

A preliminary report on flora of Muzaffarpur with special reference to B. R. A. Bihar University Campus: Herbal Biodiversity

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ABSTRACT

The herbal biodiversity of Muzaffarpur district with special reference to B.R.A. Bihar University campus has been described in the present paper. The total number of plant species is 122 which have been recorded from the university campus, out of which 106 are dicots while 16 plant species are monocots. The plants belong to 45 families comprising of 36 dicot families and 9 monocot families.

Keywords: Herbs, flora, B.R.A. Bihar University campus, Muzaffarpur, India.

INTRODUCTION

The herbs are potentially important and globally recognized bio-resources for pharmaceutical industries (Chaturvedi 2007, Sharma *et al.* 2010, Raageeva Bimal *et al.* 2011, Singh *et al.* 2011, Raageeva Bimal and Sahnawaz, 2012, Bimal *et al.* 2014 a, b). The efficient use of plants necessitates and emphasizes the need for a sound knowledge of plants growing in the area (Bimal *et al.* 1991; Bimal *et al.* 2014a, b). In our effort to promote interest in the field of plant taxonomy and create botanical database of B.R.A. Bihar University campus, floristic survey of herbs was undertaken. B. R. A. Bihar University campus has been botanically explored previously for its tree biodiversity (Bimal *et al.* 2014c), aquatic angiosperms (Bimal *et al.* 2014d) and wall flora (Bimal *et al.* 1991). The host range of Dodder (*Cuscuta reflexa*) a parasitic angiosperm in B.R.A. Bihar University Campus has also been reported (Singh *et al.* 2015). In the present paper systematic enumeration of herbs growing in the University campus has been described.

MATERIALS AND METHODS

Although the B. R. A. Bihar University Campus was intensively surveyed from June 2015 to May 2016. After completing the survey and collection of plant specimens, these were identified as described earlier (Bimal *et al.* 1991).

RESULTS AND DISCUSSION

The systematic enumeration of herbs of B.R.A. Bihar University campus recorded during present study has been given below:

Dicotyledones:

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| 1. Ranunculaceae
<i>Ranunculus scleratus</i> L. | 3. Papaveraceae
<i>Argemone mexicana</i> L. |
| 2. Menispermaceae
<i>Tinospora cordifolia</i> Wild. | 4. Cruciferae
<i>Iberis amara</i> L.
<i>Senebiera didyma</i> Pers. |

5. Cappariaceae
Cleome viscosa L.
Gynandropsis pentaphylla DC.
6. Portulacaceae
Portulaca oleracea L.
P. tuberosa Roxb.
7. Aizoaceae
Trianthema portulacastrum L.
8. Malvaceae
Abutilon indicum Don.
Malachra capitata L.
Malvastrum tricuspidatum A. Gray
Sida cordifolia Linn.
9. Ampelideae
Vitis trifolia L.
10. Rutaceae
Citrus medica L.
11. Papilionaceae
Crotolaria juncea L.
Clitoria ternatea L.
Medicago sativa L.
Melilotus alba Lamk.
12. Caesalpineae
Cassia tora L.
C. sophera L.
13. Mimosae
Mimosa pudica L.
14. Rosaceae
Rosa indica L.
15. Combretaceae
Quisqualis indica L.
16. Lythraceae
Lawsonia alba Lamk.
17. Cucurbitaceae
Coccinia indica W. & A.
18. Cactaceae
Opuntia dillenii L.
19. Umbelliferae
Centella asiatica (L.) Urban.
20. Rubiaceae
Ixora parviflora Vahl.
Mussaenda frondosa L.
21. Compositae
Ageratum conyzoides L.
Blumea sp.
Echinops echinatus Roxb.
Eclipta alba Hassk.
Launaea asplenifolia DC.
Parthenium hysterophorus Linn.
Pulicaria crispa Schultz.
Sonchus asper Vill.
Tridax procumbens L.
Vernonia cinerea Less.
Wedelia calandulacea Less.
Xanthium strumarium L.
22. Primulaceae
Anagallis arvensis L.
23. Oleaceae
Jasminum sambac Ail.
24. Apocyanaceae
Aganosma caryophyllata G. Don.
Nerium odorum Soland. (Syn. *N. indicum* Mill.)
**Rauwolfia serpentina* Benth.
Tabernaemontana coronaria Br.
T. divaricata Burhill.
Thevetia neriifolia Juss.
Vinca rosea L.
25. Boraginaceae
Heliotropium indicum Linn.
26. Convolvulaceae
Convolvulus arvensis L.
**¹Cuscuta reflexa* Roxb.
Evolvulus alsinoides Wall.
Ipomoea aquatica Forsk.
I. carnea Jacq.
I. palmata Forsk.
27. Solanaceae
Cestrum nocturnum L.
C. diurnum Linn.
Datura alba L.
D. metel L.
Nicotiana plumbaginifolia Viv.
Physalis peruviana L.
Solanum nigrum L.
S. torvum L.
S. xanthocarpum Schrad and Went.

28. Scrophulariaceae
Lindenbergia indica (Linn.) O. Kuntz.
Scoparia dulcis L.
Vandellia crustacea Benth.
29. Acanthaceae
Adhatoda vasica Nees.
Barleria cristata L.
Astercantha longifolia Nees.
Ruellia tuberosa L.
R. prostrata Poir.
Rungia parviflora Nees.
Thunbergia grandiflora Roxb.
30. Verbenaceae
Clerodendron infortunatum Gaertn.
C. inerme (L.) Gaertn.
Duranta plumieri Jacq.
Lantana camara L.
Lippia nodiflora Rich.
31. Labiatae
Anisomeles indica O. Ktze.
Leonurus sibiricus L.
Leucas cephalotes Spreng.
Mentha viridis L.
Nepeta hindostana Roth.
Ocimum sanctum L.
32. Nyctaginaceae
Boerhaavia diffusa L.
Bougainvillea Sp.
Mirabilis jalapa L.
33. Polygonaceae
Polygonum plebejum Br.
34. Amarantaceae
Achyranthes aspera L.
Amaranthus spinosus L.
A. tricolor L.
A. viridis L.
Alternanthera sessilis Br.
Digera alternifolia Aschers.
35. Loranthaceae
*¹*Loranthus longiflorus* Desr.
36. Euphorbiaceae
Acalypha indica L.
Croton sparsiflorus Morung.
Euphorbia hirta L.
Phyllanthus niruri L.
Pedilanthus tithymaloides Poit.
Ricinus communis L.
- Monocotyledones:**
37. Orchidaceae
Zeuxine sulcata Lindl.
38. Amaryllidaceae
Polianthes tuberosa L.
Zephyranthes rosea Lindl.
39. Musaceae
Musa sapientum L.
40. Cannaceae
Canna indica L.
41. Liliaceae
Dracaena terniflora Roxb.
42. Commelinaceae
Commelina benghalensis L.
Rhoeo discolor Hance
Tradescantia virginiana L.
43. Araceae
Alocasia indica Schott.
Amorphophallus campanulatus Blume.
Colocasia antiquorum Schott.
Pothos Sp.
44. Cyperaceae
Cyperus rotundus L.
45. Gramineae
Cyanodon dactylon Pers.
Saccharum officinarum L.
*Endangered plant
*¹ Parasitic angiosperm

The floristic wealth with reference to herbs growing in the B.R.A. Bihar University campus is characterized by total number of 45 families representing 36 dicot families and 9 monocot families. The flora consists of two parasites, the total stem parasite *Cuscuta reflexa* spread over 43 hosts in the campus, of which 42 hosts are angiosperm and one fern (Singh *et al.* 2015). The other parasite *Loranthus longiflorus* most commonly observed on Mango trees in the campus. From the point of view of conservation status, sight of a very small patch of *Rauwolfia serpentina* gives pleasure and excitement. An *in vitro* conservation protocol was

established recently for this plant (Devla *et al.* 2013). The coverage area of *R. serpentina* has been drastically reduced in the campus in recent years reflecting the callous attitude of people towards plants or medicinal plants growing in their surroundings. The paper is a rich source of information on the botany of B.R.A. Bihar University Campus.

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