

## Template for Evidence(s) UI GreenMetric Questionnaire

University : Alexandria University  
Country : Egypt  
Web Address : <https://alexu.edu.eg/>

### [1] Setting and Infrastructure (SI)

[1.23] Conservation: plant, animal, and wildlife, genetic resources for food and agriculture secured in either medium or long-term conservation facilities



Green House (Faculty of Veterinary Medicine)



Plantation (Faculty of Veterinary Medicine)



Green House (Faculty of Veterinary Medicine)



Plantation (Faculty of Veterinary Medicine)



Cattle Farming (Faculty of Veterinary Medicine)



Cattle Farming (Faculty of Veterinary Medicine)



Chicken Farming (Faculty of Agriculture)



Cattle Farming (Faculty of Agriculture)



Water pond with conserved aquatic plants (Faculty of Science - Moharram Bek building)



**Botanic Garden (ALEX) (Faculty of Science in Moharram Bek)**



**Botanic Garden (ALEX), Green House (Faculty of Science in Moharram Bek)**



**Botanic Garden, Green House (Faculty of Science in Moharram Bek)**



**Alexandria city (Faculty of Science, Botanic Garden Location)**

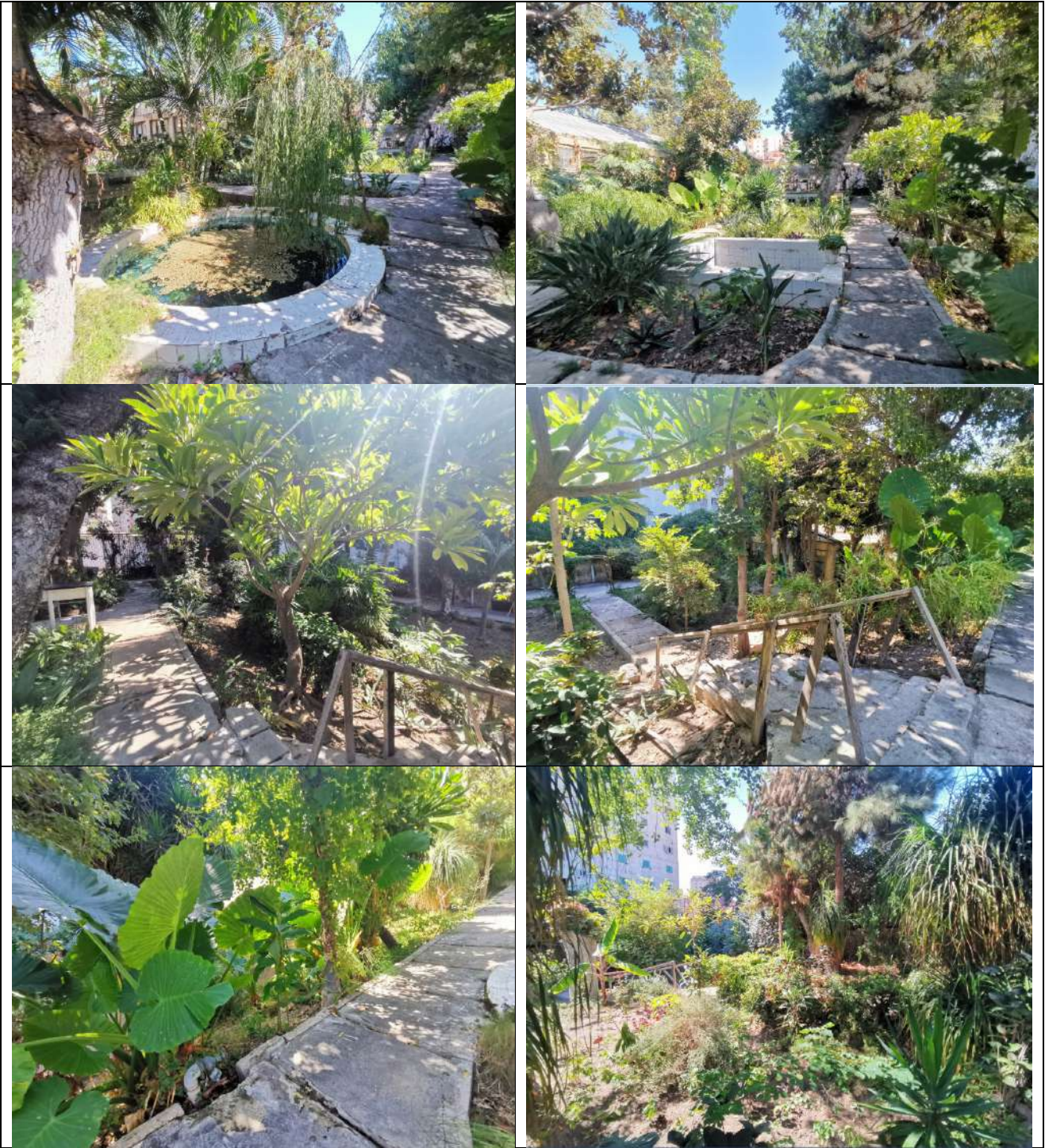


Wildlife Conservation of some important fern

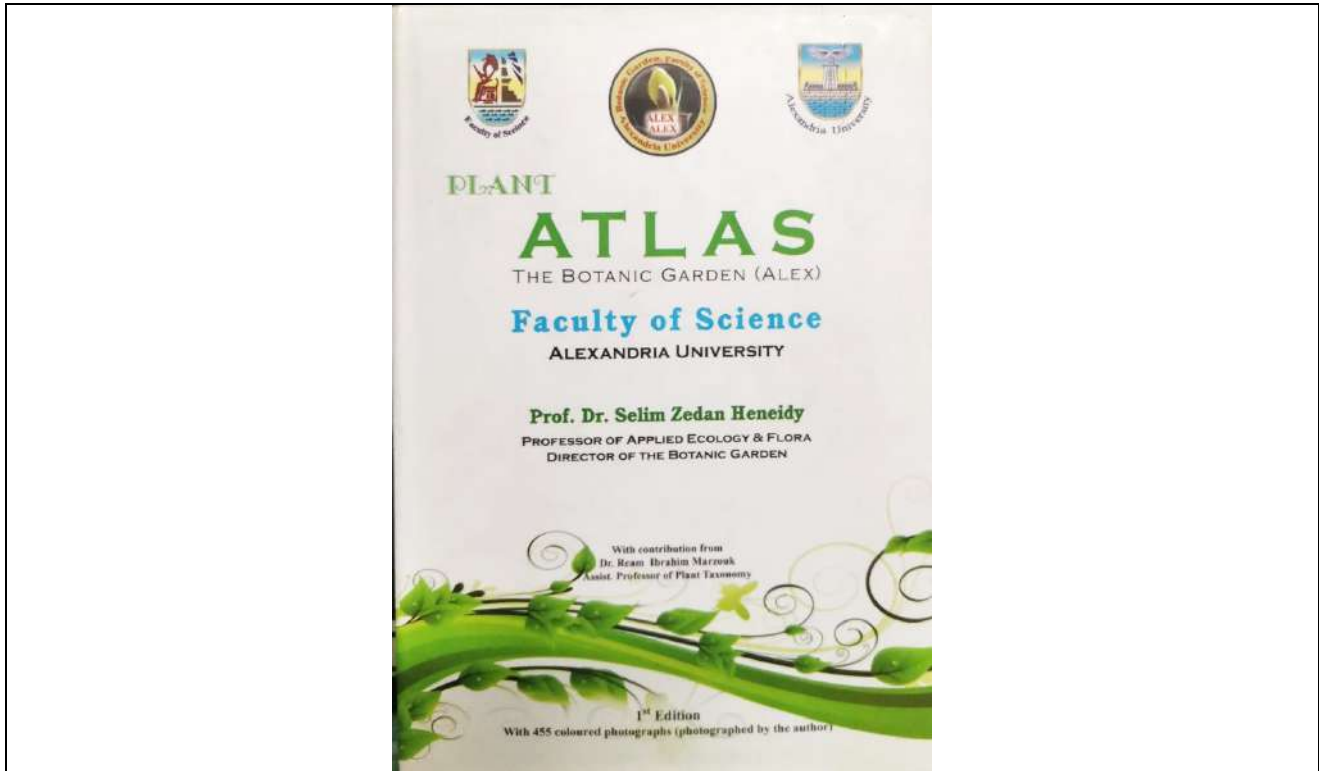


Preparation of Herbarium sheets for conserving plant species

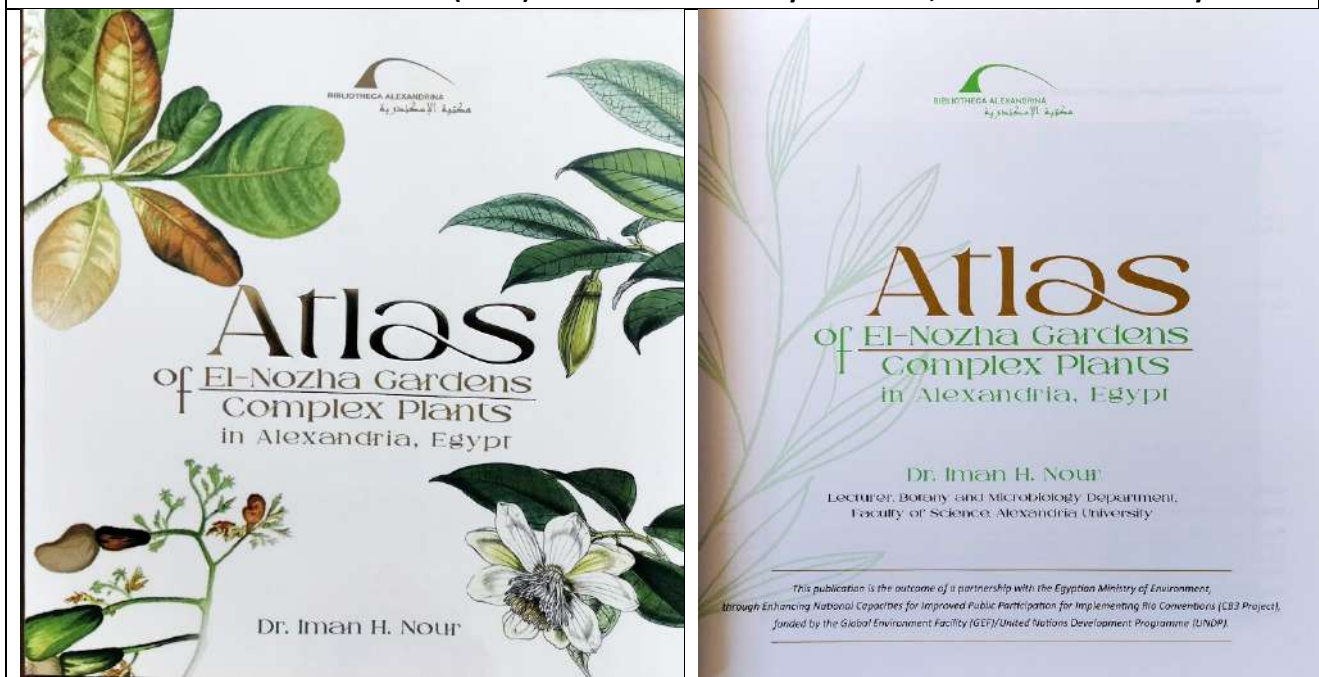




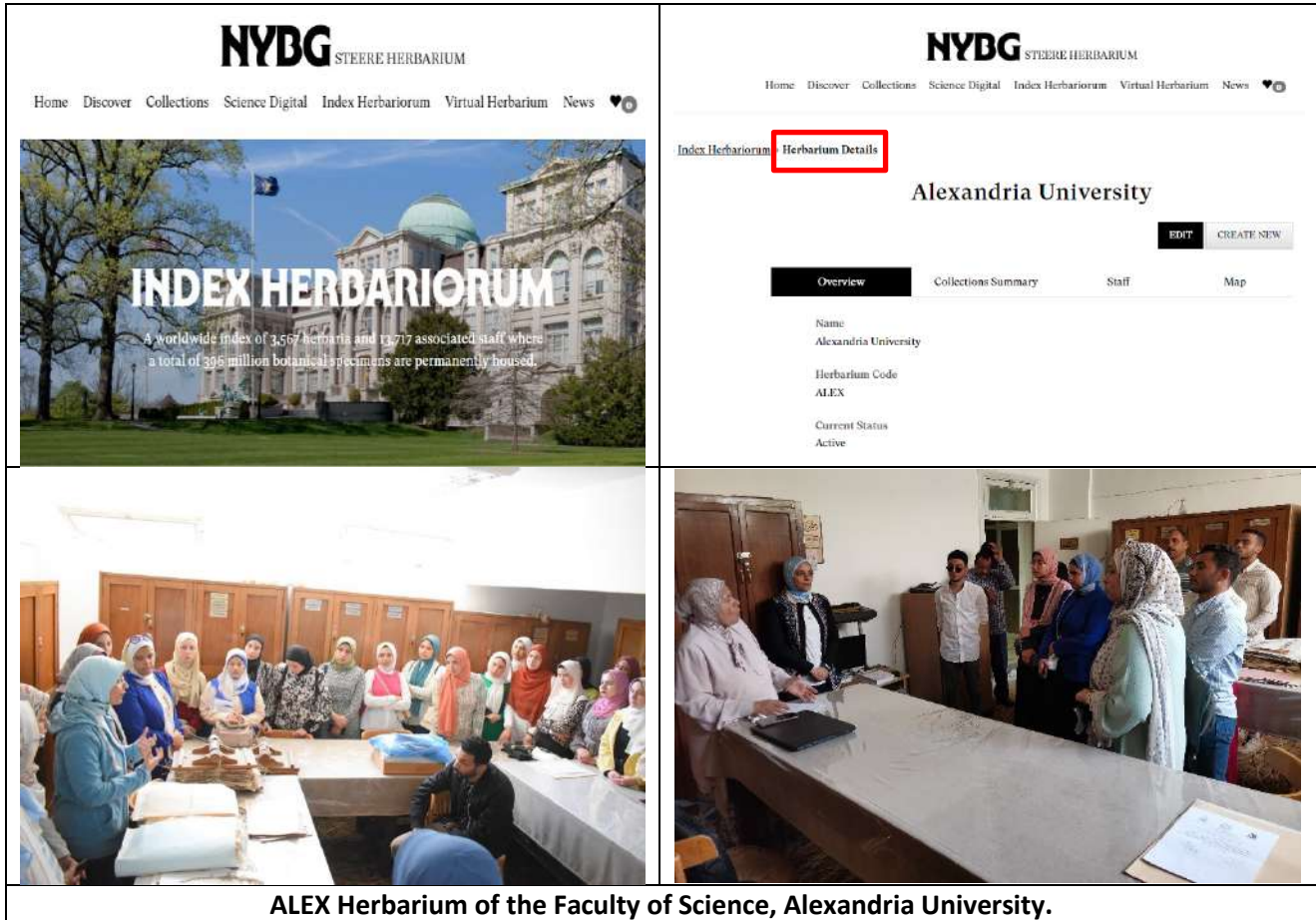
Additional photos of the Botanic Garden



**Atlas of the Botanic Garden (ALEX) located at the Faculty of Science, Alexandria University.**



**Conservation efforts and floristic documentation of the historic Al-Nozha garden complex: An Atlas published by Bibliotheca Alexandrina to support the conservation of gardens surrounding the University Campus**



The image shows two screenshots of the NYBG Steere Herbarium website. The left screenshot displays the 'INDEX HERBARIORUM' page with a large banner image of a building and the text: 'A worldwide index of 3,567 herbaria and 13,717 associated staff where a total of 398 million botanical specimens are permanently housed.' The right screenshot shows the 'Herbarium Details' page for Alexandria University, listing the name, herbarium code (ALEX), and current status (Active).

**ALEX Herbarium of the Faculty of Science, Alexandria University.**

**Description:**

1. Green House (Faculty of Veterinary Medicine).
2. Plantation (Faculty of Veterinary Medicine).
3. Cattle Farming (Faculty of Veterinary Medicine).
4. Botanic Garden (Faculty of Science in Moharram Bek).  
Botanic Garden, Green House (Faculty of Science in Moharram Bek) and its location in Alexandria City.
5. ALEX Herbarium of the Faculty of Science, Alexandria University.

**Description:**

**The Green House and Plantation at the Faculty of Veterinary Medicine at Alexandria University serve as vital educational and research facilities.**

**1. Green House (Faculty of Veterinary Medicine).**

The Green House at the Faculty of Veterinary Medicine is part of the educational facilities aimed at providing hands-on experience for students. The Green House primarily focuses on plant production and research, providing students with hands-on experience in growing various plants, particularly those relevant to veterinary medicine and animal feed. This facility is designed to enhance students' understanding of plant biology, cultivation techniques, and the role of plants in animal nutrition. The facility serves multiple purposes:

- **Research:** It allows students and faculty to conduct experiments and research on plant growth, breeding, and cultivation techniques.
- **Education:** The Green House acts as a practical training ground for students, teaching them about plant biology, care, and the agricultural practices necessary for veterinary medicine.



- **Sustainability Initiatives:** It often engages in projects that promote sustainable agriculture and environmental conservation.

## 2. Plantation (Faculty of Veterinary Medicine).

The Plantation area is dedicated to agricultural practices and is instrumental for students learning about animal nutrition and feed production. It typically involves the cultivation of various crops and forage species that can be used as animal feed, thereby supporting research in animal husbandry and veterinary sciences.

The plantation area complements the Green House and serves as an outdoor extension for agricultural training. Key aspects include:

- **Cultivation:** The plantation is used for growing a variety of crops and livestock feed, providing students with insights into animal nutrition.
- **Field Studies:** Students can participate in hands-on learning experiences, observing the growth cycles of different plants and understanding the impact of various environmental factors.
- **Research and Development:** It may also serve as a site for experimental agricultural practices and studies related to veterinary medicine.

## 3. Cattle Farming (Faculty of Veterinary Medicine, Alexandria University)

The cattle farming program is another essential component of the Faculty of Veterinary Medicine. It includes:

- **Livestock Management:** Students learn about the care, breeding, and management of cattle, which is crucial for veterinary practices related to large animals.
- **Health Monitoring:** The program often focuses on the health and welfare of cattle, teaching students how to diagnose and treat common ailments.
- **Sustainability and Production:** There is an emphasis on sustainable practices in livestock farming, including efficient feeding, breeding strategies, and environmental considerations.

**These facilities are designed to enhance the educational experience of veterinary students, providing them with practical skills and knowledge applicable to their future careers in veterinary medicine and animal care.**

## 4. Botanic Garden (Faculty of Science in Moharram Bek)

The university botanic garden at the Faculty of Science is valuable to the educational and training facilities available to staff and students. In it, students can come to close intimacy with plants, use their senses of touch, smell and taste in familiarizing themselves with life features of plants, and develop their observation abilities in studying plants as they grow, mature and regenerate. Information intake is considerable. Land plots, greenhouses and sheds provide space for field experiments that may be part of botanical garden accumulates experiences and knowledge related to plant life; grasping this wealth of information and documenting it is a most welcome enterprise.

University botanic gardens often accommodate exotic species brought in to represent: (1) diverse ecological conditions in world biogeographical regions, and (2) diverse taxonomic groups of the plant kingdom. Husbanding and nursing these alien plants may need innovative means. This broadens the scope of work. The University botanical garden of Alexandria has its shares of these general attributes.





## THE BOTANIC GARDEN

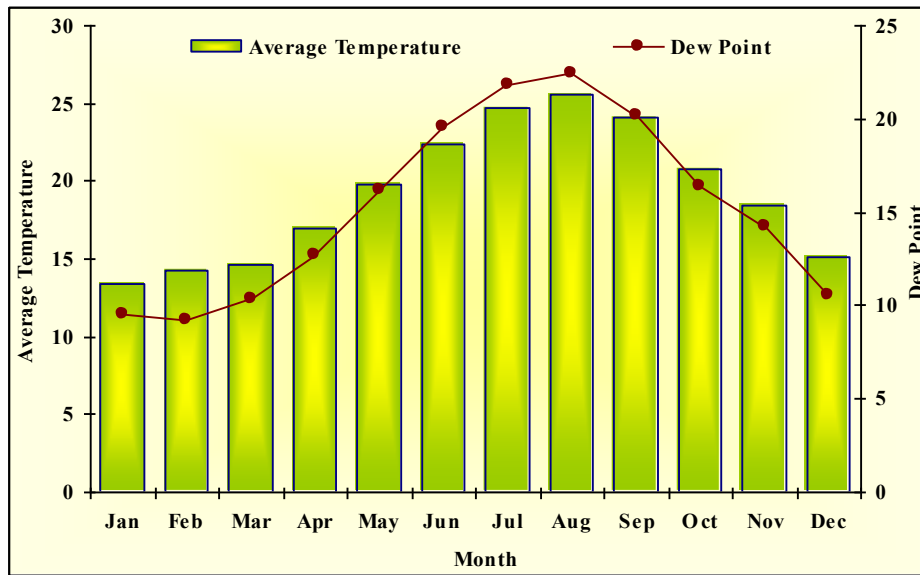
*The Botanical Garden is an institution holding documented collections of living plants for the purposes of scientific research, conservation, display and education.*

In 1942, a botanical garden was established at the Southern area of Muharrem Bek building (**Faculty of Science, King Farouk University**), between the coordinates: N: 31° 11' 19.38", E: 29° 54' 28.14" (Figure 1) and constituted a facility for education as well as for scientific research. Since 1942, the Botanical Garden was greatly developed and was provided with different plant species especially trees and shrubs introduced from different regions by Professor Mohamed Aziz Fekry (the Dean of Faculty of Science and Head of Botany Department 1948- 1958). It was consistently ranked as one of the top gardens by the International Union for Scientific Gardens (International code is **ALEX**), and holds some of the rare and most impressive species that facilitate improved learning, and teaching students; the purpose for which it was designed.

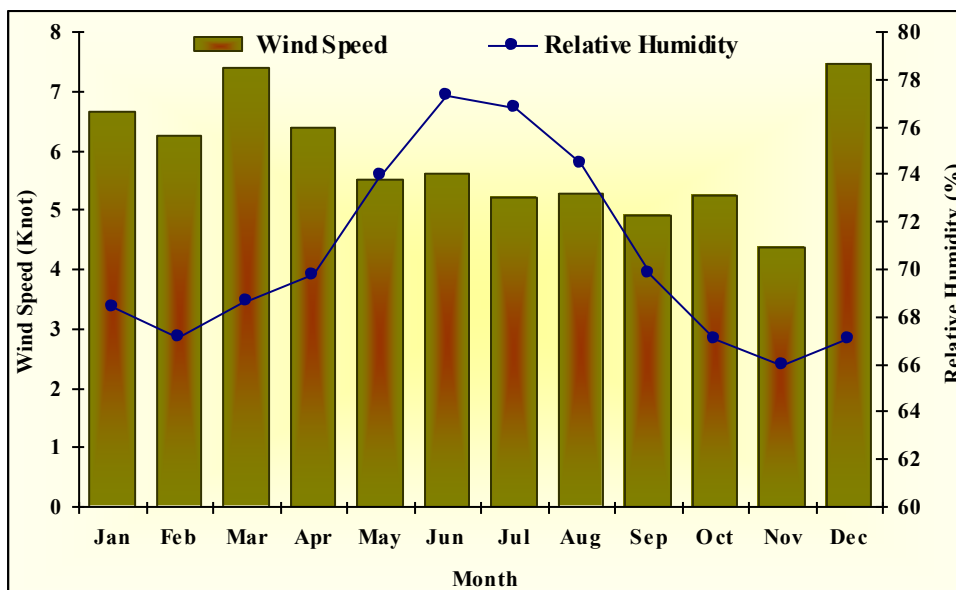
This area (about 1.4 hectares) is of international concern attracting a large number of overseas visitors, who come specially to see its collections. Although these are the main objectives, care has been taken to make the garden inexpensive to maintain, as well as interesting and attractive so as to provide for the local community, staff and students the garden as a reference collection.

According to the Global Strategy for Plant Conservation (GSPC), it is very important to put this garden on the schedule which means, listing and conserving all the garden's collections to become known, at least at the regional levels and next on the international level. With more than 455 species and 24 infraspecific epithets (subspecies, variety, forma), indigenous and introduced, in the Botanical Garden of the Faculty of Science, most of them represent tropical, subtropical, temperate species and the rest belong to the Mediterranean zone. This number is a very significant proportion of the Egyptian flora, as they belong to 121 families (total flowering plant families, which are treated 128 Boulos, 2005) while, the families treated in the checklist 2009 are 129 (Boulos, 2009). On the other hand, this garden is characterized by its high diversity, so the conservation of this plant diversity is both an enormous challenge and significant regional and national responsibility. It is well recognized that the plant diversity represents the greatest source of renewable natural resources of any country. More than 25% of plant species of this botanical garden are of medicinal value, about 14% of them are used as timber and good source of valuable wood. While 86% of the botanic garden species are used in decoration. All of these species are used as teaching materials for the students of biology. Some families appear in this book under two names, e.g. Compositae and Asteraceae. According to the "International Code of Botanical Nomenclature" (ICBN) both names are accepted. In other words, one is not a synonym of the other; these are alternative names and any or both of them could be used to refer to the same family (cited by Boulos, 2009).

Recently (in 2003) according to the Botanical Gardens Conservation International (BGCI), *ex-situ* conservation by vegetative propagation of rare species is carried out in the green houses of the Faculty of Science, Botanic Garden. For the purpose of genetic resources conservation, exchange of plant species with other botanic gardens and bulk collection of seeds representing most of plant species cultivated in the garden is also currently executed.



Temperature, dew point, relative humidity and wind speed on Alexandria city (Averages of the last five years, after El-Gendy, A. Personal Communication).



Published Book:

Heneidy, S. Z. (2010). Plant Atlas: the botanic garden (ALEX). *Monchaat Al-Maaref, Alexandria*. 632 pp.

**Additional evidence link:** <https://alexu.edu.eg/index.php/about-us-ar>

**Link for Sustainable Development:** <https://alexu.edu.eg/index.php/en/sustainable-development>

<https://alexu.edu.eg/index.php/en/2015-11-24-10-38-07/ranking?id=6011>

<http://sustainability.alexu.edu.eg/>

**Link for Green University:**

[https://alexu.edu.eg/index.php/?option=com\\_content&view=article&id=5932&catid=21&lang=ar-AA](https://alexu.edu.eg/index.php/?option=com_content&view=article&id=5932&catid=21&lang=ar-AA)



- Efforts to conserve plant species have expanded to the gardens surrounding the university campus. Under the mentorship of Dr. Iman Nour, a team of students has published an atlas, by *Bibliotheca Alexandrina*, documenting the plants of the **historic Al-Nozha Garden complex**, the oldest garden in Alexandria, dating back to the **Ptolemaic period (300 BC)**. Given the lack of informative books or databases on the floristic composition of Alexandria's gardens, evaluating these botanical resources is an essential first step toward sustainability and conservation.
- This book examines the plant species diversity across four interconnected botanical gardens in Alexandria: Antoniadis, Nozha, Rose, and the Zoo, collectively known as the Nozha complex. A total of seventy-nine plant taxa are classified under sixty-five genera and thirty-five families. The atlas features 158 photographs of various species and their characteristic parts. Each species is accompanied by a morphological description drawn from literature and floras. Additionally, the population status of the recorded taxa is assessed according to the IUCN Red List of Threatened Species, along with their economic uses. This atlas serves as a pictorial guide to identifying plants cultivated in the El-Nozha complex gardens in Alexandria, Egypt.
- Citation: Nour, I.H. (Editor); Mohamed, D.M.; Mesalam, H.G.; ElGedily, Y.A.; Mohamed, Y.G.; Gabr, Z.H. (2023). *Atlas of El-Nozha Gardens Complex Plants in Alexandria, Egypt. Bibliotheca Alexandrina*. (ISBN 978-977-452-667-5, Dar El-Kuttub Depository Number: 11676/2023).

#### ALEX Herbarium of the Faculty of Science

- The herbarium is listed in the Index Herbariorum (NYBG Steere Herbarium), contains a large collection of preserved wild plants, totaling up to 6,000 specimens, located in the Faculty of Science building in Shatby. These plants represent most of the Egyptian flowering plants and are accurately identified using flora books and cross-referenced with the Cairo University Herbarium. Specimens have been collected from the northern coast, North and South Sinai, southern Egypt up to the Sudanese border, and other regions.
- The herbarium serves graduate students and various research projects at Alexandria University and other universities. It is also a source of pollen samples for various studies. Students from various schools in Alexandria, as well as public and private universities across Egypt, are welcomed at the Herbarium of the Faculty of Science. These visits aim to introduce them to the herbarium's role, which is essential for preserving plant specimens and aiding in research, education, and conservation efforts. This effort is part of the university's plan to serve the community and achieve the 17th goal of sustainable development (partnership for the goals).
- Currently, the herbarium's plant species are being digitally photographed to facilitate the access of researchers and students without disturbing the type specimens or "reference samples" unless necessary.

[https://www.alexu.edu.eg/index.php/2016-04-02-06-46-52/university-museums/science-ar#:~:text=%D9%88%D8%AA%D9%82%D8%B9%20%D8%A7%D9%84%D8%AD%D8%AF%D9%8A%D9%82%D8%A9%20%D8%A7%D9%84%D8%B1%D8%A6%D9%8A%D8%B3%D9%8A%D8%A9%20%D8%AC%D9%86%D9%88%D8%A8%D9%8A%20%D9%85%D8%A8%D9%86%D9%89,%D8%AF%D9%88%D9%84%D9%8A%D8%A7%D9%8B%20%D8%AA%D8%AD%D8%AA%20%D8%A7%D8%B3%D9%85%20\(%20Alex\).](https://www.alexu.edu.eg/index.php/2016-04-02-06-46-52/university-museums/science-ar#:~:text=%D9%88%D8%AA%D9%82%D8%B9%20%D8%A7%D9%84%D8%AD%D8%AF%D9%8A%D9%82%D8%A9%20%D8%A7%D9%84%D8%B1%D8%A6%D9%8A%D8%B3%D9%8A%D8%A9%20%D8%AC%D9%86%D9%88%D8%A8%D9%8A%20%D9%85%D8%A8%D9%86%D9%89,%D8%AF%D9%88%D9%84%D9%8A%D8%A7%D9%8B%20%D8%AA%D8%AD%D8%AA%20%D8%A7%D8%B3%D9%85%20(%20Alex).)