

**UNIVERSITY OF PESHAWAR
BOTANICAL GARDEN
(UPBG)**

CATALOGUE OF PLANTS

FIRST EDITION

2015



**CENTRE OF PLANT BIODIVERSITY
UNIVERSITY OF PESHAWAR**

G.T. Road Azakhel Nowshera, Pakistan
www.upbg.org

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MESSAGE

Plants are important component of Biodiversity and its role in food security, clean water, clean air availability, poverty alleviation, combat desertification and sustainable development cannot be ignored. From the smallest ant to the tallest tree, from the birds roaming in the skies to the fish swimming in the sea, each and every creature is part of Biodiversity family. It is the time to protect our family and Conserve Biodiversity now.

It is a fact that Humanity's fate is tightly linked with biological diversity—the variety of life on earth. Biodiversity is essential for sustainable development and human well-being. Biodiversity is a vital asset in global and local economies. Food production depends on Biodiversity and the services provided by ecosystems. Clean and secure supplies of water also depend on Biodiversity. Biodiversity and ecosystem functioning provide goods and services essential for human health—including nutrients, clean air, water and regulation of pests and vector-based diseases. Biodiversity is the basis for sustainable livelihoods. Traditional knowledge associated with Biodiversity is also important and has value not only to those who depend on it in their daily lives but to modern industry and agriculture as well.

In the above contest the present effort of preparing a Catalogue is highly appreciated and I congratulate the Dean, Faculty of Life & Environmental Sciences, Director, Centre of Plant Biodiversity/Botanical Garden and his faculty for publishing the First Edition of the Catalogue of plants growing in the Botanical Garden comprising of 95 families and 258 species. I did sure that this Catalogue will provide basic information regarding the flora of Botanical Garden and it will further be helpful in identification of plants growing in Botanical Garden and surrounding areas. I hope this will serve as a useful reference for the researchers and lovers of plants and thus be a source of further scientific work.

Prof. Dr. Muhammad Rasul Jan
Vice Chancellor
University of Peshawar

FOREWORD

Biodiversity is really a vital asset and beauty of the planet earth. It is the foundation of life and is considered an important pillar in the process of achieving sustainable development over the globe. Biodiversity is the basis for sustainable livelihoods. As a human being we are dependent on clean water, air, clothes, food, shelter & medicine etc. which in reality are actually the diversified services of the diverse ecosystems. Supplies of all these basic needs are impossible without conservation of Biodiversity. Biodiversity plays a major role in the mitigation of the adverse effects of climate change and global warming by contributing to long-term sequestration of carbon in a number of biomes. Even the built environment of our urban agglomerations are intimately linked to and affected by biodiversity. However, it is really a pity that presently the biodiversity is threatened at an alarming rate which leads into eroding the capability of planet to sustain and support life on Earth. It is for this reason that in the 3rd Global Botanical Gardens Congress-2007, the member countries unanimously agreed to achieve a significant reduction in the rate of loss of Biodiversity by the year 2010. This agreement and its targets for 2010 were fully integrated into the framework for the Millennium Development Goals. It is also important to point out that as a sign of further support and solidarity, the international community decided to declare 2015 with the theme “Biodiversity for sustainable Development”.

It is important to note that in accordance to the Convention on Biological Diversity and United Nations Framework on Climate Change, the International Community is committed to conserve Biodiversity and combat climate change. The global response to these challenges needs to move much more vigorously, and with more commitment at the global, national, regional and local levels. It is in connection to these commitments that the Faculty of Life & Environmental Sciences, University of Peshawar took steps in the right direction by establishing two very important institutions i.e. the Centre of Plant Biodiversity at Botanical Garden Azakhel and the Centre for Disaster Preparedness & Management at the main Peshawar Campus. The purpose of establishing these two Centers is to meet commitment with the International Community in the best interest of present and future generations. If we look around, what to talk of National & International levels, we have lost the animals, birds, plants, flora & fauna present even in our immediate surroundings in Peshawar Vale. It is therefore, high time to focus on conservation of our Natural Resources. However, this focusing will not be possible without documenting our present biodiversity.

Looking at its importance and urgency, I urged the Director and Staff of the Centre of Plant Biodiversity on the World Environment Day-2015 to make activities of the Centre task specific. I expressed my desire at that time to document all our existing resources of the Centre of Plant Biodiversity. I am really thankful to the Director and Staff of Plant Biodiversity Centre that they came forward and fulfill this desire of mine by taking initiative on preparing this catalogue. I hope they will continue their efforts to fulfill

other tasks also. As per the data provided by the Centre of Plant Biodiversity there are total 95 families and 258 species housed in the Botanical Garden of Centre of Plant Biodiversity, University of Peshawar. The documentation of this catalogue will communicate the basic and first-hand information to the Schools, Colleges and University students, scientists and general public regarding flora of the Garden and the surrounding area. It will also serve as a useful reference for the researchers and plant lovers and thus be a source of future scientific research. Various segments of the society will take benefit from this Catalogue and it will help in identification of many common plants growing in the Garden including indigenous, and may other important species from Conservation point view. I congratulate, the Director, Centre of Plant Biodiversity and his young and energetic team for taking keen interest in the preparation of this catalogue. I pray & hope that they will work as a team for further improvement of our Centre of Plant Biodiversity and Botanical Garden InshaAllah.

Dr. Amir Nawaz Khan
Meritorious Professor & Dean
Faculty of Life & Environmental Sciences
University of Peshawar

PREFACE

This is the First Edition of the Catalogue of Plants wildy growing and cultivated in University of Peshawar, Botanical Garden, which was established in 2005. The Catalogue records 79 families and 214 species including varieties and cultivars.

It is presumed that this Catalogue will help the layman, School, College and University students in identification of common plants. Further, this Catalogue will also provide information regarding the species used in local landscaping and as ornamentals. The First Edition of the Catalogue comprises of 95 families and 258 species. Many of the species mentioned in the present book are trees and some shrubs are also included. Some species are wildy growing herbs few exotic and many indigenous species are also present. These indigenous species needs conservation and there growth must be encouraged for their Conservation.

In present scenario it is important that documentation of the local flora may be carried out. Therefore, the present Catalogue is an attempt to share the common flora of University of Peshawar, Botanical Garden. I am sure that this Catalogue will help in identification of many common plants growing in the area for conservation, ornamental and medicinal purposes. Since plants are the primary producers and they are lungs of the nature therefore, the present Catalogue will provide an opportunity for selection and growth of many plants to be cultivated in future.

I would like to pay thanks to Prof. Dr. Amir Nawaz Khan, Dean Faculty of Life & Environmental Sciences for idea of preparation of a Catalogue and teaching faculty of Centre of Plant Biodiversity for their encouragement during the preparation of this Catalogue. Special thanks goes to Syed Ghias Ali, Horticulturist/Lecturer for his moral support, encouragement, help and company during collection of data at Botanical Garden. This effort may be helpful in imparting knowledge and understanding of 'how to love plants'. I do hope this Catalogue will at least provide the basic information regarding many common plants growing in University of Peshawar, Botanical Garden.

Dr. Asad Ullah
Director
Centre of Plant Biodiversity &
Botanical Garden
University of Peshawar
August, 2015

GEOGRAPHICAL LOCATION, AREA AND CLIMATE

Latitude:	34° 15' to 34° 31' N
Longitude:	71° 43' to 71° 44' E
Area:	83 acres
Altitude:	290 meters
Climatic Region:	Dry Thorny Sub-Tropical
Mean Annual Temperature Summer:	29.5 °C
Highest Recorded:	50 °C (1994)
Mean Annual Temperature Winter:	16.5 °C
Lowest Recorded:	-3.1 °C (2000)
Range of Annual Precipitation:	> 400 mm
Relative Humidity:	50 % to 85 %

ABSTRACT

S. No.	Group	Families	Genera	Species
1	Pteridophytes	7	7	8
2	Gymnosperms	6	11	13
3	Monocot	24	60	63
4	Dicot	58	163	174
5.	Total	95	241	258

A. PTERIDOPHYTES

1. ADIANTACEAE

Adiantum venustum D. Don.

Adiantum capillus veneris L.

2. ASPLENIACEAE

Asplenium adiantum-nigraum L.

3. AZOLLACEAE

Azolla imbricata (Roxb.) Nakai

4. DRYOPTERIDACEAE

Dryopteris serrato-dentata (Bedd). Hay

5. EQUISETACEAE

Equisetum arvense L.

6. MARSILEACEAE

Marsilea quadrifolia L.

7. PTERIDACEAE

Pteris vitata L.

B. GYMNOSPERMS

1. ARAUCARIACEAE

Araucaria heterophylla (Salisb) Franco

2. CUPRESSACEAE

Cupressus sempervirens L.

Juniperus communis Thunb.

Thuja orientalis L.

3. CYCADACEAE

Cycas circinalis L.

Cycas revoluta Thunb.

4. GINKGOACEAE

Ginkgo biloba L.

5. PINACEAE

Pinus roxburghii Sargent

Pinus wallichiana A. B. Jackson

Cedrus deodara Duhamel.

6. TAXODIACEAE

Metasequoia glyptostroboides Hu & W.C. Cheng

Taxodium mucronatum Ten.

Taxus fuana Nan Li & R. R. Mill

C. ANGIOSPERMS (MONOCOT)

1. ARECACEAE

Caryota urens L.

Dyopsis iutescens Beentje

Livistona chinensis R. Brown ex Martius

Nannorrhops ritchiana (Griff.) Aitchison

Phoenix dactylifera L.

Rhapis excelsa (Thunb.) Henry ex. Rehder

Trachycarpus fortunei (Hook.) H. Wendl.

Washingtonia filifera (L. Linden) H. Wendl.

2. AMARYLLIDACEAE

Zephyranthes candida Herb.

3. ARACEAE

Acorus calamus L.

Epipremnum aureum (Linden & Andre) G. S. Bunting

Monstera deliciosa Liebm.

Pistia stratiotes L.

4. ARALIACEAE

Schefflera arbuticola (Hayata) Kanehira

5. ASPARAGACEAE

Asparagus officinalis L.

Asparagus racemosus Willd.

Beaucarnea recurvata Lem.

Chlorophytum comosum Thunb.

6. ASPHODELACEAE

Aloe vera (L.) Burm. f.

7. BUTOMACEAE

Butomus umbellatus L.

8. BROMELIACEAE

Ananas cosmosus (L.) Merr.

9. CANNACEAE

Canna indica L.

10. CACTACEAE

Echinocactus grusonii Hildm.

Opuntia stricta (Haw.) Haw.

11. CYPERACEAE

Cyperus rotundus L.

12. DIOSCOREACEAE

Dioscorea deltoidea Wall. ex Kunth

13. HAEMODORACEAE

Ophiopogon intermedius D. Don

14. HEMEROCALLIDACEAE

Hemerocallis fulva (L.) L.

15. IRIDACEAE

Iris hookeriana Foster

16. LEMNACEAE

Lemna gibba L.

17. LILIACEAE

Allium sativum L.

Allium cepa L.

Cordyline terminalis L.

Dracaena deremensis (L.) Ker Gawl.

Hippeastrum puniceum (Lamarck) Voss

Narcissus poeticus L.

Tulipa culsiana DC.

Yucca elephanties Lindling.

18. MUSACEAE

Musa paradisiaca L.

19. POACEAE

Avena sativa L.

Cenchrus ciliaris L.

Cynodon dactylon (L.) Pers.

Cymbopogon citratus (DC. ex Nees) Stapf

Cymbopogon jwarancusa (Jones) Schult

Dactyloctenium aegyptium (L.) Willd.

Dentrocalamus strictus (Roxb.) Nees.

Dichanthium annulatum (Forssk.) Stapf

Eragrostis minor Hest.

Imperata cylindrica (L.) P. Beauv

Muhlenbergia duthieana Hack.

Phalaris minor Retz.

Phragmites karka (Retz). Trin-extend.

Poa annua L.

Polypogon monspeliensis (L.) Desf.

Saccharum munja Roxb.

Schismus barbatus (L.) Thell.

Setaria italica (L.) P. Beauv.

20. PONTEDERIACEAE

Eichhornia crassipes (Mart.) Solma

21. SMILACACEAE

Smilax glaucophylla Klotzsch

22. STRELITZIACEAE

Ravenala madagascariensis Sonn.

23. TYPHACEAE

Typha angustifolia L.

24. ZINGIBERACEAE

Curcuma longa L.

Zingiber officinale Roscoe

D. ANGIOSPERMS (DICOT)

1. ACANTHACEAE

Adhatoda vasica L.

Ruellia squarrosa Lam.

2. ANACARDIACEAE

Schinus molle L.

3. AIZOACEAE

Aptenia cordifolia (L. f.) N. E. Br.

Darotheanthus bellidiformis L.

4. AMARANTHACEAE

Amaranthus viridis L.

Amaranthus spinosus L.

Chenopodium album L.

Chenopodium murale L.

Chenopodium ambrosioides (L.) Mosyakin & Clemants

Suaeda fruticosa (L.) Forssk

5. APIACEAE

Ammi visniga (L.) Lam.

Coriandrum sativum L.

Foeniculum vulgare L.
Scandix pecten-veneris L.
Trachyspermum ammi (L.) Sprague

6. APOCYNACEAE

Alstonia scholaris L. R. Br.
Jatropha integerrima Jacq.
Nerium indicum Mill.
Nerium oleander L.
Plumeria obtusa L.
Tabernaemontana coronaria R. Br. ex Roem. & Schult.
Thevetia peruviana (Pers.) Schum.
Vinca rosea L.

7. ASCLEPIADACEAE

Calotropis procera (Aiton) W. T. Aiton.
Caralluma tuberculata N.E. Brown

8. ASTERACEAE

Calendula officinalis L.
Chrysanthemum coronarium L.
Conyza aegyptiaca (L.) Aiton
Gazania rigens (L.) Gaertn.
Helianthus annuus L.
Lactuca serriola L.
Launaea procumbens Endl.
Matricaria chamomilla. L.
Senecio cineraria DC.
Silybum merianum (L.) Gaeth
Tagetes erecta L.
Tagetes patula L.
Taraxacum officinalis L.
Zinnia peruvianum L.

9. BIGNONIACEAE

Jacaranda mimosifolia D. Don
Campsis grandiflora (Thumb.) K. Schum
Stenolobium stans (L.) Juss. ex Kunth

10. BORAGINACEAE

Cordia myxa L.

11. BRASSICACEAE

Brassica campestris L.

Coronopus didymus (L.) Sm.

Matthiola incana (L.) W. T. Aiton

Raphanus sativa L.

Sisymbrium irio DC.

12. BOMBACACEAE

Bombax cieba L.

13. BUXACEAE

Buxus wallichiana L.

Sorcococa saligna (D. Don.) Muell.

14. CAESALPINACEAE

Cassia fistula Benth.

Bauhinia variegata L.

Bauhinia purpurea L.

15. CARYOPHYLLACEAE

Anagallis arvensis L.

Stellaria media L.

16. CELASTERACEAE

Euonymus japonicas Thunb.

17. COMBRETACEAE

Quisqualis indica L.

18. CHENOPODIACEAE

Chenopodium album L.

Chenopodium botrys L.

Chenopodium murale L.

19. CONVULVULACEAE

Convolvulus arvensis L.

20. CUCURBITACEAE

Cucumis melo var. agrestis L.

21. EBENACEAE

Diospyros kaki L.

Diospyros lotus L.

Diospyros embryopteris Gaertn.

22. EUPHORBIACEAE

Euphorbia helioscopia L.
Euphorbia heterophylla L.
Euphorbia prostrata Aiton.
Euphorbia milli des Moul.
Euphorbia caducifolia Haines
Excoceria bicolor Lour.
Jatropha hastata Jacq.
Phyllanthus emblica Gaertn.
Ricinus communis L.
Sapium sebiferum (L.) Small

23. HIPPOCASTANCEAE

Aesculus indica (Wall. ex Camb.) Hook. f.

24. HYPERICACEAE

Hypericum calycinum L.

25. LAMIACEAE

Lamium album L.
Mentha spicata (L.) L.
Mentha longifolia L.
Rosmarinus officinalis L.

26. LYTHRACEAE

Lagerstroemia indica (L.) Pers.
Lagerstroemia speciosa (L.) Pers.

27. MALVACEAE

Malva neglecta L.
Althaea rosea L.
Hibiscus rosa-sinensis L.

28. MAGNOLIACEAE

Magnolia grandiflora Moc.

29. MELIACEAE

Azadirachta indica A. Juss.
Melia azedarach L.

30. MIMOSACEAE

Acacia modesta Wall.
Albizia lebbek (L.) Benth.
Melilotus indica (L.) All.
Leucaena leucocephala (Lam.) de Wit.
Prosopis juliflora Swartz.

31. MORACEAE

Ficus carica L

Ficus elastica Roxb. ex Hornem.

Broussonetia papyrifera (L.) L.

Morus nigra L.

Morus alba L.

32. MYRTACEAE

Callistemon lanceolatus DC.

Eucalyptus camaldulensis Dehnh.

Eucalyptus citrodora Hook.

Eucalyptus torelliana F.V. Mu

Melaleuca accedens (Hawkeswood) Craven & R. D. Edwards

Psidium guvava L.

Syzygium cumini (L.) Skeels.

33. NYCTAGINACEAE

Bougainvillea spectabilis Willd.

34. OLEACEAE

Jasmiunm officinal L.

Jasmiunm sambac (L.) Aiton

Tabernaemontana divaricate R. Br. ex Roem. & Schult.

Ligustrum vulgare L.

Olea ferruginea Royle

Olea europaea L.

35. OXALIDACEAE

Oxalis corniculata L.

Oxalis pescarpae L.

Oxalis corymbosa DC.

36. PAPILIONACEAE

Dalbergia sissoo Roxb.

Indigofera heterantha Wall. ex Brandis

Medicago sativa L.

Melilotus offinalis (L.) Pall.

Lotus corniculatus L.

Pongamia pinnata (L.) Panigrahi

37. PAPAVERACEAE

Papaver rhoeus L.

Papaver somniferum L.

38. PLATANACEAE

Platanus orientalis L.

39. PUNICACEAE

Punica granatum L.

40. POLYGONACEAE

Polygonum aviculare L.

Rumex dentatus L.

41. PORULACACEAE

Portulaca grandiflora Hook.

42. PRIMULACEAE

Anagallis arvensis L.

43. RANUNCULACEAE

Ranunculus muricatus L.

Batrachium trichophyllum (Chaix) Van der Bosche

44. RHAMNACEAE

Ziziphus jujuba Mill.

Ziziphus mauritiana L.

45. ROSACEAE

Rosa indica L.

Eriobotrya japonica (Thunb.) Lindley.

Prunus domestica L.

46. RUBIACEAE

Galium aparine L.

47. RUTACEAE

Citrus acida Roxb.

Citrus medica L.

Citrus lemon L.

Murraya paniculata (L.) Jacq.

48. SALICACEAE

Salix babylonica L.

Salix acmophylla Boiss.

Populus alba L.

49. SAPINDACEAE

Dodonea viscosa (L.) Jacq.

50. SAXIFRAGACEAE

Bergenia ciliata (Haw.) Sternb

51. SCROPHULARIACEAE

Antirrhinum majus L.

Russelia juncea Jacq.

Veronica biloba L.

52. SIMAROUBACEAE

Ailanthus altissima (Mill.) Swingle.

53. SOLANACEAE

Brugmansia arborea (L.) Sweet.

Cestrum nocturnum L.

Cestrum diurnum L.

Datura metal L.

Datura stramonium L.

Petunia hybrida Hort. ex Vilm.

Solanum nigrum L.

Solanum surattense Burm.

Withania somnifera L.

Cardiospermum halicacabum L.

54. STERCULIACEAE

Sterculia foetida G. Don.

55. TAMARICACEAE

Tamarix aphylla L.

56. VERBENACEAE

Clerodenrum inermi L.

Duranta repens L.

Lantana camara L.

Verbena officinale L.

57. VIOLACEAE

Viola odorata Wall

***Viola tricolor* L.**

58. VITACEAE

Vitis vinifera L.

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