کۆلێژی پەروەردە / زانکۆی سەلاحەدین
Erbil – University Salahaddin

A Survey of Flowering Plants of Kore in Kurdistan Region-Iraq

Research Project

Submitted to the Department of (Biology) in partial fulfillment of the requirements for the degree of BSc. in (Plant Taxonomy)

By

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Supervisor's Certification

We certify that this research project was prepared under our supervision in the Department of Biology, College of Education, Salahaddin University-Erbil and hereby recommend it to be accepted in partial fulfilment of the requirements for the degree of BSc. in Biology-Plant Taxonomy.

Signature

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Dare:

Chair Certification

In view of the available recommendation, I forward this research project for debate by the examining committee.

Signature:

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Chairman of Biology Department

Date: 4 /2023

DEDICATION

I dedicate this work to

My lovely parents

My brothers

My Friends: Ahmed and Rwanga

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SUMMARY

In this study, a survey of flowering plants has been done in Kore region which locates to the north-east of Erbil province. In this study (75) genera have been collected during two scientific exclusion in which they belong to (27) plant families, the most of these collected plants were herbs and annual, (21) families of them belong to the dicotyledon plants and (6) families were monocotyledon plants. The large number of the genera that have been identified were belong to Asteraceae, Brassicaceae, Fabaceae, Poaceae and Lamiaceae families.

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1- INTRODUCTION

Plant taxonomy is a branch of the sciences which is concerned with describing identifying, categorizing, and naming plants, and it is most useful classification system. Several different systems are used to plants arrangement, with the most familiar being the Kingdom, Division, Class, Order, Family, Genus, and Species. Biologists who work with plants utilize plant taxonomy on a daily basis to order and make sense of the plants they work with, and to effectively communicate information to other biologists, also the plant taxonomy is an old science that uses the gross morphology like flower, leaf shape and fruit form to separate them in to similar groups. Plant and their extracts have been used for their healing properties and some were successful, but not all plants have an effect on health. (Usman et al., 2014). Although the world is full of plants and we see them every day, we are often blind to their presence. More than that, our knowledge of these plants may not extend much beyond the idea that they use sunlight and carbon dioxide to produce oxygen and sugars, the very things that sustain our life on Earth. We should to see plants, begin a relationship with them, and appreciate their amazing diversity. For a long time, scientists have interest about Iraqi plants especially in Kurdistan region due to the present of different kinds of plants which help in growing different kinds of plants also due to suitable environments factors that help to grow these plants in this area, among these studies (Khalaf, 1980), (Faris, 1983) ,(Fatah, 2003),(Ahmed, 2010) , (Ahmad, 2013) ,(Hameed et al., 2016) and (Saeed, 2021) also there are many studies in this area but all of them involves only one genus or one family. Kore region which is found to the north east of Erbil province was detected to make a survey of the flowering plants that growing there. Many of the founding plants have unimportant either medicinally or used as food, *Astragalus* plant have long been used as medicinal plants in folk medicine as cardiovascular, antihypertensive, diuretic,

choleretic, as well as antimicrobial and antiviral agents. The plants of the genus exhibit a broad spectrum of pharmacological effects, among which major include diuretic, anti-inflammatory, bactericidal and hypotensive(Lysiuk and Darmohray, 2016). *Papaver* plant used to treat nervousness, insomnia, digestive and respiratory disorders, baldness, eye infections, as well as measles treatment.(Grauso et al., 2021). The aerial parts, leaves and roots of *Rumex* are used as vegetables and for the treatment of several health disorders such as mild diabetes, constipation, infections, diarrhoea, oedema, jaundice, and as an antihypertensive and analgesic, in case of skin, liver and gallbladder disorders, and inflammation. Many phytochemical investigations on that *Rumex* species are rich in anthraquinones, naphthalenes, flavonoids, stilbenoids, triterpenes, carotenoids, and phenolic acids. Moreover, it draws the attention that high level of oxalic acid in some species can cause toxicity (kidney stones) if consumed large quantity.(Vasas et al., 2015)

2- MATERIALS AND METHODS

In this study three scientific excursions (trips) were done to the different location of Kore region during the year 2023. The identification process has been done depending on Flora of Iraq (Townsend and Guest, 1968),(Townsend and Guest, 1974),(Townsend et al., 1980),(Ghazanfar et al., 2013), (Ghazanfar and Edmonson, 2016)and(Ali et al., 2019).

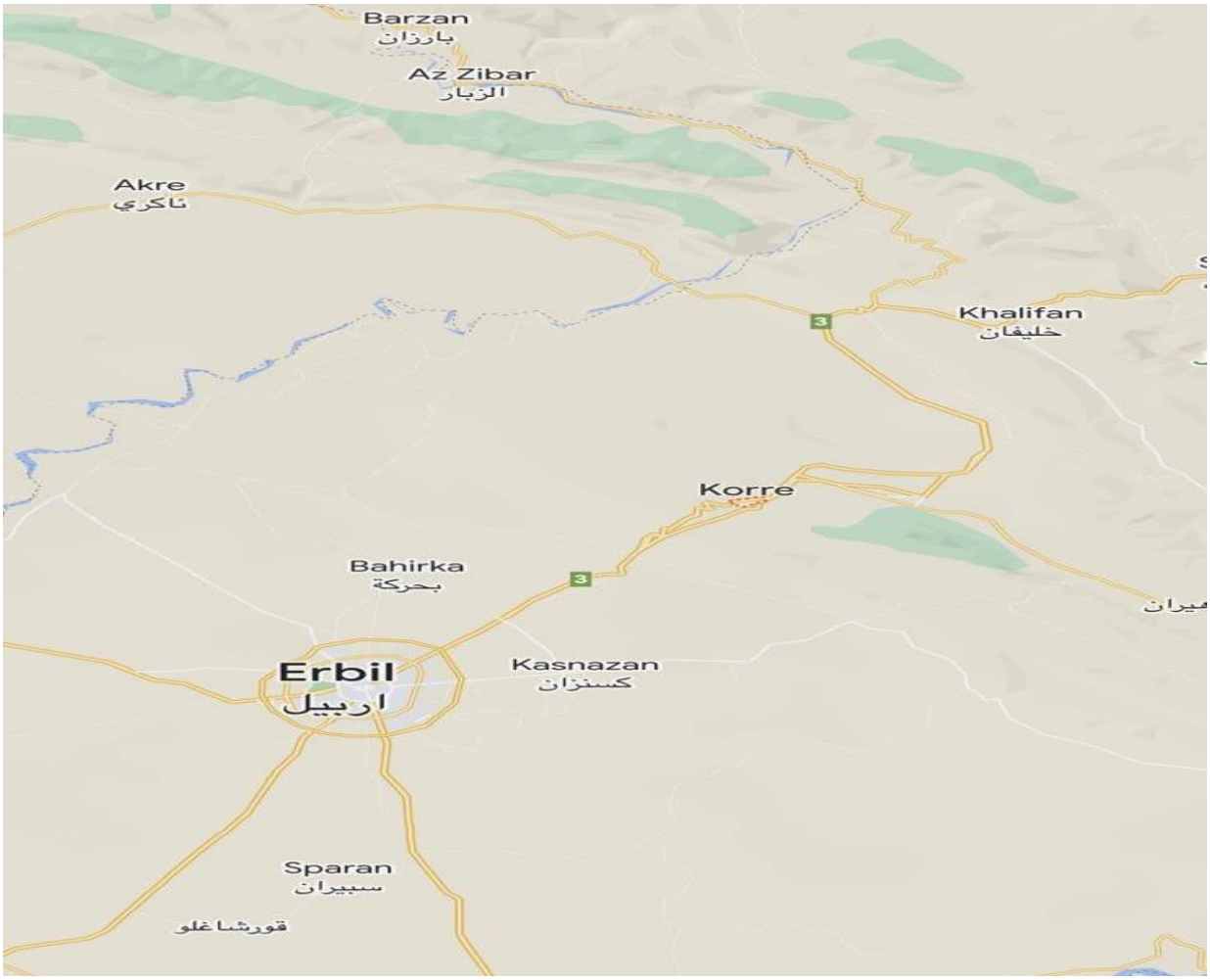

Figure (1): Location of kore From Erbil Province

3- Results

In this study (75) genera are collected which belong to (27) families as the following:

1. Amaryllidaceae

   Allium

2. Apiaceae

   Daucus

   Scandix

3. Araceae

   Biarum

4. Asteraceae

   Silybum

   Echinops

   Crepis

   Senecio

   Crupina

   Gandlia

   Chardinia

   Sonchus

   Notobasis

   Crupina

   Calendula

5. Boraginaceae

   Anchusa

   Onosma

   Echium

6. Brassicaceae

   Aetheonima

   Sysmbrium

   Biscuttela

   Brassica

Erucaria

7. Crassulaceae

Rosularia

Sedum

8. Caryophyllaceae

Vaccaria

Silene

9. Capripholiaceae

Cephalaria

10. Cistaceae

Helianthemum

11. Euphorbiaceae

Euphorbia

12. Fabaceae

Astragalus

Vicia

Trigonella

Trifolium

Prosopis

Scorpiurus

Onobrychis

Medicago

Pisum

Lathyrus

Onopordum

13. Geraniaceae

Erodium

Geranium

14. Iridaceae

Iris

15. Lamiaceae

Lamium

Marrubium

Salvia

Lallemancia

Teuerium

16. Liliaceae

Tulip

Gagea

Muscari

Ornithogalum

17. Linaceae

Linum

18. Orchidaceae

Ophrys

Orchis

19. Papaveraceae

Papaver

Fumaria

20. Plantaginaceae

Plantago

21. Poaceae

Aegilops

Poa

Hordium

Polypogon

Lolium

Phalaris

22. Polygonaceae

Rumex

Polygonum

23. Phagaceae

Quercus

24. Ranunculaceae

Adonis

Anemone

Ranunculus

25. Rosaceae

Prunus

Poterium

26. Rubiaceae

Galium

27. Scrophulariaceae

Verbascum

4- DISCUSSION

This study was done in Kore region which is locates in north-east of Erbil city, during this scientific exclusion (75) genera are collected, these genera are belong to (27) plant families. Most of the collected plants are herb with present of cultivated plants and trees in the area. The favorable weather helps to present different kinds of flowering plants, the results showed that (21) of the collected plants are dicotyledon plants which have a tap roots, and (6) families are belong to the Monocotyledon plants which have tubers or adventitious root. The number of plants is different between the families, some of families have (11-12) genera such as Asteraceae and Fabaceae while the most remain families have between 1 to 6 genera.

5- CONCLUSIONS

1- (75) genera were collected during scientific exclusion in this region.

2- Most of the collected plants were herbaceous.

3- (21) families were belonging to dicotyledon plants.

4- (6) families were monocotyledon plants.

5- The commonly diagnosed genera were backed to Asteraceae, Fabaceae, Brassicaceae, Poaceae, Lamiaceae families.

6- RECOMMENDATIONS:

1- Made more surveying studies in Kurdistan regions.
2- Identifying the species of collected plant specimens
3- Protection the rare and threaten by extinction species of the plant families.

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Papaver

Malva

Vaccaria

Euphorbia

Anagallis

Erodium

Plate (1) Field Photographs of the Plant Specimens

Plantago

Galium

Erodium

Lolium

Helianthemum

Adonis

Plate (2) Field Photographs of the Plant Specimens

Polygonum

Onosma

Allium

Silybum

Lamium

Trigonella

Plate (3) Field Photographs of the Plant Specimens

Pisum

Ornithogalum

Ranunculus

Cephalaria

Brassica

Muscari

Plate (4) Field Photographs of the Plant Specimens