



(RESEARCH ARTICLE)



Checklist of the Umbelliferae family in the herbarium of Iraq natural history museum

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Abstract

The aim of this study is to make the inventory for Umbelliferae family for the purpose of identifying the samples that were collected over long periods and saved in the herbarium of Iraq Natural History Museum/ University of Baghdad. We found that the herbarium plants were very large and varied from different parts for Iraq, in different and varied environments, which collected and arranged according to a very specific system in the herbarium for remaining an important source to all graduate students and researchers to take advantage for these plants. Also, the flowering and fruiting periods for these plants in Iraq were recorded in different regions. Most these plants begin to flower in the spring and thrive at fields and farms.

Keywords: Umbelliferae; Herbarium; Iraq; Natural; History; Museum

1. Introduction

Umbelliferae, one for the best-known families for flowering plants have 300-455 genera and 3000- 3700 species [1]. The family Umbelliferae is very rich at secondary metabolites [2]. The synthesis for essential oils and oleoresin, secreted in schizogenous canals at root, stem, leaves and inflorescence, which a characteristic feature for this family [3]. So Apiaceae is cosmopolitan, and particularly abundant at the northern hemisphere, temperate regions and rare at tropics [4]. The species in the family Umbelliferae were aromatic plant, have a distinctive flavor and diverse volatile compounds in their fruits and leaves [5,6,7].

Umbelliferae species distributed almost all over the world, and are diverse at temperate climatic areas, like Eurasia and North America. They are quite rare at tropical humid regions which limited in high mountains. The Apiaceae species are present at all types of habitats, in sea-level to alpine zones: aquatic biotopes, grasslands, grazed pastures, forests have their clearings and margins, screes, rocky hills, cliffs,, open sandy, gravelly soils, steppes, cultivated fields, fallows, waste grounds and road sides [8,9,10].

2. Material and methods

The specimens of Umbelliferae family in various habitats for Iraq and saved at the herbarium for Iraq Natural History Museum was written down and studied the geographical distribution. So used many taxonomic keys identification and diagnosed genera such as: [11,12,13].

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3. Results and discussion

The checklist of Umbelliferae in the herbarium of Iraq Natural History Museum showed the genera as follow [14,15,16,17,18]:

3.1. *Ammi* L.

In the herbarium of Iraq Natural History Museum, it was found two species which were they *Ammi majus* L. and *Ammi visnaga* (L.) Lam.

HAB. *Ammi majus* L., gravelly hillsides, along ditches in fields, alt. 50-400 m, fl. And fr. Apr.-Jun.

HAB. *Ammi visnaga* (L.) Lam., moist places, banks of ditches, rice fields, alt. 50-1400 m, fl. and fr. May-Aug.

3.2. *Anethum* L.

In the herbarium of Iraq Natural History Museum, it was found one species which was *Anethum graveolens* L.

HAB. *Anethum graveolens* L., In gradens, orchards, fields and waste land, alt. up to 700m, fl. And fr. Mar.- May.

3.3. *Anisosciadium* DC.

In the herbarium of Iraq Natural History Museum, it was found the genus *Anisosciadium* DC.

3.4. *Ainsworthia* Boiss.

In the herbarium of Iraq Natural History Museum, it was found one species which was *Ainsworthia trachycarpa* Boiss.

HAB. *Ainsworthia trachycarpa* Boiss., lower mountains weed in fig garden, alt. 500-1000 m., fl. And fr. Apr.- May.

3.5. *Apium* L.

In the herbarium of Iraq Natural History Museum, it was found one species which was *Apium graveolens* L.

HAB. *Apium graveolens* L., Damp places, along streams, gardens, alt. up to 500 m, fl. and fr. Apr.- Jun.

3.6. *Artemisia* L.

In the herbarium of Iraq Natural History Museum, it was found one species which was *Artemisia squamata* L.

HAB. *Artemisia squamata* L., on mountain slopes and stony hillsid, alt. 150- 1300 m., fl. and fr. Apr.- Jun.

3.7. *Bunium* L.

In the herbarium of Iraq Natural History Museum, it was found one genus which was *Bunium* L.

3.8. *Bupleurum* L.

In the herbarium of Iraq Natural History Museum, it was found two species which were they *Bupleurum kurdicum* Boiss. And *Bupleurum lancifolium* Hornem.

3.9. *Cachrys* L.

In the herbarium of Iraq Natural History Museum, it was found one genus which was *Cachrys* L.

3.10. *Caucalis* L.

In the herbarium of Iraq Natural History Museum, it was found one genus which was *Caucalis* L.

3.11. *Chaerophyllum* L.

In the herbarium of Iraq Natural History Museum, it was found one genus which was *Chaerophyllum* L.

3.12. *Coriandrum L.*

In the herbarium of Iraq Natural History Museum, it was found one species which was *Coriandrum sativum L.*

HAB. *Coriandrum sativum L.*, cultivated as a garden herb, alt. 500-1000 m., fl. And fr. Mar.- May.

3.13. *Daucus L.*

In the herbarium of Iraq Natural History Museum, it was found one species which was *Daucus carota L.*

HAB. *Daucus carota L.*, mountains, waste land in garden, alt. 50-1000 m., fl. And fr. Apr.-Aug.

3.14. *Ducrosia Boiss.*

In the herbarium of Iraq Natural History Museum, it was found one species which was *Ducrosia anethifolia (DC.) Boiss.*

HAB. *Ducrosia anethifolia (DC.) Boiss.*, desert, on sandy, sandy gravel soils, alt. 50-700 m., fl. and fr. Jun.- Jul.

3.15. *Eryngium L.*

In the herbarium of Iraq Natural History Museum, it was found one genus which was *Eryngium L.*

3.16. *Falcaria Fabr.*

In the herbarium of Iraq Natural History Museum, it was found one species which was *Falcaria vulgaris Bernh.*

HAB. *Falcaria vulgaris Bernh.*, Mountain slopes, in fields and waste land, alt. 250-1550 m., fl. and fr. Jun-Sep.

3.17. *Ferula L.*

In the herbarium of Iraq Natural History Museum, it was found one species which was *Ferula orientalis L.*

HAB. *Ferula orientalis L.*, on the mountain, among rocks, alt. up to 1400m, fl. And fr. Jun.- Jul.

3.18. *Ferulago W.D.J. Koch*

In the herbarium of Iraq Natural History Museum, it was found one genus which was *Ferulago angulata (Schltdl.) Boiss.*
And *Ferulago brachyloba Boiss. & Reut.*

3.19. *Foeniculum Mill.*

In the herbarium of Iraq Natural History Museum, it was found one genus which was *Foeniculum Mill.*

3.20. *Johrenia DC.*

In the herbarium of Iraq Natural History Museum, it was found one genus which was *Johrenia DC.*

3.21. *Ormosciadium Boiss.*

In the herbarium of Iraq Natural History Museum, it was found one genus which was *Ormosciadium Boiss.*

3.22. *Petroselinum Hill*

In the herbarium of Iraq Natural History Museum, it was found one genus which was *Petroselinum Hill*

3.23. *Myrrhoides nodosa (L.) Cannon*

In the herbarium of Iraq Natural History Museum, it was found one species which was *Myrrhoides nodosa (L.) Cannon*

HAB. *Myrrhoides nodosa (L.) Cannon*, lower mountain, on stony clay, alt. 700-1400 m., fl. and fr. May-Jun.

3.24. *Pimpinella L.*

In the herbarium of Iraq Natural History Museum, it was found one species which was *Pimpinella anisum L.*

HAB. *Pimpinella anisum* L., rare in Iraq.

3.25. *Smyrniium* L.

In the herbarium of Iraq Natural History Museum, it was found one genus which was *Smyrniium* L.

3.26. *Torilis* Adans.

In the herbarium of Iraq Natural History Museum, it was found one species which was *Torilis leptophylla* (L.) Rchb.f.

HAB. *Torilis leptophylla* (L.) Rchb.f., on mountain in grassy patches, weed in field, alt. 50-1400 m., fl. and fr. Apr.-Jun.

3.27. *Trachyspermum* Link

In the herbarium of Iraq Natural History Museum, it was found one species which was *Trachyspermum ammi* (L.) Sprague.

4. Conclusion

The study showed many of the genus and species of the Umbelliferae family which saved in the herbarium of Iraq Natural History Museum and their distribution in various, so they are very important widespread plant families and resist many difficult environmental conditions. So, that will be a reference to many researchers and those interested at this aspect.

Compliance with ethical standards

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