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Floristic Study of Shirur Region Pune, Maharashtra, India

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Abstract

The investigation was carried out in order to explore the existing floristic composition in Shirur, Pune (Maharashtra). The present area of Shirur, Pune is selected for the floristic studies because it has been given little attention of its vegetation. The vegetation was arid to semiarid and dry deciduous, thorny scrub type. Over 161 plants belonging to more than 49 families were studied. Among 49 families, Caesalpiniaceae and Mimosaceae are the most dominant family. The floristic information of the tree flora of Shirur city is now available for the first time with this publication.

Keywords: floristic, studies, Shirur, vegetation.

Introduction

Natural resources survey like floristic study plays an important role in the economic development of developing country like India. Vegetation is the most precious gift, nature has provided to us as meeting all kinds of essential requirements of the humans in the form of food, fodder, fuel, medicine, timber, resins, and oil, etc[1]. Plant communities play a pivotal role in sustainable management by maintaining biodiversity and conserving the environment[2]. Floristic study and diversity assessments are necessary to understand the present diversity status and conservation of biodiversity. Floristic study is a necessary prerequisite for much fundamental research in tropical community ecology, such as modelling patterns of species diversity or understanding species distributions[3].

Floristic studies acquire increasing importance in recent years in response to the need of developing and under developing countries to assess their plant wealth[4]. Many floristic diversity studies have been conducted in different parts of world[5-18]. Thus, it is clear that floristic studies are undertaken by many researchers worldwide in different levels. The present study area of Shirur from Pune district is selected for the floristic studies because it has not been given attention its vegetation. Shirur is a municipal council in the Pune district of the Indian state of Maharashtra. Shirur city is located on the boundaries of the Pune and Ahmednagar district on the banks of the River Ghod. The knowledge of the plant community is a prerequisite to understand the overall structure and function of ecosystem. The floristic information of the flora of Shirur city is now available for the first time with this publication.

Material and Methods

Study Area: Shirur is situated on the bank of Ghod river. It is bound on the Nagar and Pune district. Shirur lies between 18.8300°N latitude and 74.3800° E longitude. The region Shirur having climatic condition hot temperature and scanty rainfall. The region having the minimum temperature as low as 5°C to 10°C and maximum temperature as high as 40°C to 48°C.

Floristic Analysis: During the present works we have regularly and also season wise observed plants from Shirur area during 2010-2012. Floristic Survey of the different areas was done and studied floristic diversity and vegetation pattern of the area. Field data has been noted in the field diary. The plants were collected, identified by using standard flora[19-22] and preserved in the form of Herbarium and Photographs.

Results and Discussion

The investigation was carried out in order to explore the existing floristic composition in Shirur, Pune (Maharashtra) during 2010-2012. The vegetation was arid to semiarid and dry deciduous, thorny scrub type. The Study revealed that the presence of some important shrubs and trees in the area. Over 161 plants belonging to more than 49 families were studied table-1. Among 49 families, Caesalpiniaceae and Mimosaceae are the most dominant family.

Out of 161 plants, genera like *Cassia, Acacia, Ficus, Zizipus etc.* are dominant. From the above observation, it can be concluded that Caesalpiniaceae is the dominant and leading family, species wise as well as genera wise, followed by Mimosaceae, Fabaceae, Euphorbiacea*e.* Some of the rare trees in the Shirur area observed during the survey, *Cocous nucifera* L., *Roystonea regia* (H.B. and K.) F., *Jacaranda acutifolia* Humd and Bonpl. *Terminalia bellerica* (Roxb.) Gaertn, *Callistemon citratus* (Curtis) Skeels, *Terminalia chebula* (Gaertn.) Retz. etc.

Conclusion

Present study revealed that, Over 161 plants belonging to more than 49 families were studied. Floristic vegetation is very much affected by local activities and their natural regeneration

prevented due to heavy cuttings, grazing etc mining activities. The influence of industrialization, over population, loss of potential habitat, climatic changes etc., have altered the vegetation pattern of the area. This has definitely affected flora adversely. There is urgent need for whole area under conservation and protection by Government as well to aware the peoples about the plant biodiversity. We do not know the effects of the new introductions over native vegetation yet. The data presented in this work are original and first hand. It is hoped that it will contribute in preparation of flora of Shirur. There is a need to be protect and conserve this species for the future generation.

Table-1
Flora of Shirur region, Pune (M.H, India)

Botanical name	Family	Common name
Adhathoda vasica Nees	Acanthaceae	Adulsa
Barleria prionitis L.	Acanthaceae	Kate koranti
Crossandra infundibuiformis (L.) Nees	Acanthaceae	Aboli
Barleria prionitis L. Acanthaceae	Acanthaceae	Pivali koranti
Agave Americana L. var.*americana*	Agavaceae	Kektad
Agave angustifolia Haw.	Agavaceae	Ghayapat
Achyranthes aspera L.	Amaranthaceae	Aaghada
Amaranthus roxburghianus Nevsaki	Amaranthaceae	Tandulja
Amaranthus spinosus L.	Amaranthaceae	Kante Math
Amaranthus tricolor L	Amaranthaceae	Math
Celosia argentea L.	Amaranthaceae	Kardu
Mangifera indica L.	Anacardiaceae	Aamba
Annona squamosa L.	Annonaceae	Sitaphal
Annona reticulate L.	Annonaceae	Ramphal
Artabotrys hexapetalous(L.f.) Bhandari.	Annonaceae	Hirva chafa
Polyalthia longifolia L.	Annonaceae	Ashok
Catharanthus roseus L.	Apocynaceae	Sadaphuli
*Nerium indicum*Mill.	Apocynaceae	Kaner
Tabernaemontana divaricata (L.) Br.	Apocynaceae	Chandni, Tagar
Plumeria acuminata Alt.	Apocynaceae	Dev-chapha
Plumeria alba L. Pandhara	Apocynaceae	Chapha
Plumeria rubra L.	Apocynaceae	Lal Chapha
Alstonia scholaris (L.) R. Br.	Apocynaceae	Saptparni
Wrightia tinctoria R. Br.ssp. Tinctoria	Apocynaceae	Kala Kuda
Cocous nucifera L.	Arecaceae	Naral, Mad
*Phoenix sylvestris*L. Roxb.	Arecaceae	Shindi
Roystonea regia (H.B. & K.) F.	Arecaceae	Bottle pam
Colocasia esculenta (L.)Schott.	Arecaceae	Alu
Calotropis procera (Ait.) R. Br.	Asclepiadaceae	Rui
Holostemma annulare (Roxb.) K. Schum.	Asclepiadaceae	Shidodi
Calotropis gigantea (L.) R. Br.	Asclepiadaceae	Mandar
Araucaria excelsa Br.	Araucariaceae	Christ Mas Tree
Helianthus annuus L.	Asteraceae	Sunflower
Parthenium hysterophorus L	Asteraceae	Gajar ghas
*Tridax procumbens*L	Asteraceae	Kanphuli
Tagetes erecta L.	Asteraceae	Zendu
Millingtonia hortensis L. f.	Bignoniaceae	Buchzad,akashnimb
Jacaranda acutifolia Humd & Bonpl.	Bignoniaceae	Neel mohor
Spathodea campanulata	Bignoniaceae	Pichakari
Adansonia digitata L.	Bombacaceae	Gorakhchinch
Bambusa arundinacea (Retz.) Willd.	Bambusaceae	Bambu
Bombax ceiba L	Bombacaceae	Katesavar
Cassia fistula Linn.	Caesalpiniaceae	Bahava

Botanical name	Family	Common name
Cassia tora L.	Caesalpiniaceae	
Caesalpinia bonduc L.	Caesalpiniaceae	Sagargota
Caesalpinia pulcherrima (L.) Sw.	Caesalpiniaceae	Sankarshawar
*Caesalpinia decapetala (*Roth) Alston	Caesalpiniaceae	Chillar
Delonix regia Raf.	Caesalpiniaceae	gul mohur
Saraca ashoka de Willd	Caesalpiniaceae	Ashok (Sitecha)
Bauhinia purpurea L.	Caesalpiniaceae	Kanchan
Bauhinia racemosa Lamk.	Caesalpiniaceae	Apta
Peltophorum pterocarpum (DC.) Baker	Caesalpiniaceae	Sonmohar
Cassia auriculata L.	Caesalpiniaceae	Tarwad
Tamarindus indica Linn.	Caesalpiniaceae	Chincha
*Opuntia elatior*Mill.	Cactaceae	Nivdung
Carica papaya L.	Caricaceae	Popai
Biota oriantalis Endl.(L.)	Cupressaceae	Morpankhi
Cycas circinalis	Cycadaceae	Cycas
Cyperus rotundus L	Cyperaceae	Nagar motha
Ipomoea cairica (L.) Sweet	Convolvulaceae	Garvel
Ipomoea carnea Jacq. Subsp. *Fistulosa*	Convolvulaceae	Besharum
Casuarina aqusetifolia Lour.	Casurinaceae	Suru
Cana flaccid Rosc.	Cannaceae	Kardal
Cana indica L.	Cannaceae	Karadal
Terminalia bellerica (Roxb.) Gaertn	Combretaceae	Beheda
Terminalia catappa L.	Combretaceae	Desi badam
Terminalia chebula (Gaertn.) Retz.	Combretaceae	Hirda
Emblica officinalis	Euphorbiaceac	Amla
Euphorbia hirta L	Euphorbiaceae	Dudhi
Euphorbia tirucalli L	Euphorbiaceae	Sher
Phyllanthus fraternus Webstr.	Euphorbiaceae	Bhui-amla
Phyllanthus emblica L.	Euphorbiaceae	Awla
Ricinus communis L.	Euphorbiacea*e*	Erand
*Dalbergia sissoo*Roxb.	Fabaceae	Sisham
Delonix regia Rafin	Fabaceae	Gulmohar
*Pongamia pinnata*L	Fabaceae	Karanj
Sesbania grandiflora (L.) Poir	Fabaceae	Hadaga
*Sesbania sesban*L.	Fabaceae	Shewri
Indigofera cordifolia Heyne ex Roth.	Fabaceae	Godhadi
Tephrosia purpurea (L.) Pers.	Fabaceae	Unhali
Abrus precatoriius L. Fabaceae	Fabaceae	Gunj
Clitoria ternatea L. Fabaceae	Fabaceae	Gokarna
Gillricidia sepium (Jacq.) Kunth exWalp	Fabaceae	Giripushpa
Ocimum sanctum L.	Lamiaceae	Tulsi
Ocimum americanum L.	Lamiaceae	Ran Tulas
Ocimum basilicum L. Var. thyrsiflora Benth.	Lamiaceae	Sabja
Aloe vera (L.)Burm.f	Liliaceae	Korphad
Tribulus Terrestris	Lygophyllaceae	Sarata, Gokhur
*Michelia champaca*L.	Magnoliaceae	Champa
Hibiscus rosa-sinensis L.	Malvaceae	Jaswandi
Hibiscus syriacus L.	Malvaceae	Nili jaswand
*Azadirachta indica*Juss.	Meliaceae	Neem, Nimba
*Melia azedarach*L.	Meliaceae	Limbara, Bakana
Tinospora cordifolia (Willd.) Miers ex Hook.f. & Thoms.	Menispermaceae	Gulvel
Acacia nilotica L.	Mimosaceae	Babhool, Kikar

Botanical name	Family	Common name
Acacia arabica (Lam.) Willd.	Mimosaceae	Babul
Acacia chundra (Roxb. Ex. Rottl.) Willd.	Mimosaceae	Khair
Acacia arabica (Lam.) Willd.	Mimosaceae	Babul
Acacia auriculiformis A.Cunn.	Mimosaceae	Australian baval
Mimosa pudica L.	Mimosaceae	Chu-mui
Leucaena latisiliqua (L.) Gills	Mimosaceae	Subabhul
Samanea saman (Jacq.)Merr.	Mimosaceae	Rain tree
Prosopis julifera (Sw.) DC.	Mimosaceae	Vedibabhul
Albizia lebbeck (L.) Bth.	Mimosaceae	Siris
Albizia procera (Roxb.)Bth.	Mimosaceae	Safed siris
Prosopis cineraria (L.) Druce.	Mimosaceae	Khijado
Ficus religiosa L.	Moraceae	Pipal
Ficus bengalensis Linn.	Moraceae	Vad
Ficus carica	Moraceae	Anjeer
Ficus racemosa L.	Moraceae	Umbar
Ficus tsiela Roxb.	Moraceae	Pipli
Morus alba L.	Moraceae	Tuti
Moringa oleifera Lamk	Moringaceae	Shevga
Musa acuminata X *balbisiana* Colla.	Musaceae	Kela
Tinospora cordifolia (Willd.)	Menispermaceae	Gulvel
Psidium guajava L.	Myrtaceae	Peru
Callistemon citratus (Curtis) Skeels	Myrtaceae	Bottle brush
Eucalyptus citriodora HK.f.	Myrtaceae	Neelgiri
Syzygium cumini (L.) Skeels.	Myrtaceae	Jambhul
Lawsonia inermis L.	Myrtaceae	Mehandi
Boerhavia diffusa L	Nyctaginaceae	Punarnava
Bouganvillea Spectabilis Willde.	Nyctaginaceae	Bouganvillea
Jasminum multiflorum (Burma.f.) Aners	Oleaceae	Chameli
Nyctanthes arbor-tristis Linn.	Oleaceae	Parijatak
Biophytum sensitivum (L.) DC.	Oxalidaceae	Lajwanti,
***Argemone mexicana* L.**	**Papaveraceae**	Bilayat
Piper longum Linn.	Piperaceae	Pimpli
Punica granatum L.	**P**unicaceae	Dalimb
Zizipus mauritiana Lam.	Rhamnaceae	Bor
Aegle marmelos L.Corr.	Rutaceae	Bael, Bilva
Citrus limon (L.) Burm.	Rutaceae	Limbu
Santalum album L.	Santalaceae	Chandan
Manilkara zapota (L.) Van.	Sapotaceae	Chikoo
Datura metel L.	Solanaceae	Kala Dhotra
Datura stramoniim L.	Solanaceae	Dhotara
Dombeya acutangula L	Sterculiaceae	Bhadraksh
Typha angustifolia L.	Typhaceae	Pankanis
Ailanthus excelsa Roxb.	Simaroubaceae	Maharukh
Sapindus emarginatus Vahl.	Sapindaceae	Ritha
Duranta repens L.	Verbenaceae	Duranta
Lantana camara L.	Verbenaceae	Ghaneri
Tectona grandis Linn.	Verbenaceae.	Sag, Sagwan
Vitex negundo L.	Verbenaceae	Nirgundi

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