

Synonyms: *Echium sericeum* Vahl. Symb. 2:35. 1791; *E. sericeum* var. *diffusum* (Sibth. & Sm.) Boiss., Fl. Or. 4:207.1879.

Distribution: Mediterranean region and Syria. - In Tarhuna: Dawoon, Hejaz, Khsaya, Msaaed, Msabha and Terghlat.

Fl. January-March.

Collectors: MSB **Collection date:** 22.03.2016

6.4. *Echium humile* Desf., fl. Atl. 1:165. 1798.

Collection number: 787

Synonyms: *Echium angustifolium* var. *humile* de Coincy in Morot J. de Bot. 16:215. 1902; *Echium pycnanthum* ssp. *humile* (Desf.) Jan. & Maire, Cat. Pl. Mar. 605. 1934.

Distribution: N. Africa, Egypt and Southern Europe. - In Tarhuna: Khsaya and Wlaade Hammad.

Fl. March-May.

Collectors: MSB **Collection date:** 8.04.2016

6.5. *Echium sabulicola* Pomel, Nouv. Mat. Fl. Atl. 90. 1874.

Collection number: 755

Synonyms: *Echium confusum* de Coincy ex Morot in J. de Bot. 14. 298.1900; *Echium confusum* var. *decipiens* (Pomel) de Coincy ex Morot in J. Bot. 16:230.1902.

Distribution: W. Mediterranean region and N. Africa. - In Tarhuna: Hejaz.

Fl. March-April.

Collectors: MSB **Collection date:** 22.03.2016

6.6. *Elizaldia calycina* (Roem. & Schultes) Maire, Bull. Soc. Hist. Nat. Afr. Nord 20: 192. 1929.

Collection number: 858

Synonyms: *Lycopsis calycina* Roem. & Schultes Syst. 4:74.1819; *Elizaldia violacea* (Desf.) I.M. Johnst. ssp. *calycina* (Roem. & Schultes) Maire, l.c. 1920.

Distribution. Mediterranean region. - In Tarhuna: Arebeen and Dawoon.

Fl. January-June.

Collectors: MSB **Collection date:** 27.04.2017

6.7.Heliotropium europaeum* L. Sp.Pl. 130. 1753.**

Collection number: 816

Synonyms: *Heliotropium commutatum* Roem. & Schult. Syst. Veg. 4:219. 1819.

Distribution: Asia Minor, Central and South Europe, N. Africa, Iraq and Iran. - In Tarhuna: Msabha.

Fl. November-May.

Collectors: MSB **Collection date:** 19.05.2016

6.8* *Lappula spinocarpos* (Forsk.) Ascherson ex O. Kuntze in Acta Horti Petrop. 10: 215.1887.

Collection number: 885

Synonyms: *Anchusa spinocarpos* Forsk. Fl. Aegypt. -Arab. 41. 1775; *Echinosperrum spinocarpos* (Forsk.) Boiss., Fl. Or. 4:249. 1879.

Distribution: N. Africa, Sinai, Palestine, Syria, Iraq, Iran, Afghanistan, Pakistan and Central Asia. - In Tarhuna: Wlaad Hmmd.

Fl. January-May.

Collectors: MSB **Collection date:** 10.05.2017

7. Brassicaceae

7.1. *Brassica tournefortii* Gouan, Ill. Oibs. Bot. 44, t. 20A. 1773.

Collection number: 785

Synonyms: *Brassica stocksii* Hook. f. & Thoms. In J. Linn. Soc. Bot. 5:171. 1861.

Distribution: N. Africa, S. Europe, estwards to Pakistan. - In Tarhuna: Arabeen, Msaad, Sok-El-Ahed and Zurgan.

Fl. January - March

Collectors: MSB **Collection date:** 8.03.2016

7.2. *Didesmis bipinnatus* (Desf.) DC., Syst. 2: 659. 1821.

Collection number: 756

Synonyms: *Sinapis bipinnata* Desf.; Fl. Atlant. 2:97. 1799; *Rapistrum bipinnatum* (Desf.) Coss. et Kral, in B. Soc. Bot. France 4:395. 1857.

Distribution: Egypt, Libya, Tunisia, Algeria. - In Tarhuna: Hejaz, Khsaya, Terghlat and Zurgan.

Fl. February - April.

Collectors: MSB **Collection date:** 22.03.2016

7.3. *Diplotaxis muralis* (L.) DC., Syst. Nat. 2: 634. 1821.

Collection number: 859

Synonyms: *Sisymbrium murale* L., Sp. Pl. 658. 1753.

Distribution: Europe and N. Africa. - In Tarhuna: Dawoon, Sok-El-Ahed and Terghlat.

Fl. January - March.

Collectors: MSB **Collection date:** 27.04.2017

7.4. *Enarthrocarpus clavatus* Del. ex Godr., Fl. Juven. Adv. 4. 1853.

Collection number: 789

Synonyms: *Enarthrocarpus trabalis* Pomel,

Nouv. Mat. 358. 1875.

Distribution: N. Africa. - In Tarhuna: Msaad and Zurgan.

Fl. February-April.

Collectors: MSB **Collection date:** 8.04.2016

7.5. *Eruca sativa* Mill., Gard. Dict. ed.8,1:1768.

Collection number: 697

Synonyms: *Brassica eruca* L., Sp. Pl. 667. 1753; *Eruca vesicaria* (L.) Cav. ssp. *sativa* (Mill.) Thell., adv. Montpell. 260. 1912, et var. *sativa* (Mill.) Thell. In Hegi, 111. Fl. Mittleur. 4 (1): 201. 1918.

Distribution: N. Africa. - In Tarhuna: Makhalefand Whedat.

Fl. March- April.

Collectors: MSB **Collection date:** 19.03.2016

7.6. *Hussonia pinnata* (Viv.) Jafri comb. Nov. 1977.

Collection number: 860

Synonyms: *Raphanus pinnatus* Viv., Fl. Lib. Sp. 37. Tab. 16.1824; *Hussonia uncatata* Boiss., Diagn. Ser. 1.8: 47. 1849.

Distribution: N. Africa, Sinai, Arabia Petraea. - In Tarhuna: Dawoon and Sok-El-Ahed.

Fl. March-May.

Collectors: MSB **Collection date:** 27.04.2017

7.7. *Matthiola fruticulosa* (L.) Maire in Jah. & Ma- itre, Cat. Pl. Maroc. 2: 311. 1932.

Collection number: 837

Synonyms: *Cheiranthus fruticulosus* L., Sp. Pl. 662. 1753.

Distribution: Europe, N. Africa, Cyprus, Lebanon, Turkey. - In Tarhuna: Terghlat and Zurgan.

Fl. February. - April.

Collectors: MSB **Collection date:** 19.05.2016

7.8. *Matthiola longipetala* (Vent.) DC., Syst. 2:174.1821.

Collection number: 698

Synonyms: *Cheiranthus longipetalus* Vent., Hort. Cals. 93. 1802; *Matthiola oxyceras* DC., l.c. 173.

Distribution: Irano-Turanian element: S. Europe, N. Africa, Arabia, W. Asia, to S. Russia & Turkey. - In Tarhuna: Khsaya, Maghawsha, Sharshara, Sok-El-Ahed and Zurgan.

Fl. February-May.

Collectors: MSB **Collection date:** 19.03.2016

7.9. **Sinapis alba* L., Sp. Pl. 668. 1753.

Collection number: 872

Synonyms: *Brassica alba* (L.) Rabenh., Fl. Lusatica, 1:154. 1893; *S. alba* ssp. *mairei* (Lindb.) Maire in M. C. 1365. 1933.

Distribution: Europe, N. Africa, S.W. Asia. -In Tarhuna: Sok-El-Ahed.

Fl. February-April.

Collectors: MSB **Collection date:** 3.05.2017

7.10. *Sisymbrium irio* L., Sp. Pl. 659. 1753.

Collection number: 790

Synonyms: *Sisymbrium irioides* Boiss. In Ann. Sc. Nat. Ser. 2. 17: 76. 1842.

Distribution: Europe, N. Africa, S.W. & C. Asia. - In Tarhuna: Zurgan.

Fl. February-May.

Collectors: MSB **Collection date:** 8.04.2016

8. Caesalpiaceae

8.1. **Ceratonia siliqua* L., Sp. Pl. 1026. 1753.

Collection number: 873

Distribution: S. Europe, Cyprus, N. Syria, N. Africa. - In Tarhuna: Sok-El-Ahed.

Fl. January-November.

Collectors: MSB **Collection date:** 3.05.2017

9. Caryophyllaceae

9.1. *Silene colorata* Poiret, Voy. Barb. 2:163. 1789.

Collection number: 757

Synonyms: *Silene bipartite* Desf., Fl. Atl. 1: 352. T. 100. 1798; *S. ligulata* Viv., Fl. Lib. Spec. 24. 1. 12., f. 3. 1824.

Distribution: S. Europe, Turkey, Russia, N. Africa, Arabia and Pakistan. - In Tarhuna: Hejaz, Wlaad Hammad and Zurgan.

Fl. January-June.

Collectors: MSB **Collection date:** 22.03.2016

9.2. **Silene gallica* L., Sp. Pl. 417. 1753.

Collection number: 886

Synonyms: *Silene quinquevulnera* L., Sp. Pl. 416. 1753.

Distribution: N. Africa, Europe, Asia. - In Tarhuna: Wlaad Hammad.

Fl. November-May.

Collectors: MSB **Collection date:** 10.05.2017

10. Chenopodiaceae

10.1. **Chenopodium album* L., Sp. Pl. 219. 1753.

Collection number: 806

Synonyms: None.

Distribution: Europe, Asia and N. Africa. - In Tarhuna: Msaaed.

Fl. March-November.

Collectors: MSB **Collection date:** 19.05.2016

10.2. **Chenopodium murale* L., Sp. Pl. 219. 1753.

Collection number: 791

Distribution: Cosmopolitan species. - In Tarhuna: Msaaed, Terghlat and Zurgan.

Fl. January -May.

Collectors: MSB **Collection date:** 8.04.2016

10.3. **Hammada scoparia* (Pomel) Ijlin in J. Bot. US, 33: 583. 1943.

Collection number: 843

Synonyms: *Haloxylon scoparium* Pomel., Nouv. Mat. Fl. Atl. 335. 1875; *Salsola articulate* Cav. I.c. 3: 43.t. 284. 1794 *Haloxylon articulatum* ssp. *scoparium* (Pomel.) Batt. In B. & T., Fl. Alg. 765. 1890; *Arthrophytum scoparium*. (Pomel.) Ijlin ex Jeh. & Maire, Cat. Maroc. 975. 1914.

Distribution: S.E. Spain, N. Africa, Iran. - In Tarhuna: Khsaya, Sok-El-Ahed and Terghlat.

Fl. October-May.

Collectors: MSB **Collection date:** 27.04.2017

11. Cistaceae

11.1. **Fumana arabica* (L.) Spach in Ann. Sc. Nat. Ser. II. 6: 359. 1836.

Collection number: 844

Synonyms: *Cistus arabicus* L., Sp. Pl. ed. 2: 745. 1762; *Helianthemum arabicum* (L.) Pers., Syn. Pl. 2: 80. 1807.

Distribution: N. Africa, Italy, Turkey, Syria and Iran. - In Tarhuna: Khsaya.

Fl. March-April.

Collectors: MSB **Collection date:** 27.04.2017

11.2. **Fumana thymifolia* (L.) Spach ex Webb, Iter, Hisp. 69. 1838.

Collection number: 817

Synonyms: *Cistus thymifolius* L., Sp. Pl. 528. 1753; *Fumana viscida* Spach, Hist. Veg. Phan. 6: 12. 1838 *F. viscid* var. *thymifolia* (L.) Spach in Spach in Ann. Sc. Nat. Bot. Ser. 2. 6: 359. 1836.

Distribution: S. Europe, N. Africa to W. Syria & Turkey. - In Tarhuna: Msaaed and Terghlat.

Fl. March - April.

Collectors: MSB **Collection date:** 19.05.2016

11.3. *Helianthemum ciliatum* (Desf.) Pers., Syn. Pl. 2: 79. 1806.

Collection number: 807

Synonyms: *Cistus ciliates* Desf., Fl. Atlant. 1: 421.

Tab. 109. 1798.

Distribution: Spain, N. Africa, Egypt, Palestine and Arabia Petrea. - In Tarhuna: Msaaed.

Fl. March-April.

Collectors: MSB **Collection date:** 19.05.2016

11.4. *Helianthemum hirtum* (L.) Mill., Gard. Dict. ed. 8, no. 14. 1768.

Collection number: 699

Synonyms: *Cistus hirtus* L., Sp. Pl. 528. 1753; *Helianthemum ruficosum* (Viv.) Spreng., Spet. 2: 589. 1825; *Helianthemum hirtum ssp. ruficosum* (Viv.) Maire in Jahand. Maire, Cat. Pl. Maroc. 900. 1934.

Distribution: S.W. Europe, Algeria, Mauritania and Liby. - In Tarhuna: Hejaz, Meghawsha and Terghlat.

Fl. March-April.

Collectors: MSB **Collection date:** 19.03.2016

11.5. **Helianthemum kahiricum* Delile, Fl. Egypt 237. Tab. 31. 1813.

Collection number: 818

Synonyms: *Helianthemum libycum* Pomel, Nouv. Mat. Fl. Atl. 352. 1875.

Distribution: N. Africa, Egypt, Palestine and Arabia Petrea. - In Tarhuna: Msaaed.

Fl. March-April.

Collectors: MSB **Collection date:** 19.05.2016

11.6. **Helianthemum lavandulifolium* Miller, Gard. Dict. ed. 8 no, 13. 1768.

Collection number: 724

Synonyms: *Helianthemum racemosum* Pers., Sy. 2: 79. 1819.

Distribution: Europe and N. Africa. - In Tarhuna: Mckhalef.

Fl. February-April.

Collectors: MSB **Collection date:** 19.03.2016

11.7. **Helianthemum lippii* (L.) Dum. Cours., Le Bot. Cult. 3: 130. 1802.

Collection number: 865

Synonyms: *Cistus lippii* L., Mantissa 2: 245. 1767.

Distribution: N. Africa, Arabia, W. Asia- E. Pakistan. - In Tarhuna: Sharshara and Sok-El-Ahed.

Fl. March-May.

Collectors: MSB **Collection date:** 27.04.2017

11.8. **Helianthemum stipulatum* (Forsk.) C. Chr. In Dansk. Bot. Ark. 4 (3): 20. 1922.

Collection number: 838

Synonyms: *Cistus stipulates* Forsk., Fl. Aeg. - Arab, 101. 1775; *Cistus ellipticum* Desf., Fl. Atl. 1: 418. T. 107. 1800; *Helianthemum ellipticum* (Desf.) Pers. Synops. 2: 78. 1807.

Distribution: N. Africa, Greece, Anatolia, Egypt, Arabia and Iraq. - In Tarhuna: Terghlat.

Fl. March-April.

Collectors: MSB **Collection date:** 19.05.2016

12. Convolvulaceae

12.1. *Convolvulus althaeoides* L., Sp. Pl. 1: 156. 1753.

Collection number: 700

Distribution: S. Europe, Canary Islands & Mediterranean region. - In Tarhuna: Hejaz, Mckhalef, Meghawsha and Sok-El-Ahed.

Fl. March-June.

Collectors: MSB **Collection date:** 19.03.2016

12.2. **Convolvulus arvensis* L., Sp. Pl. 153. 1753.

Collection number: 845

Distribution: Temperate regions throughout the world except Australia. - In Tarhuna: Khsaya, Shersharah, and Terghlat.

Fl. March-August.

Collectors: MSB **Collection date:** 27.04.2017

12.3. **Convolvulus dorycnium* L., Syst. Nat. ed. 10, 2: 923. 1759.

Collection number: 832

Distribution: Greece, Crete, Tunisia, Libya and Egypt. - In Tarhuna: Msabha.

Fl.????

Collectors: MSB **Collection date:** 19.05.2016

12.4. *Convolvulus supinus* Coss. et Kral. In Bull. Soc. Bot. Fr. 4: 400. 1857.

Collection number: 792

Distribution: N. Africa (Libya, Tunisia, Algeria, Morocco). - In Tarhuna: Terghlat.

Fl. April-June.

Collectors: MSB **Collection date:** 8.04.2016

13. Crasulaceae

13.1. *Sedum sediforme* (Jacq.) Pau. In Act. Mem. Prim. Congr. Nat. Esp. Zaragoza 246. 1909.

Collection number: 725

Synonyms: *Sempervivum sediforme* Jacq., Hort., Vindob. 1: 35. T. 81. 1770; *Sedum altissimum* Poiret

in Lamk. Encycl. 4, 634. 1796.

Distribution: S. Europe, Mediterranean region & W. Asia. - In Tarhuna: Hejaz and Mckhalef.

Fl. March-July.

Collectors: MSB **Collection date:** 19.03.2016

14. Cucurbitaceae

14.1. **Bryonia cretica* L., Sp. Pl. 1013. 1753.

Collection number: 846

Synonyms: *Bryonia dioica* Jacq., Fl. Austr. 2: 59. T. 199. 1774; *B. cretica* ssp. *dioica* (Jacq.) Tutin in Feddes Report. 79: 61. 1968.

Distribution: Europe, N. Africa and W. Asia. - In Tarhuna: Khsaya.

Fl. February- April.

Collectors: MSB **Collection date:** 27.04.2017

15. Cuscutaceae

15.1. *Cuscuta planiflora* Ten., Fl. Nap. 3: 250, tab. 220.1829.

Collection number: 758

Synonyms: *Cuscuta sicula* Ten. ex Englem. In Trans. Acad. St. Louis 1: 466. 1859.

Distribution: Mediterranean region, N. Africa, Mauretania and Iran. - In Tarhuna: Hejaz.

Fl. March-May.

Collectors: MSB **Collection date:** 22.03.2016

16. Dipsacaceae

16. 1. *Scabiosa arenaria* Forskal, Fl. Aeg-Arab. LXI no. 89.1775.

Collection number: 701

Synonyms: *Scabiosa rhizantha* Viv., Fl. Lib. Spec. 6. t. 3. 1824; *Astercephalus arenarius* (Forsk.) Vis., Ic. Pl. Quar. Aeg. -Nub. 6. t. 1.1.1836.

Distribution: N. Africa, Syria and Palestine. - In Tarhuna: Hejaz, Msaaed and Terghlat.

Fl. March-May.

Collectors: MSB **Collection date:** 19.03.2016

17. Ephedraceae

17.1. *Ephedra altissima* Desf., Fl. Atl. 2:372, 1799; Pamp. Trip. 5.1914; Mair, Fl. Af. Nord. 1:145. 1952; Keith, Prelim. Check list Lib. 1.456. 1965.

Collection number: 901

Distribution: N. Africa. - In Tarhuna: Arbeen.

Fl. March-May.

Collectors: MSB **Collection date:** 10.05.2017

18. Euphorbiaceae

18.1. **Euphorbia exigua* L., Sp. Pl. 456. 1753.

Collection number: 819

Synonyms: *Euphorbia exigua* var. *retusa* L., Sp. Pl. 45. 1753.

Distribution: Europe, N. Africa, Canaries & W. Asia. - In Tarhuna: Msabha.

Fl. February-May.

Collectors: MSB **Collection date:** 19.05.2016

18.2. **Euphorbia falcata* L., Sp. Pl. 456. 1753.

Collection number: 793

Synonyms: *Euphorbia acuminata* Lam., Encyc. 2: 426. 1788; *E. falcata* var. *acuminata* (Lam.) S. Amand, Fl. Agen. 189, 1821.

Distribution: N. Africa, Pakistan and India. - In Tarhuna: Zurgan.

Fl. February-June.

Collectors: MSB **Collection date:** 8.04.2016

18.3. *Euphorbia helioscopia* L., Sp. Pl. 459. 1753.

Collection number: 874

Synonyms: *Euphorbia helioscopioides* Loscos & Pard., Inconf. Arag 93. 1863.

Distribution: Europe, N. Africa to Asia. - In Tarhuna: Sok-El-Ahed.

Fl. January-May.

Collectors: MSB **Collection date:** 3.05.2017

18.4. *Euphorbia terracina* L., Sp. Pl. ed. 2: 654. 1762.

Collection number: 808

Synonyms: *Euphorbia trapezoidalis* Viv., Fl. Lib. Spec. 25, tab. 4. 1824.

Distribution: Europe, Mediterranean region, Canaries and Syria. - In Tarhuna: Msaaed.

Fl. January-June.

Collectors: MSB **Collection date:** 19.05.2016

18.5. **Ricinus communis* L., Sp. Pl. 1430. 1753.

Collection number: 820

Distribution: Most Tropical and subtropical countries. - In Tarhuna: Msabha and Terghlat.

Fl. Throughout the year

Collectors: MSB **Collection date:** 19.05.2016

19. Fabaceae

19.1. **Anthyllis tetraphylla* L., Sp. Pl. 719. 1753.

Collection number: 759

Synonyms: *Physanthyllis tetraaphylla* (L.) Boiss., Voy. Bot. Espagne 2: 162. 1839

Distribution: Mediterranean region. - In Tarhuna: Hejaz.

Fl. February-April.

Collectors: MSB **Collection date:** 22.03.2016

19.2. *Argyrobium uniflorum (Decne.) Jaub. & Spach, Ill. Pl. Or. 1: 115. 1843.

Collection number: 760

Synonyms: *Cystisus uniflorus* Decne. In Ann. Sc. Nat. Bot. Ser. II. 3: 265. 1835.

Distribution: N. Africa, Sinai, Palestine, Syria, S. Anatolia. - In Tarhuna: Hejaz, Msabha, Terghlat and Zurgan.

Fl. March-April.

Collectors: MSB **Collection date:** 22.03.2016

19.3. *Astragalus asterias Stev. ex Ledeb., Fl. Ross. 1: 636. 1843.

Collection number: 809

Synonyms: *Astragalus aristidis* Coss. ex Batt. Et. Trab., Alg. 256. 1889.

Distribution: C. & W. Asia, Arabia and N. Africa. - In Tarhuna: Msaaed.

Fl. January-March.

Collectors: MSB **Collection date:** 19.05.2016

19.4. *Astragalus caprinus L., Sp. Pl. ed. 2: 1071. 1763.

Collection number: 847

Synonyms: *Astragalus lanigerus* Desf., Fl. Atl. 2: 181. t. 202. 1799. *A. caprinus* ssp. *lanigerus* (Desf.) Maire in Jehand. & Maire, Cat. Pl. Maroc. 2:413. 1932.

Distribution: N. Africa, Palestine, Turkey, Cyprus, Syria, Iraq and Iran. - In Tarhuna: Khsaya.

Fl. Almost throughout the year.

Collectors: MSB **Collection date:** 27.04.2017

19.5. *Astragalus sinaicus Boiss., Diagn. Ser. 1.9. 57. 1849.

Collection number: 761

Distribution: Greece, Aegean, Crimea, Turkey, N. Africa, Sinai and Arabia. - In Tarhuna: Hejaz and Wlaad Hammad

Fl. March-May.

Collectors: MSB **Collection date:** 22.03.2016

19.6. *Astragalus stella Gouan. Ill. Obs. Bot. 1773.

Collection number: 738

Synonyms: *Astragalus acutifolius* DC. ex Steud.

Nom. 88. 1821; *Stella radiata* Fourr. In Ann. Soc. Linn. Lyon 16: 364. 1863.

Distribution: Mediterranean region & Arabia. - In Tarhuna: Khsaya and Whedat.

Fl. February-April.

Collectors: MSB **Collection date:** 22.03.2016

19.7. Astragalus tribuloides Del., Fl. Aeg. Ill. 70. 1813.

Collection number: 726

Synonyms: *Oxyglottis tribuloides* (Delile) Nevski in Acta Inst. Bot. Acad. Sc. URSS ser1 (4): 259. 1937.

Distribution: N. Africa, Palestine, Turkey, W. Asia, Arabia. - In Tarhuna: Mckhalef.

Fl. March-April.

Collectors: MSB **Collection date:** 19.03.2016

19.8. *Astragalus trigonus DC., Astragal. 81. 1802.

Collection number: 762

Synonyms: *Astragalus leucacanthus* Boiss., Diagn. Ser. 1.9: 93. 1849; *A. trigonus* var. *leucacanthus* (Boiss.) Tackh. et Boulos in Pub. Cairo Univ. Herb. 5:69. 1972.

Distribution: Egypt and Libya. - In Tarhuna: Hejaz.

Fl. March-April.

Collectors: MSB **Collection date:** 22.03.2016

19.9. *Calicotome villosa (Poir.) link in Schrader, Nau. J. Bot. 2(2): 51. 1806.

Collection number: 763

Synonyms: *Spartium villosum* Poir., Voy. Barb. 2: 207. 1789; *Calicotomerigida* (Viv.) Maire & Weil., in Bull. Soc. Hist. Nat. Afr. Nord 30: 271. 1939. *C. villosa* var. *rigida* (Viv.) Beg. et Vacc., Cont. Fl. Lib. 47. 1912.

Distribution: S. Europe, N. Africa, Palestine. - In Tarhuna: Hejaz, Khsaya and Terghlat.

Fl. January-April.

Collectors: MSB **Collection date:** 22.03.2016

19.10. *Coronilla scorpioides (L.) Koch, Syn. Fl. Germ. Helv. 188. 1853.

Collection number: 764

Synonyms: *Ornithopus scorpioides* L., Sp. Pl. 744. 1753

Distribution: Europe, N. Africa, Palestine, Turkey, Syria and S. Iran. - In Tarhuna: Hejaz, Khsaya and Shersharah.

Fl. February- April.

Collectors: MSB **Collection date:** 22.03.2016

19.11. *Hippocrepis bicontorta* Loisel, Nouv. Not. 32. 1827.

Collection number: 765

Synonyms: *Hippocrepis conigera* Boiss, Diagn. Ser. 1.2: 102. 1843..

Distribution: N. Africa, Sinai, Palestine, Arabia, Kuwait, Bahrain and S. Iran. - In Tarhuna: Arabeen, Hejaz, and Terghlat.

Fl. March-May.

Collectors: MSB **Collection date:** 22.03.2016

19.12. **Hippocrepis ciliata* Willd. In Ges. Naturf. Fr. Berlin Mag. 2: 137. 1808.

Collection number: 766

Distribution: Mediterranean region. - In Tarhuna: Hejaz.

Fl. February-April.

Collectors: MSB **Collection date:** 22.03.2016

19.13. **Hippocrepis cyclocarpe* Murb. In Act. Univ. Lund 33(12):80.1897.

Collection number: 767

Synonyms: *Hippocrepis cyclocarpe* var. *pubescens* Pamp. in Bull. Soci. Bot. Ital. 14.1914.

Distribution: Egypt, Libya and Tunisia. - In Tarhuna: Hejaz.

Fl. March-May.

Collectors: MSB **Collection date:** 22.03.2016

19.14. **Hymenocarpus circinatus* (L.) Savi, Fl. Pis. 2:205. 1798.

Collection number: 768

Synonyms: *Mddicago circinata* L., Sp. Pl. 778. 1753; *Corniciana circinata* (L.) Boiss., Voy. Bot. Esp. 2: 163. 1839.

Distribution: S. Europe, N. Africa and Asia. - In Tarhuna: Hejaz.

Fl. Marc-April.

Collectors: MSB **Collection date:** 22.03.2016

19.15. *Lotus cytisoides* L., Sp.PI. 776. 1753.

Collection number: 769

Synonyms: *Lotus cretius* var. *cytisoides* (L.) Boiss., Fl. Or. 2:165. 1872; *L. cretius* ssp. *Cytisoides* (L.) Aschers.

Distribution: Mediterranean region. - In Tarhuna: Terghlat.

Fl. March-June.

Collectors: MSB **Collection date:** 22.03.2016

19.16. *Lotus edulis* L., Sp. Pl. 774. 175.

Collection number: 770

Distribution: Mediterranean region. - In Tarhuna: Hejaz.

Fl. March-May.

Collectors: MSB **Collection date:** 22.03.2016

19.17. **Lotus halophilus* Boiss. et Spruner in Boiss., Diagn. Ser. 1.2.1843.

Collection number: 771

Synonyms: *Lotus pusillus* Viv., Fl. Lib. Spec. 47, 1824; *L. halophilus* var. *macranthus* Boiss., Fl. Or. 2:17. 1872.

Distribution: E. Mediterranean, Greece, Italy, Crete, Sicily, Cyprus, N. Africa, Palestine, Turkey and W. Syria. - In Tarhuna: Targhat.

Fl. January-April.

Collectors: MSB **Collection date:** 22.03.2016

19.18. **Medicago littoralis* Rohde ex Lois., Not. Fl. France. 118. 1810.

Collection number: 772

Distribution: Mediterranean region. - In Tarhuna: Hejaz and zurgan.

Fl. February-June.

Collectors: MSB **Collection date:** 22.03.2016

19.19. **Medicago minima* (L.) Bart., Cat. Piant. Siena 61. 1776.

Collection number: 866

Synonyms: *Medicago polymorpha* var. *minima* L., Sp. Pl. 780. 1753.

Distribution: Eurasia. Mediterranean region and S. Africa. - In Tarhuna: Shersharah.

Fl. February-April.

Collectors: MSB **Collection date:** 27.04.2017

19.20. **Medicago polymorpha* L., Sp. Pl. 779. 1753.

Collection number: 739

Synonyms: *Medicago nigra* Krock., Fl. Siles. 2 (2): 244. 1826; *M. hispida* Gaertn., Fruct. et Sem. 2:349. 1791.

Distribution: Mediterranean region, W, & C. Asia. - In Tarhuna: Dawoon, Shersharah, Whedat and Wlaad Hammad.

Fl. February-May.

- Collectors:** MSB **Collection date:** 22.03.2016
- 19.21. **Medicago tornata*** (L.) Mill., Gard. Dict. ed. 8. No. 3. 1768.
Collection number: 702
Synonyms: *Medicago polymorpha* var. *tornata* L., Sp. Pl. 780. 1753.
Distribution: Mediterranean region. - In Tarhuna: Mackhalef and Zurgan.
Fl. February-May.
Collectors: MSB **Collection date:** 19.03.2016
- 19.22. **Medicago truncatula*** Gaertn., Fruct. et Sem. 2:350. 1791.
Collection number: 773
Synonyms: *Medicago tribuloides* Desr. In Lam., met. 3: 635. 1792; *Medicago tribuloides* var. *truncatula* (Gaertn.) Koch, Syn. Fl. Germ. Helv. !62. 1835.
Distribution: Mediterranean and Saharo-Arabian region to Syria. - In Tarhuna: Hejaz.
Fl. February-May.
Collectors: MSB **Collection date:** 22.03.2016
- 19.23. **Ononis reclinata*** L., Sp. Pl. ed. 2:1011.1753.
Collection number: 703
Synonyms: *Ononis mollis* Savi, Mem, Mod. 9:351. t. 8. 1801; *O. reclinata* var. *minor* Moris, Fl. Sard. 1:422. 1837; *O. reclinata*.var. *mollis* (Savi) Heldr. in Bull. Herb. Boiss. 6:292. 1808.
Distribution: Mediterranean region & S.W. Asia. - In Tarhuna: Meghawsha.
Fl. March-June.
Collectors: MSB **Collection date:** 19.03.2016
- 19.24. *Ononis sicula*** Guss., Cat. Pl. Boccad. 78. 1821.
Collection number: 704
Synonyms: *Ononis viscosa* L. var. *sicula* (Guss.) Fiori, Fl. Anal. Ital. 1:826. 1925.
Distribution: Mediterranean region (S. Europe, N. Africa) Arabia, Iraq and Iran. - In Tarhuna: Meghawsha.
Fl. March-May.
Collectors: MSB **Collection date:** 19.03.2016
- 19.25. **Psoralea bituminosa*** L., Sp. Pl. 763. 1753.
Collection number: 705
Synonyms: *Psoralea palestina* Gouan, lll. Obs. Bot. 5. 1773; *Aspalathium bituminosum* (L.) Medik., Phil. Bot. 1: 211. 1789.
Distribution: S. Europe, N. Africa, Palestine, W. Syria and Turkey. - In Tarhuna: Meghawsha.
Fl. March-June.
Collectors: MSB **Collection date:** 19.03.2016
- 19.26. **Retama raetam*** (Forsk.) Webb in Webb & berth., Phyt. Canar. 2:56.1842.
Collection number: 706
Synonyms: *Genista raetam* Forsk., Fl. Aeg. -Arab. 214. 1775; *Spartium raetam* (Forsk.) Spach in Ann. Sc. Nat. Ser. 2:19. 288.t. 16. 1843; *Retama duriaei* (Spach) Webb Spach in Ann. Sc. Nat. Ser. 2.20: 279. 1843.
Distribution: N. Africa, Palestine and Syria. - In Tarhuna: Khsaya, Meghawsha, Msabha, Sok-El-Ahed, Terghlat, Whedat and Zurgan.
Fl. February-June.
Collectors: MSB **Collection date:** 19.03.2016
- 19.27. **Scorpiurus muricatus*** L., Sp. Pl. 745. 1753.
Collection number: 707
Synonyms: *Scorpiurus subvillosus* L., Sp. Pl. 745. 1753.
Distribution: Mediterranean region, Canaries, S. Iran and E. Afric a.- In Tarhuna: Mckhalef, Meghawsha, Sok-El-Ahed and Whedat.
Fl. March-April.
Collectors: MSB **Collection date:** 19.03.2016
- 19.28. **Vicia ervilia*** (L.) Willd., Sp. Pl. 3:1103. 1802.
Collection number: 861
Synonyms: *Ervum ervilia* L., Sp. Pl. 738. 1753.
Distribution: Mediterranean area, S.W. Asia. - In Tarhuna: Terghlat.
Fl. February-June.
Collectors: MSB **Collection date:** 27.04.2017
- 19.29. **Vicia monantha*** Retz., Obs. Bot. 3:39. 1783.
Collection number: 912
Synonyms: *Vicia calcarata* Desf., Fl. Atlant. 2:166. 1798.
Distribution: Mediterranean area, S.W. Asia. - In Tarhuna: Terghlat.
Fl. March-May.
Collectors: MSB **Collection date:** 12.06.2017
- 19.30. **Vicia villosa*** Roth, Tent. Fl. Germ. 2:182. 1789.
Collection number: 867
Synonyms: *Vicia reuteriana* Boiss. & Buhse, Aufz. 73. 1860; *V. ambigua* Guss., Prodr. 2:435. 1828;

V. pseudo-caracca var. *ambigua* (Guss.) Durand & Barratte, l.c. 876.

Distribution: S. & C. Europe, N. Africa, Palestine, Turkey, S. & W. Asia. - In Tarhuna: Shersharah.

Fl. January-April.

Collectors: MSB **Collection date:** 27.04.2017

20. Fumaraceae

20.1. *Fumaria densiflora* DC., Cat. Hort. Monspel. 113. 1813.

Collection number: 794

Synonyms: *Fumaria micrantha* Lag., Elench. Hort. Matrit. 21. 1816; *F. bracteosa* Pomel, Nouv. Mat. 239. 1874.

Distribution: W. & S. Europe, N. & S. Africa, Turkistan and New Zealanda. - In Tarhuna: Msaaed and Zurgan.

Fl. February-April.

Collectors: MSB **Collection date:** 8.04.2016

20.2. **Fumaria parviflora* Lam., Encycl. 2:567. 1788.

Collection number: 875

Synonyms: *Fumaria caspitosa* Loscos ex Willk. & Lange, Prod. Fl. Hisp. 3: 884. 1880; *F. glauca* Jord., Pugill. 8. 1852.

Distribution: Europe, S. Russia, N. Africa and S.W. Asia. - In Tarhuna: Sok-El-Ahed.

Fl. February-April.

Collectors: MSB **Collection date:** 3.05.2017

21. Geraniaceae

21.1. **Erodium glaucophyllum* (L.) L'Herit in Ait., Hort. Kew 2:416. 1789.

Collection number: 862

Synonyms: *Geranium glaucophyllum* L., Sp. Pl. 679. 1753; *E. tordilioides* Viv., Fl. Lib. Spec. 39. 1824.

Distribution: N. Africa, Jordan, Sinai, Syria, Iraq, Kuwait, Arabia and Iran. - In Tarhuna: Dawoon and Sok-El-Ahed.

Fl. November-May.

Collectors: MSB **Collection date:** 27.04.2017

21.2. **Erodium hirtum* (Forsk.) Willd., Sp. Pl. 3:632. 1880.

Collection number: 902

Synonyms: *Geranium hirtum* Forsk., Fl. Aeg-Arab. 123. 1775.

Distribution: N. Africa, Jordan, Sinai, Palestine, Lebanon, Syria and Iraq. - In Tarhuna: Arabeen.

Fl. January-May.

Collectors: MSB **Collection date:** 10.05.2017

21.3. *Erodium laciniatum* (Cav.) Willd., Sp. Pl. 3: 633. 1800.

Collection number: 708

Synonyms: *Geranium laciniatum* Cav., Monad. Class. Diss. Dec. 4:228. t. 113. 1787; *E. laciniatum* ssp. *pulverulentum* (Cav.) Burt & Lewis in Kew Bull. 1954. 405. 1954.

Distribution: N. Africa, S. Europe, Eastwards to Pakistan. - In Tarhuna: Arabeen, Meghawsha and Terghlat.

Fl. January-May.

Collectors: MSB **Collection date:** 19.03.2016

21.4. **Erodium neuradifolium* Delile in Godron, Fl. Juv. 17. 1853.

Collection number: 795

Synonyms: *Erodium aegyptiacum* Boiss., Diagn. Pl. Or. Nov. 2 (3): 111. 1854; *E. angulatum pommel* Nouv. Mat. Fl. Atl. 341. 1874.

Distribution: Canaries, S. W. Europe, N. Africa, Iran and Afghanistan. - In Tarhuna: Zurgan.

Fl. December-June.

Collectors: MSB **Collection date:** 8.04.2016

22. Hypecoaceae

22.1. **Hypecoum geslini* Coss. et Kral. In Bull. Soc. Bot. France 4: 522. 1857.

Collection number: 913

Synonyms: None.

Distribution: N. Africa (Egypt to Morocco). - In Tarhuna: Terghlat.

Fl. May - June.

Collectors: MSB **Collection date:** 12.06.2017

23. Ilceberaceae

23.1. **Gymnocarpus decander* Forsk., Fl. Aegypt.-Arab. 65. 1775.

Collection number: 709

Synonyms: *Trianthema fruticosum* Vahl, Symb. 1:32. 1790; *Gymnocarpus fruticosum* (Vahl) Pers., Syn. 1:262. 1805.

Distribution: Canary Islands estwards to Pakistan and Afghanistan through N. Africa and Arabia. - In Tarhuna: Meghawsha, Msabha, Terghlat and Whedat.

Fl. February-May.

Collectors: MSB **Collection date:** 19.03.2016

23.2. **Herniaria hemistemon* J. Gay in Duch.,

Bot. 2:371. 1847.

Collection number: 710

Synonyms: *Herniaria fruticosa* Linn. Var. *hemis-temon* (J. Gay) Barratte in B. & B., Cat. Tun 65. 1896.

Distribution: N. Africa, Jordan, Iraq and Iran. - In Tarhuna: Meghawsha, Wlaad Hammad and Zurgan.
Fl. March-June.

Collectors: MSB **Collection date:** 19.03.2016

23.3. *Paronychia arabica (Linn.) DC. In Lamk., Encycl. Method. Bot. 5:24.1804.

Collection number: 711

Synonyms: *Illecebrum arabicum* L., Mant. 1:51. 1767.

Distribution: N. Africa, Turkey, Palestine, Jordan, Syria, Lebanon, Iraq, Kuwait, Saudi Arabia and Iran. - In Tarhuna: Dawoon, Msabha, Shersharah, Sok-El-Ahed, Terghlat and Wlaad hammad.

Fl. February - May.

Collectors: MSB **Collection date:** 19.03.2016

23.4. *Paronychia chlorothyrsa Murb. In Acta Univ. Lund. 33:48. tab. 2. 1897.

Collection number: 727

Synonyms: *Paronychiamacrosepala* Sensus Ball. Journ. Bot. 204. 1875; *Paronychia capitata* (Linn.) Lamk. ssp. *chlorothyrsa* (Murb.) Maire et Weiller in Maire, Fl. Afr. Nord. 9:28. 1963.

Distribution: Widespread in Sahara from S. Libya to Morocco and Eritrea. - In Tarhuna: Hejaz, and Mckhalef.

Fl. February- June.

Collectors: MSB **Collection date:** 19.03.2016

24. Iridaceae

24.1. Iris sisyrinchium L., Sp. Pl. 40. 1753; Viv., Fl. Lib. Spec. 3.1824.

Collection number: 914

Synonyms: *Moraea sisyrinchinum* (L.) Ker-Gwal. In Kon. et Sims., Ann. 1:241. 1805; *Iris syrtica* Viv., Fl. Lib. Spec. 3. 1824.

Distribution: S. Europe, N. Africa, S.W. Asia and Iran. - In Tarhuna: Terghlat.

Fl. February- April.

Collectors: MSB **Collection date:** 12.06.2017

25. Lamiaceae

25.1. *Ajuga iva (L.) Schreder, Pl. Vert. Unilab, 25. 1773.

Collection number: 849

Synonyms: *Teucrium iva* L. Sp. Pl. 563. 1753.

Distribution: S. & C. Europe, N. Africa, Syria, Palestine, and Pakistan. - In Tarhuna: Khsaya and Sharsharah.

Fl. March-April.

Collectors: MSB **Collection date:** 27.04.2017

25.2. Lavandula multifida L., Sp. Pl. 572. 1753.

Collection number: 863

Distribution: N. Africa, Spain, Arabia, Syria, Palestine to Iran. - In Tarhuna: Dawoon, Sharsharah and Wlaad Hammad.

Fl. March-May.

Collectors: MSB **Collection date:** 27.04.2017

25.3. *Marrubium alysson L., Sp. Pl. 582. 1753.

Collection number: 876

Distribution: S. Europe, N. Africa (Mediterranean region), Syria, and Palestine. - In Tarhuna: Sok-El-Ahed.

Fl. January-May.

Collectors: MSB **Collection date:** 3.05.2017

25.4. *Marrubium vulgare L., Sp. Pl. 583. 1753.

Collection number: 848

Distribution: N. Africa, Europe, Caucasus, Turkey, Syria, Palestine. Iran & Pakistan. - In Tarhuna: Khasya and Terghlat.

Fl. April - July.

Collectors: MSB **Collection date:** 27.04.2017

25.5. *Prasium majus L., Sp. Pl. 601. 1753.

Collection number: 773

Distribution: Mediterranean and S. Aegean region. - In Tarhuna: Hejaz.

Fl. March-June.

Collectors: MSB **Collection date:** 22.03.2016

25. 6. Rosmarinus officinalis L., Sp. Pl. 23. 1753.

Collection number: 833

Synonyms: *Rosmarinus angustifolius* Mill., Gard. Dict. ed. 8:1. 1758; *Salvia Rosmarinus* Schleid., Handb. Med.-Pharm. Bot. 1. 265. 1852.

Distribution: Portugal, N. W. Spain, Mediterranean region. - In Tarhuna: Msabha.

Fl. Almost throughout the year.

Collectors: MSB **Collection date:** 19.05.2016

25.7. Salvia lanigera Poir. In Lamarck, Encyclop.

Method. Suppl. 5:149. 1817.

Collection number: 728

Synonyms: *Salvia lanigera* Desf., Tasb. L'ecol Mus. Hist. Nat. ed. 3:95. 1829.

Distribution: N. Africa, Siani, Cyprus, Palestine, Jordon, Syria, Lebanon, Arabia, Iraq and Iran. - In Tarhuna: Terghlat.

Fl. January- April.

Collectors: MSB **Collection date:**19.03.2016

25.8. *Salvia verbenaca* L., Sp. Pl. 25. 1753.

Collection number: 915

Synonyms: *Salvia clandestine* L., Sp. Pl. ed. 2:36. 1762; *Horminum verbenacea* Mill., Gard. Dict. ed. 8, *Horminum* no. 1. 1768.

Distribution: Canary Islands, Maderia, N. Africa, Europe, Turkey and Iran. - In Tarhuna: Terghlat.

Fl. December- April.

Collectors: MSB **Collection date:**12.06.2017

25. 9.Scutellaria rubicunda* Hornem., Hort. 2:968. 1815.**

Collection number: 729

Synonyms: *Scutellaria peregrine* L. Sp. Pl. 599. 1753.

Distribution: N. Africa, S. Balkan peninsula, C. & S. Italy and Sicily. - In Tarhuna: Mckhalef.

Fl. March-May.

Collectors: MSB **Collection date:**19.03.2016

25.10. **Teucrium polium* L., Sp. Pl. 566. 1753.

Collection number: 868

Synonyms: *Teucrium polium* L. ssp. *Cyrenaicum* Maire et Weiller, Bull. Soc. Hist. Nat. Afr. Nord. 30:297. 1939.

Distribution: S. Europe, S. C. Russia, Turkey, Syria, Palestine, Saudi Arabia, Iraq, Iran, N. Africa, E. Africa and Somalia. - In Tarhuna: Sharsharah and Terghlat.

Fl. March-July.

Collectors: MSB **Collection date:**27.04.2017

25.11.Thymus capitatus* (L.) Hoffm. & Link, Fl. Port. 1:123: 1809.**

Collection number: 774

Synonyms: *Satureja capitata* L., Sp. Pl. 568. 17753; *Cordiothymus capitatus* (L.) Reichenb, f. in Oestr. Bot. Wocherbl. XVIII, tab. 70. 1857.

Distribution: Mediterranean region of Europe & Africa. - In Tarhuna: Hejaz, Khsayaand Msabha.

Fl. March-August.

Collectors: MSB **Collection date:**22.03.2016

26. Liliaceae

26.1. **Asparagus stipularis* Forsk., Fl. Aeg. -Arab. 72. 1775.

Collection number: 775

Synonyms: *Asparagushorridus* L., f., Suppl. 203. 1781; *A. stipularis* var. *brachyclados* Boiss. Fl. Or. 5: 338. 1884.

Distribution: N. Africa, Sicily, Cyprus, Palestine and Syria. - In Tarhuna: HejazandKhsaya.

Fl. March-April.

Collectors: MSB **Collection date:** 22.03.2016

26.2.Asphodellus fistulosus* L., Sp. Pl. 309.1753.**

Collection number: 712

Synonyms: *Asphodellus fistulosus* var. *atlanticus* Jah., Maire & Weller in Maire, Fl. Afr. Nord., 5: 38. 1958.

Distribution: Mediterranean region. - In Tarhuna: Dawoon and Meghawsha.

Fl. March-May.

Collectors: MSB **Collection date:**19.03.2016

26.3. *Asphodellus microcarpus* Salzm. & Viv. In Viv., Fl. Cors. Diag. 5. 1824.

Collection number: 796

Synonyms: *Asphodellus africanus* Jord. In Bull. Soc. Bot. 7:730. 1860.

Distribution: Mediterranean region and Canaries. - In Tarhuna: Mdsabha and Zurgan.

Fl. January-May.

Collectors: MSB **Collection date:** 8.04.2016

6.4. *Dipcadi serotinum* (L.) Medic. In Act. Acad. Theod. Palat. 6:431. 1790.

Collection number: 730

Synonyms: *Hyacinthus serotinum* L., Sp. Pl. 317. 1753.

Distribution: S. Europe, Africa and Asia. - In Tarhuna: Mckhalef.

Fl. February-April.

Collectors: MSB **Collection date:**19.03.2016

26.5. *Muscari comosum* (L.) Mill., Gard. Dict. ed. 8, no. 2. 1768.

Collection number: 713

Synonyms: *Hyacinthus comosus* L., Sp. Pl. 318. 1753; *Leopoldia comosa* (L.) Parl., Fl. Palerm.

1.438. 1845.

Distribution: S. Europe, N. Africa and W. Asia. - In Tarhuna: Mckhalef, Sok-El-Ahed and Zurgan.

Fl. March-June.

Collectors: MSB **Collection date:**19.03.2016

26.6. *Scilla peruviana* L., Sp. Pl. 309. 1753.

Collection number: 740

Synonyms: *Scilla hemisphaerica* Boiss., Voyage Espagne, 63, 1845; *S. peruviana* var. *hipponensis* (Jord. & Forr.) Maire & Weill. In M. C. 2842, 1939.

Distribution: N. Africa, Spain, Portugal and Italy. - In Tarhuna: Hejaz, Terghlat and Zurgan.

Fl. January- April.

Collectors: MSB **Collection date:**22.03.2016

26.7. *Urginea maritima* (L.) Baker in J. Linn. Soc. 13: 221. 1873.

Collection number: 877

Synonyms: *Scilla maritime* L., Sp. L. 308. 1753; *Urginea scilla* Steinh. In Ann. Sc. Nat. Ser. 2.1:321. 1834.

Distribution: Mediterranean region and Canaries. - In Tarhuna: Sok-El-Ahed.

Fl. May- October.

Collectors: MSB **Collection date:**3.05.2017

27. Malvaceae

27.1. **Lavatera bryoniifolia* Miller, Gard. Dict. ed. 8. No.11. 1768.

Collection number: 887

Synonyms: *Lavatera unguiculata* Desf., Tabl. 145. 1804.

Distribution: Libya, Sicily, Greece, Aegean region, Turkey, Palestine. - In Tarhuna: Wlaad Hammad.

Fl. May-June.

Collectors: MSB **Collection date:**10.05.2017

27.2. *Malva parviflora* L., Demonstr. Pl. 18. 1753.

Collection number: 797

Distribution: Libya, Mediterranean area, Syria, Arabia, Iran, Turkestan, Afghanistan and Pakistan. - In Tarhuna: Terghlat and Zurgan.

Fl. March-May.

Collectors: MSB **Collection date:** 8.04.2016

27.3. *Malva sylvestris* L., Sp. Pl. 689. 1753.

Collection number: 714

Distribution: N. Africa, S. W. Asia, W. Europe. - In Tarhuna: Msaaed and Terghlat.

Fl. March-May.

Collectors: MSB **Collection date:**19.03.2016

28. Papaveraceae

28.1. **Papaver hybridum* L., Sp. Pl. 506. 1753.

Collection number: 798

Distribution: Europe, N. Africa, S.W. & C. Asia. - In Tarhuna: Khsaya.

Fl. February-April.

Collectors: MSB **Collection date:** 8.04.2016

28.2. *Papaver rhoea* L., Sp. Pl. 507. 1753.

Collection number: 850

Synonyms: *Papaver chanceliae* Maire, Annot. Fl. Alg. in B. S. H. N. Afr. Nord. 6:277. 1914. *P. agrivagum* Jord., Diagn. 96. 1864.

Distribution: Europe, Asia and N. Africa. - In Tarhuna: Khsaya and Terghlat.

Fl. January- June.

Collectors: MSB **Collection date:**27.04.2017

29. Plantaginaceae

29.1. *Plantago albicans* L., Sp. Pl. 114. 1753.

Collection number: 799

Distribution: Spain, Portugal and Mediterranean region. - In Tarhuna: Dawoon, Msaaed, Msabha and Zurgan.

Fl. February-June.

Collectors: MSB **Collection date:** 8.04.2016

29.2. **Plantago amplexicaulis* Cav., Icon. Descr. 2:22, Tab. 125. 1793.

Collection number: 731

Distribution: Spain, Algeria, Tunisia, Libya, Egypt, Arabia, Iran, Pakistan and W. India. - In Tarhuna: Hejaz, and Mckhalef.

Fl. March- May.

Collectors: MSB **Collection date:**19.03.2016

29.3. *Plantago coronopus* L., Sp. Pl. 115. 1753.

Collection number: 741

Distribution: Europe, Mediterranean region, W. Asia. - In Tarhuna: Arabeen, Sok-El-Ahed, Whedat and Zurgan.

Fl. March-July.

Collectors: MSB **Collection date:**22.03.2016

29.4. **Plantago lanceolata* L., Sp. Pl. 1753.

Collection number: 916

Synonyms: *Plantago orientalis* Stapf. In Denkschr. Akad. Wiss. Math. Nat. Kl. 50:33. 1885.

Distribution: N. Africa, Europe, S. Asia - the mountains of Tien Shan, Pamir Alaj and Australia. - In Tarhuna: Terghlat.

Fl. March-July.

Collectors: MSB **Collection date:** 12.06.2017

29.5. *Plantago lagopus* L., Sp. Pl. 114. 1753.

Collection number: 742

Synonyms: *Plantago lusitanica* L., Sp. Pl. ed. 2.1667.

Distribution: Mediterranean region to Afghanistan & Pakistan. - In Tarhuna: Dawoon, Sok-El-Ahed and Whedat.

Fl. March-May.

Collectors: MSB **Collection date:** 22.03.2016

29.6. **Plantago notata* Lag. Gen. Sp. Nov. 7. 1816.

Collection number: 821

Synonyms: *Plantago syrtica* Viv., Fl. Lib. Spec. 7.t. 3. 1824.

Distribution: S. Spain, N. Africa, Iraq, S. Iran and Transcaucasia. - In Tarhuna: Msabha.

Fl. March-June.

Collectors: MSB **Collection date:** 19.05.2016

30. Plumbaginaceae

30.1. **Limonium pruinatum* (L.) O. Ktze, Rev. Gen. Pl. 2: 396. 1891.

Collection number: 888

Synonyms: *Statice pruinosa* L. Mant. 59. 1767.

Distribution: N. Africa to Palestine and Syria. - In Tarhuna: Wlaad Hammad.

Fl. October-May.

Collectors: MSB **Collection date:** 10.05.2017

31. Poaceae

31.1. **Aegilops kotschy* Boiss., Diagn. Pl. Or. Nov. Ser. 1, 7: 129. 1846.

Collection number: 743

Synonyms: *Aegilops ovate* var. *triaristata* acut. Non Willd. 1805.

Distribution: Egypt, Syria, Palestine, Jordan, Kuwait, Turkey, Cyprus and Iran. - In Tarhuna: Ara-been, Hejaz, Khsaya, Wlaad Hammad and Zurgan.

Fl. March-May.

Collectors: MSB **Collection date:** 22.03.2016

31.2. **Avena barbata* Pott ex Link in Schrad., Journ. Fur Botanik, 2: 314. 1799.

Collection number: 715

Distribution: Mediterranean region, Anatolia, Iraq, Iran and Afghanistan. - In Tarhuna: Hejaz, Meghawsha and Msabha.

Fl. January-May.

Collectors: MSB **Collection date:** 19.03.2016

31.3. *Bromus rigidus* Roth in Bot. Mag. (Roem. & Usteri) 4, 10: 21. 1790.

Collection number: 822

Synonyms: *Bromus villosus* Forsk., Fl. Aeg. Arab. 23. 1775; *B. villosus* var. *rigidus* (Roth) Aschers. Et Graebn. In Syn. Mitt. Fl. 11: 596. 1901.

Distribution: Mediterranean region, Lebanon, Syria, C. & S. Europe and S.W. Asia. - In Tarhuna: Khsaya.

Fl. March-June.

Collectors: MSB **Collection date:** 19.05.2016

31.4. **Bromus rubens* L., Cent. Pl. 1:5. 1755.

Collection number: 744

Synonyms: *Anisantha rubens* (L.) Nevski, in Acta Univ. As. Med. Ser. VIII b, Bot. Fsc. 17: 19. 1934.

Distribution: Europe, Mediterranean region, Anatolia, Iraq, Iran, Afghanistan and Turcomania. - In Tarhuna: Hejaz, Sok-El-Ahed, Whedat and Wlaad Hammad.

Fl. March-May.

Collectors: MSB **Collection date:** 22.05.2016

31.5. *Catapodium rigidum* (L.) C. E., Hubbard in Dony, Fl. Bedfordshire 437 1953.

Collection number: 800

Synonyms: *Poa rigida* L., Cent. Apl. 1:5. 1755; *Scelopoa rigida* (L.) Griseb., Spicil. Fl. Rumel. 2: 431. 1846.

Distribution: W. and S. Europe, Cyprus, Syria, Palestine, Lebanon, Jordan, N. Africa, Turkey, Iran and Caucasus. - In Tarhuna: Terghlat and Zurgan.

Fl. April-June.

Collectors: MSB **Collection date:** 8.04.2016

31.6. **Cenchrus ciliaris* L., Mant. Alt. 2: 302. 1771.

Collection number: 851

Synonyms: *Pennisetum ciliare* (L.) Link, Hort. Berol. 1: 213. 1827.

Distribution: S. Europe, N. Africa, Arabia, Iran, Afghanistan, Pakistan and India. - In Tarhuna: Dawoon and Khsaya.

Fl. March-April.

Collectors: MSB **Collection date:** 27.04.2017

31.7. *Cutandia dichotoma* (Forsk.) Trabut in Batt. And Trab., Fl. Alg. Mon. 237.1895.

Collection number: 812

Synonyms: *Festuca dichotoma* Forsk., Aeg. Arab. 22. 1775.

Distribution: Cyprus, Syria, Palestine, Jordan, Sinai, Egypt, Iran, C. Asia, N. Africa, Spain and Italy. - In Tarhuna: Msabha.

Fl. March-June.

Collectors: MSB **Collection date:**19.05.2016

31.8. **Cutandia maritima* (L.) Barbey, Fl. Sard. Comp. 72: 1885.

Collection number: 745

Synonyms: *Triticum maritimum* L., Sp. Pl. ed. 2: 128. 1762.

Distribution: Mediterranean region. - In Tarhuna: Whedat.

Fl. March.

Collectors: MSB **Collection date:**22.03.2016

31.9. *Cutandia memphitica* (Spreng.) richter, Pl. Europ. 1: 77. 1890.

Collection number: 823

Synonyms: *Dactylis memphitica* Spreng., Bot. Gart. Halle, Nachtr. 1: 20. 1801; *Scleropoa memphitica* (Spreng.) Parl., Fl. Ital. 1: 470. 1848.

Distribution: Mediterranean Europe and N. Africa, Syria, Lebanon, W. Pakistan, Afghanistan and C. Asia. - In Tarhuna: Dawoon.

Fl. February-May.

Collectors: MSB **Collection date:**19.05.2016

31.10. **Cyndon dactylon* (L.) Pers., Syn. Pl. 1: 85 (1805).

Collection number: 824

Synonyms: *Panicum dactylon* L., Sp. Pl. 58. 1753.

Distribution: Cosmopolitan. - In Tarhuna: Khsaya and Sok-El-Ahed.

Fl. April-October.

Collectors: MSB **Collection date:**19.05.2016

31.11. **Desmazeria philistaea* (Boiss.) H. Scholz, in Willdenowia, 6: 291. 1971.

Collection number: 776

Synonyms: *Scleropoa philistaea* Boiss., Diagn. Pl. Or. Nov. Ser. I, 13: 60.1853.

Distribution: Libya, Egypt, Palestine and Syria. - In Tarhuna: Hejaz.

Fl. March-April.

Collectors: MSB **Collection date:** 22.03.2016

31.12. **Hordeum marinum* Hudson, Fl. Angl. et. 2, 1: 57. 1778.

Collection number: 746

Synonyms: *Hordeum maritimum* with., Nat. Arr. Br.Pl. ed. 2, 1: 127. 1787.

Distribution: N. Africa, W. & S. Europe, Syria, Palestine, Jordan, Turkey, Iran, and Afghanistan. - In Tarhuna: Dawoon, Khsaya, Sok-El-Ahed and Whedat.

Fl. April-May.

Collectors: MSB **Collection date:** 22.03.2016

31.13. **Hyparrhenia hirta* (L.) Stapf in Prain, Fl. Trop. Afr. 9: 315. 1919.

Collection number: 834

Synonyms: *Andropogon hirtus* L., Sp. Pl. 1046. 1753.

Distribution: Mediterranean region, S. W. Asia, Pakistan, N.W. India, S. & E. Africa. - In Tarhuna: Msabha.

Fl. March-May.

Collectors: MSB **Collection date:**19.05.2016

31.14. *Lagurus ovatus* L., Sp. Pl. 81. 1753.

Collection number: 777

Distribution: Macronasia, E. France and Mediterranean region. - In Tarhuna: Hejaz.

Fl. March-June.

Collectors: MSB **Collection date:**27.03.2016

31.15. **Lolium multiflorum* Lam., Fl. France. 3: 621. 1778.

Collection number: 869

Synonyms: *Lolium italicum* A. Braun in Flora 17: 259. 1834; *L.gaudini* Parl., Fl. Ital. 1: 532. 1848.

Distribution: Europe, N. Africa and temperate Asia. - In Tarhuna: Shersharah.

Fl. March-May.

Collectors: MSB **Collection date:**27.04.2017

31.16. **Lolium rigidum* Gaudin, Agrost. Helvet. 1:334 1811.

Collection number: 801

Distribution: Europe, Mediterranean region, Middle East and Caucasus. - In Tarhuna: Dawoon, Khsaya, Terghlat, Wlaad Hammad and Zurgan.

Fl. March-June.

Collectors: MSB **Collection date:** 8.04.2016

31.17. **Lophochloa salzmannii* (Boiss.) H. Scholz in Willdenowia, 6: 292. 1971.

Collection number: 716

Synonyms: *Koeleria salzmannii* Boiss. et Reuter, Pugillus, 123. 1852.

Distribution: N. Africa, Iberian Peninsula. - In Tarhuna: Dawoon, Khsaya, Meghawsha, Msabha, Whedat and Zurgan.

Fl. February-June.

Collectors: MSB **Collection date:** 19.03.2016

31.18. *Lygeum spartum* Loeft. ex Linn., Cent. Pl. ed. 5, 1: 4. 1754.

Collection number: 917

Distribution: Mediterranean region. - In Tarhuna: Hejaz.

Fl. March-April.

Collectors: MSB **Collection date:** 12.06.2017

31.19. **Pennisetum divisum* (Forsk. ex Gmel) Henr., in Blumea 3: 162. 1938.

Collection number: 889

Synonyms: *Panicum divisum* Forsk ex Gmel., Syst. Nat. 2: 156. 1791.

Distribution: N. Africa, Arabia, Iraq, Iran, Afghanistan, Pakistan and India. - In Tarhuna: Wlaad Hammad.

Fl. March-May.

Collectors: MSB **Collection date:** 10.05.2017

31.20. **Stipa barbata* Desf., Fl. Atlant. 1:97, tab. 27. 1798.

Collection number: 835

Distribution: Spain, Mediterranean region, Jordan, Sinai, Cacasus, Iran, Pakistan, Afghanistan, Kashmir, C. Asia and N. Africa. - In Tarhuna: Khsaya, Msabha and Terghlat.

Fl. April-May.

Collectors: MSB **Collection date:** 19.05.2016

31.21. **Stipa capensis* Thunb., Prodr. Fl. Cap. 19. 1794.

Collection number: 802

Synonyms: *Stipa retorta* Cav., Osb., S. el R. de Valencia, 1:119. 1795; *Stipa tortilis* Desf., Fl. Atlant. 1: 99. T. 31. F. 1. 1798.

Distribution: Mediterranean region, N. and S. Africa, Palestine, Iraq, Iran, Afghanistan, Pakistan,

Arabia and India. - In Tarhuna: Arabeen, Khsaya, Msabha and Terghlat.

Fl. February-June.

Collectors: MSB **Collection date:** 8.04.2016

31.22. **Stipa parviflora* Desf. Fl., Atlant. 1: 98, tab. 29. 1798.

Collection number: 918

Distribution: Mediterranean region, Crete, Syria, Palastine, Egypt, Jordan Iran. In Tarhuna: Terghlat.

Fl. March-July.

Collectors: MSB **Collection date:** 12.06.2017

31.23. **Stipa tenacissima* L., Cent. Pl. 1: 6. 1755.

Collection number: 732

Distribution: Iberian Peninsula, N. Africa, Balears. - In Tarhuna: Dawoon, Khsaya, Mckhalef, Msabha, Terghlat, Wlaad Hammad and Zurgan.

Fl. March-June.

Collectors: MSB **Collection date:** 19.03.2016

31.24. **Stipagrostis plumosa* (L.) Munro ex T. Anders. In J. Linn. Soc. Bot. 5, Suppl. 1: 40. 1860.

Collection number: 919

Synonyms: *Aristida plumosa* L., Sp. Pl. ed. 2. 2: 1666. 1762.

Distribution: N. Africa, Pakistan and Kashmir. - In Tarhuna: Terghlat.

Fl. February-June.

Collectors: MSB **Collection date:** 12.06.2017

31.25. *Stipagrostis pungens* (Desf.) de Winter in Kirkia 3: 135. 1963.

Collection number: 903

Synonyms: *Aristida pungens* Desf. Fl. Atlant. 1: 109, tab. 35. 1798. *Aristida pungens* var. *transiens* Maire in M. C. 3382 bis 1941.

Distribution: W. Sahara, Egypt, Nubia, S. Africa, Arabia and Iran. - In Tarhuna: Arabeen.

Fl. May.

Collectors: MSB **Collection date:** 10.05.2017

31.26. **Trachynia distachya* (L.) Link, Hort. Bot. Berol. 1: 43. 1827.

Collection number: 803

Synonyms: *Bromus distachyos* L., Cent. 2: 8. 1756, Amoen Acad. 4: 304. 1759.

Distribution: Mediterranean region and S. W. C. Asia. - In Tarhuna: Zurgan.

Fl. March-June.

Collectors: MSB **Collection date:** 8.04.2016

31.27. *Vulpia ciliate* Dumort, Obs. Gram. Belg. 100. 1824.

Collection number: 747

Synonyms: *Festuca ciliate* Danth. Ex Lam. & DC., Fl. Ed. 3, 3: 55. 1805.

Distribution: Mediterranean region, Turkey, Palestine, Iraq, Iran, Afghanistan, Pakistan and N.E. India. - In Tarhuna: Terghlat.

Fl. March-April.

Collectors: MSB **Collection date:** 22.03.2016

32. Polygonaceae

32.1. *Emex spinosus* (L.) Campd., Monogr, Rum. 58. 1819.

Collection number: 839

Synonyms: *Rumex spinosus* L., Sp. Pl. 337. 1753; *R. glaber* Forsk, Fl. Aegypt Arab. 75. 1775.

Distribution: Mediterranean costal region, Iraq, S. Iran & Pakistan. - In Tarhuna: Sok-El-Ahed, Terghlat and Zurgan.

Fl. December-June.

Collectors: MSB **Collection date:** 19.05.2016

32.2. *Polygonium equisetiforme* Sibth & Sm., Prodr, Fl. Graeca 1: 266, 1809.

Collection number: 825

Distribution: S. Europe, S.W. Asia, N. Africa, Syria, Palestine, Iraq, Iran & Afghanistan. - In Tarhuna: Msabha, Sharshara and Terghlat.

Fl. January-May.

Collectors: MSB **Collection date:** 19.05.2016

32.3. **Rumex bucephalophorus* L., Sp. Pl. 336. 1753.

Collection number: 717

Distribution: Europe, N. Africa. Syria. - In Tarhuna: Meghawsha and Zurgan.

Fl. March-June.

Collectors: MSB **Collection date:** 19.03.2016

32.4. *Rumex pictus* Forsk. Fl. Aeg. -Arab. 77. 1775.

Collection number: 718

Synonyms: *Rumeex bipinnatus* L. fil., Suppl. Plant p. 211. 1781; *R. pictus ssp. bipinnatus* (L.f.) Maire, Moroc. Cat. 2827. 1939.

Distribution: Morocco, Algeria, Tunisia, Libya, Palestine and Jordan. - In Tarhuna: Meghawsha.

Fl. February-May.

Collectors: MSB **Collection date:** 19.03.2016

32.5. **Rumex tingitanus* L. Sp. Pl. 336. 1753.

Collection number: 878

Distribution: W. Irano-Turanian (Mauritanian Steppes), W. Mediterranean (Spain, Portugal, Italy and France). - In Tarhuna: Sok-El-Ahed.

Fl. January-May.

Collectors: MSB **Collection date:** 3.05.2017

32.6. **Rumex vesicarius* L., Sp. Pl. 336. 1753.

Collection number: 719

Distribution: Sahao-Arabian, N. Africa, S.W. Asia & S. Europe. - In Tarhuna: Meghawsha.

Fl. February-April.

Collectors: MSB **Collection date:** 19.03.2016

33. Primulaceae

33.1. **Anagallis arvensis* L., Sp. Pl. 148. 1753.

Collection number: 748

Synonyms: *Anagallis phoenicea* Scopoli, Fl. Carn. ed. 2. 1: 139. 1772; *A. arvensis* L. ssp. *Phoenicea* (Scop.) Vollmann in Ber. Bayer. Bot. Ges. 9: 44. 1904.

Distribution: Libya, Mediterranean region, Europe, Middle East, Iran and Pakistan. - In Tarhuna: Hejaz, Msaaed, Sok-El-Ahed, Terghlat, Whedat and Zurgan.

Fl. March- may.

Collectors: MSB **Collection date:** 22.03.2016

33.2. *Anagallis monelli* L., Sp. Pl. 148. 1753.

Collection number: 720

Synonyms: *Anagallis linifolia* L., Sp. Pl. 212. 1753.

Distribution: Libya, N.W. region to Morocco, S.W. Europe. - In Tarhuna: Meghawsha and Zurgan.

Fl. March-May.

Collectors: MSB **Collection date:** 19.03.2016

34. Ranunculaceae

34.1. **Adonis aestivalis* L., Sp. Pl. ed. 2. 771. 1762.

Collection number: 920

Distribution: Europe, N. Africa - Pakistan and Central Asia. - In Targhlat.

Fl. March-June.

Collectors: MSB **Collection date:** 12.06.2017

34.2. **Adonis dentata* Delile, Fl. Egypt 287, 753. f. 1813.

Collection number: 852

Synonyms: *Adonis persica* Boiss., Diagn. Pl. Nov.

Ser. 1. (6): 4. 1846-47.

Distribution: W. Asia, Iran, Cyprus and N. Africa. - In Tarhuna: Khsaya.

Fl. February-April.

Collectors: MSB **Collection date:** 27.04.2017

34.3. *Adonis microcarpa* DC., Reg. Veg. Syst. Nat. 1: 223. 1817.

Collection number: 870

Synonyms: *Adonis microcarpa* var. *intermedia* Boiss., Fl. Or. 1: 18. 1869; *Adonis microcarpa* var. *grandiflora* Batt. & Traub. Fl. Alg. 5. 1888.

Distribution: S. Europe, N. Africa, W. Asia and Iran. - In Tarhuna: Sharshara.

Fl. February-April.

Collectors: MSB **Collection date:** 27.04.2017

34.4. *Delphinium halteratum* Sibth. & Smith, Fl. Graec. Prodr. 1: 37. 1809.

Collection number: 904

Synonyms: *Delphinium nanum* DC., Syst. 1: 349. 1818; *D. peregrinum* L. ssp. *halteratum* (Sibth. & Smith) Batt., Fl. Alg. 16. 1888.

Distribution: Mediterranean region. - In Tarhuna: Arabeen.

Fl. December-May.

Collectors: MSB **Collection date:** 10.05.2017

35. Resedaceae

35.1. *Reseda lutea* L., Sp. Pl. 449.1753.

Collection number: 871

Synonyms: *Reseda ramosissima* Pour. Ex Willd., Enum. Hort. Berol. 499. 1809.

Distribution: N. Africa. - In Tarhuna: Sharshara.

Fl. March-May.

Collectors: MSB **Collection date:** 27.04.2017

36. Rhamnaceae

36.1. *Zizphus lotus* (L.) Lam., Encyc. 3:317.1789.

Collection number: 826

Synonyms: *Rhamnus lotus* L., Sp. Pl. 194. 1753.

Distribution: S. Europe, N. Africa - Arabia. - In Tarhuna: Khsaya and Terghlat.

Fl. March-April.

Collectors: MSB **Collection date:** 19.05.2016

36.2. *Zizphus spina-christi* (L.) Willd., Sp. Pl. 1: 1105. 1798.

Collection number: 749

Synonyms: *Rhamnus spina-christi* L., Sp. Pl. 195. 1753.

Distribution: Native of Sudan. - In Tarhuna: Whe-

dat.

Fl. September-April.

Collectors: MSB **Collection date:** 22.03.2016

37. Rubiaceae

37.1. *Galium verrucosum* Huds. In Phil. Trans. Roy. Soc. B. 56: 251. 1767.

Collection number: 853

Synonyms: *Galium valantia* Weber in Wigg., Primit. Fl. Holsat. 12. 1780.

Distribution: S. Europe & Mediterranean region. - In Tarhuna: Sok-El-Ahed.

Fl. February-May.

Collectors: MSB **Collection date:** 27.04.2017

38. Santalaceae

38.1. *Thesium humile* Vahl. Symb. Bot. 3: 43. 1794.

Collection number: 778

Distribution: Mediterranean region of Europe, N. Africa, Canaries, Egypt, S.W. Asia. - In Tarhuna: Dawoon, Hejaz and Terghlat.

Fl. February-April.

Collectors: MSB **Collection date:** 22.03.2016

39. Scrophulariaceae

39.1. *Kickxia aegyptiaca* (L.) Nabelek, Iter Turc.-Pers. 3, Publ. Fac. Sci. Univ. Masaryrk 70:31. 1926.

Collection number: 733

Distribution: N. Africa to Arabia. - In Tarhuna: Dawoon, Hejaz, Mchhalef, Msaaed, Msabha, Shars-hara, Sok-El-Ahed, Terghlat and Zurgan

Fl. March-June.

Collectors: MSB **Collection date:** 19.03.2016

39.2. *Linaria tenuis* (Viv.) Spreng.; Syst. Veg. 2:795.1825; Durand & Baratte, Fl. Lib. Prodr. 179.1910; Pamp. Fl. Trip. 207. 1914; Keith. Prilim. Check List Lib. Fl. 1965; N. Fein-Dotham. Fl. Palest. 3; 191.1978.

Collection number: 721

Synonyms: *Antirrhinum tenue* Viv., Fl. Lib. 33. 1. 16. F 5-6. 1824.

Distribution: N. Africa, Palestine, Arabia. - In Tarhuna: Meghawsha.

Fl. March-April.

Collectors: MSB **Collection date:** 19.03.2016

40. Solanaceae

40.1. *Lycium chawii* Roeme & Schultes, Syst. Veg. 4: 693. 1819.

Collection number: 921

Synonyms: *Lycium persicum* Miers, *L. arabicum* Schweinf. ex Boiss.

Distribution: N. Africa (Libya & Egypt). S. Palestine, Arabia, Kuwait, S. Iraq, Iran and Pakistan. - In Tarhuna: Terghlat.

Fl. January- June.

Collectors: MSB **Collection date:** 12.06.2017

40.2. *Lycium europaeum* L., Sp. Pl. 192. 1753.

Collection number: 827

Synonyms: *Lycium mediterraneum* Dunal in DC. Pordr. 13, 1: 523. 1852.

Distribution: S. Europe, N. Africa and Asia. - In Tarhuna: Khsaya.

Fl. March-April.

Collectors: MSB **Collection date:** 19.05.2016

40.3. *Nicotina glauca* R.C. Graham, Edinb. New Philos. Jour., 5: 175. 1828.

Collection number: 836

Distribution: Italy, Barse, Messine, Malta, Morocco, Algeria, Tunisia, Libya, Egypt, Lebanon and Palestine. - In Tarhuna: Msabha and Terghlat.

Fl. Throughout the year.

Collectors: MSB **Collection date:** 19.05.2016
41. Zygophyllaceae

41.1. *Fagonia cretica* L., Sp. Pl. 386. 1753.

Collection number: 734

Distribution: A Mediterranean element; found in S. Europe, Canary Islands and N. Africa. - In Tarhuna: Dawoon, Hejaz, Mchhalef, Sok-El-Ahed, Terghlat, and Zurgan.

Fl. October-June.

Collectors: MSB **Collection date:** 19.03.2016

41.2. **Peganum harmala* L., Sp. Pl. 444. 1753.

Collection number: 779

Synonyms: *Peganum dauricum* Pall., Reise 1: 418. 1776.

41.3. **Tribulus terrestris* L., Sp. Pl. 387. 1753.

Collection number: 879

Synonyms: *Tribulus bicornutus* Fisch. & C. A. Mey. In Bull. Soc. Nat. Mosc. 391. 1838; *T. robustus* Boiss. & Noe in Boiss., Diagn. Pl. Or. Nov. Ser. 2, 1: 112. 1854; *Tribulus terrestris* var. *bicornutus* (Fisch. & C. A. Mey) Hadidi in Rech. f., Fl. Iran. 98; 17. Tab. 19. F.

Distribution: S. Europe, Asia, N. Australia and Africa. - In Tarhuna: Sok-El-Ahed.

Fl. October-May.

Collectors: MSB **Collection date:** 3.05.2017

RESULTS

The flora of Tarhuna is represented by 222 different plant taxa belonging to 41 families, 143 genera, and 222 plant species of which 131 species are reported for the first time from Tarhuna. The total number of species includes three different plant groups gymnosperms with one family and one species, dicotyledons with 36 families and 185 species, and monocotyledons with 4 families and 36 species [Table 1]. The families Asteraceae, Fabaceae, Poaceae, and Lamiaceae are considered as the most sizable families with 42, 30, 27 and 11 plant species respectively [Table 2]. On the other families such as Brassicaceae, Boraginaceae, Cistaceae, and Liliaceae are represented by 10, 8, 8 & 7 species respectively. Whereas, the rest of the families are represented by 6 species or less. The number and percentage of the new reported plant species belonging to the largest families is also given [Table 3]. The results of this study show that the genera such as *Astragalus*, *Hellianthemum*, and *Plantago* are represented by 6 species each, followed by the genus *Medicago* with 5 species, and genera such as *Convolvulus*, *Erodium*, *Euphorbia*, *Rumex*, and *Stipa* are represented by 4 species each. Furthermore, the rest of the genera are represented by 1-3 species each. Moreover, the results have been revealed that the most characteristic features of the flora of Tarhuna is that the large number of genera [143] in proportion to that of the species [222], such a character declares that each genus consists of 1-3 species. *Anthemis glauca* is an endemic species for Libya confined to the coastal belt of Libya has been collected, identified, and reported for the first time from Tarhuna. Considering the number of species per each family with respect to the vast area of Tarhuna the flora is not rich.

DISCUSSION

The first-time reported species from Tarhuna are representing 56.7% from 222 plant species included in this study. Such a percentage gives an indication that the flora of such a region has not been considered specially during the work on the

Flora of Libya. Therefore, the present survey is considered as the most comprehensive study of the flora of Tarhuna. The most important characteristic features of the flora of Tarhuna is that the large number of genera in proportion to the total number of species which brings about 1-3 species per genus. One endemic plant species was also collected, identified and, reported for the first time from the region. Moreover, percentages of new reported species per each of the largest families [Table 3] exceeds 50%, Such percentage encourages continuation of more floristic studies should be done in other regions of Libya.

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Table 1. Different plant groups exist in the flora of Tarhuna.

Plant Groups	Families	Genera	Species
Gymnosperms	1	1	1
Dicotyledons	36	115	185
Monocotyledones	4	27	36
Total	41	143	222

Table 2. The most sizable plant families present in Tarhuna.

Families	Genera	Species
Asteraceae	28	42
Fabaceae	15	30
Poaceae	19	27
Lamiaceae	8	11

Table 3. Number and percentage of new reported species per each of the largest families.

Families	Number of species	Number of reported species	percentage
Asteraceae	42	24	57.1%
Fabaceae	30	26	86.6%
Poaceae	27	19	70.3%
Lamiaceae	11	6	54.5%

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