



## RESEARCH ARTICLE

### CHECK LIST OF THE VASCULAR PLANTS OF NASIRABAD TEHSIL, AJMER DISTRICT

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#### ABSTRACT

The floristic survey of Nasirabad tehsil resulted in collection of 570 species of flowering plants belonging to 330 genera under 88 families. Besides 3 species of pteridophytes were also collected. A checklist is presented along with a brief account on topography, climate, vegetation and floristic analysis.

#### Key words:

Nasirabad, Vascular plants, Checklist.

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## INTRODUCTION

A report on vegetation of Rajasthan has been published by Anonymous (2009). Similarly, flora of Rajasthan State has been worked out by Shetty and Singh (1993). Check lists of flora of different parts of Gujarat State have been published by Raghavan *et al.* (1981) and Meena (2004; 2008, 2012). But so far as Nasirabad tehsil of Ajmer district is concerned, no work has so far been published on its flora. Keeping this in view, the check list of vascular flora of this area has been provided in this paper. Nasirabad tehsil of Ajmer district, Rajasthan state, lies between 26.3° north latitudes and 74.73° E longitudes. The district shares its boundaries with Jaipur and Tonk district in east, Pali district in west, Nagaur district touches its north boundaries while Bhilwara district is in the south. The total geographical area is 8481.20 sq.kms. The district has no natural division. Nasirabad tehsil occupies an area spread over 748.58 sq.kms.

### Physiography

**Soil :** Lithosols and regosols types of soil are found in the east of the Aravalli hills forming a valley between Ajmer and Nasirabad. Alluvium is found in plains. The richest soils are present near Srinagar and Dilwara villages in Nasirabad tehsil. These are non-calcareous, semi-consolidated to unconsolidated,

brown, loamy sand to sandy loam and occupy gently sloping terrains in central and eastern part of the tehsil.

**Drainage:** Nasirabad tehsil falls in the Banas and Luni basin. There is no important river in this tehsil. Khari and Dai rivers are ephemeral and flow only in response to precipitation.

**Climate:** Nasirabad tehsil falls under the semi arid climatic region. Summer season starts from March and continues up to June end. The temperature reaches up to 44 °C during the month of June when days are hot and nights are pleasant. There is drop in temperature due to onset of monsoon and rises again in the month of September. Winter season start from November onwards and remain till February when minimum temperature falls up to 4.6 °C and mean monthly temperature recorded was 22.7 °C. The average annual rainfall of this tehsil is 453.2mm.

### Vegetation

The forest cover of Ajmer district is 57516 sq.kms. Out of this, the present cover area of Nasirabad tehsil is 33.57 sq.kms.

### Ecological classification of vegetation

#### 1. Wasteland vegetation

The vegetation of the wasteland area is semi-xerophytic with sparse tree layer. The common trees of this habitat are : *Acacia leucophloea*, *Acacia nilotica*, *Balanites aegyptiaca*, *Butea monosperma*, *Maytenus emarginata*, *Anogeissus pendula*,

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*Holoptelea integrifolia*, *Prosopis cineraria*, *Salvadora persica*, *Ziziphus mauritiana* etc. The progressive regeneration of most of the trees, both by seeds and coppice, is negligible due to great biotic pressure on them. *Prosopis juliflora* is the only species which shows highest survival percentage under adverse climatic and biotic conditions. Beside these, a large number of annual and perennial herbs are encountered in the waste lands. With the advent of the winter season a considerable number of compositaceous herbs in association with *Acalypha ciliata*, *Achyranthes aspera*, *Argemone Mexicana*, *Leucas cephalotes*, *Solanum nigrum* etc. appear and bloom.

### Vegetation of hilly tracts

The hilly regions of the area are comprising of subtropical deciduous type of vegetation with species like *Anogeissus pendula*, *Acacia leucophloea*, *Boswellia serrata*, *Balanites aegyptiaca* and *Wrightia tinctoria*. Bushes like *Adhatoda zeylanica*, *Plumbago zeylanica* and shrubs like *Barleria priontis* and *Grewia flavescens* are commonly observed at higher elevations. The middle zone is dominated by *Anogeissus pendula*, *Maytenus emarginata*, associated with *Lannea coromandelica*, *Wrightia tinctoria*, etc. At the basal zone *Acacia nilotica*, *Dichrostachys cinerea*, *Butea monosperma*, *Prosopis cineraria*, etc. grow almost in equal proportions.

### Grasslands and cultivated areas

#### Grasslands

The grasslands are few. They are usually managed on the outskirts of the forests, on naked hillocks, in the degraded forests, protected forests, wastelands etc. The grasslands of such habitats are dominated by tall grasses like *Apluda mutica*, *Aristida adscensionis*, *Cenchrus ciliaris*, *Chloris virgata*, *Cymbopogon martini*, *Dichanthium annulatum*, *Heteropogon contortus*, *Sorghum halepense*, *Sehima nervosum* etc.

### Vegetation of areas under cultivation (weeds)

A large number of weeds grow with the crop plants. Most of them are well equipped for dissemination by wind, water, rain and animals. The highest weed density may be observed during the month of January and February of winter season. The typical weeds of the winter crops are *Ageratum conyzoides*, *Anagallis arvensis*, *Argemone Mexicana*, *Asphodelus tenuifolius*, *Chenopodium album*, *Cynodon dactylon*, *Euphorbia dracunculoides*, *Fumaria indica*, *Lathyrus aphaca*, *Lepidium sativum*, *Oxalis corniculata* etc. *Asphodelus tenuifolius* is a common geophytic herb of these areas.

### Vegetation of aquatic habitats

The area under investigation is devoid of any permanent streams and rivers. There are seasonal rivers whose water may stay beyond the rainy season in temporary tanks, ponds, puddles, anicuts etc. Therefore, a permanent aquatic vegetation is absent except some deep ditches inside the area of the reservoirs. The aquatic vegetation may be free floating, submerged or anchored on marginal belts. Free floating and submerged vegetation consists of members of the family Hydrocharitaceae such as *Hydrilla verticillata*, *Vallisneria spiralis* and members of family Potamogetonaceae – *Potamogeton perfoliatus*. Species of *Lemna* and *Wolffia* form scum on water and in places devoid of nitrogenous matter.

*Sagittaria guayanensis*, *Vallisneria spiralis*, *Nymphaea nouchaliare* the common rooted water plants. The common marshy habitats are: *Aeschynomene indica*, *Caesulia axillaris*, *Cyperus rotundus*, *Ipomoea aquatica*, *Scirpus roylei*, *Typha angustata* and *Echinochloa colonum*.

### Methodology

To achieve the objectives of the present work, six intensive botanical explorations were conducted during year 2014 to 2017 in different seasons so as to collect all species in flowering and fruiting state. The collected specimens were identified and deposited in the herbarium of Samrat Prithviraj Chauhan Government College, Ajmer. Some of the plant species have been included based on available literature (Forest management plan). Nomenclature of all taxa has been updated. Bentham and Hooker's system of classification (1862-83) has been followed for enumeration and documentation of plant wealth of Nasirabad tehsil.

### Check list of Nasirabad tehsil

S. No.	Family
1.	Annonaceae <i>Polyalthia longifolia</i> Thw.
2.	Menispermaceae <i>Cocculushirsutus</i> (L.) Diels <i>C. pendulus</i> (J.R. & G. Forst.) Diels <i>Tinospora cordifolia</i> (Willd.) Miers
3.	Papaveraceae <i>Argemone mexicana</i> L. <i>Argemone ochroleuca</i> Sweet
4.	Fumariaceae <i>Fumaria indica</i> (Haussk.)
5.	Brassicaceae <i>Coronopus didymus</i> (L.) Sm. <i>Farsetia hamiltonii</i> Royle <i>F. jacquemontii</i> Hook.f. & Thomas <i>Sisymbrium irio</i> L.
6.	Cleomaceae <i>Cleome gynandra</i> L. var. <i>nana</i> (Blatt. & Hallb.) Bhandari <i>C. simplicifolia</i> (Camb.) Hook.f. & Thoms. <i>C. viscosa</i> L.
7.	Capparaceae <i>Capparis decidua</i> (Forsk.) Edgew. <i>C. sepiaria</i> L. <i>Crateva nurvala</i> Buch. – Ham. <i>C. religiosa</i> Forst.f. <i>Dipterygium glaucum</i> Decne <i>Maeria arenaria</i> (DC.) Hook.f. & Thoms. var. <i>scabra</i> Hook.f. & Thoms.
8.	Polygalaceae <i>Polygala arvensis</i> Willd. <i>P. erioptera</i> DC. var. <i>vahilana</i> (DC.) Chodat.
9.	Caryophyllaceae <i>Arenaria serpyllifolia</i> L. <i>Spergula fallax</i> (Lowe) Krause <i>Stellaria media</i> (L.) Vill. <i>Polycarpea corymbosa</i> (L.) Lam.
10.	Portulacaceae <i>Portulaca oleracea</i> L. <i>P. quadrifida</i> L. var. <i>meridian</i> (L.f.) DC.
11.	Tamaricaceae <i>Tamarix aphylla</i> (L.) Karst.
12.	Elatinaceae <i>Bergia ammannioides</i> Roth <i>B. bidens</i> L. <i>B. biternata</i> (Lour.) Merr. & Sherff ex Sherff
13.	Malvaceae <i>Abutilon indicum</i> (L.) Sweet ssp. <i>guineense</i> (Schum.) Borssum <i>Hibiscus caesius</i> Garcke <i>H. micranthus</i> L.f. <i>H. schizopetalus</i> (Mast.) Hook <i>Malva parviflora</i> L. <i>Malvastrum coromandelianum</i> (L.) Garcke

- Malvaviscus arboreus* Cav. var. *panduriformis* (DC.) Schery.  
*Pavonia arabica* Hochst. & Steud. Ex Boiss. var. *glutinosa*  
 Blatt. & Hallb. var. *massuriensis* Bhandari  
*P.procumbens* (Wall. ex Wt. & Arn.) Walp.  
*Sida acuta* Burm.f.  
*S.cordata* (Burm.f.) Borssum  
*S.cordifolia* L.  
*S.ovata* Forsk.  
*S.rhombifolia* L.  
*Thespesia populnea* (L.) Soland. & Corr.  
 14. Bombacaceae  
*Bombax ceiba* L.  
 15. Sterculiaceae  
*Melhania futteyporensis* Munro ex Mast.  
*Melochia corchorifolia* L.  
*Sterculiaurens* Roxb.  
*Waltheria indica* L.  
 16. Tiliaceae  
*Corchorus aestuans* L.  
*C.depressus* (L.) Stocks.  
*C.tridens* L.  
*C.trilocularis* L.  
*Grewia abutilifolia* Vent. ex Juss  
*G.damine* Gaertn.  
*G.flavescens* A. Juss.  
*G.oppositifolia* Roxb.  
*G.tenax* (Forsk.)  
*G.villosa* Willd.  
*Triumfetta pentandra* A. Rich.  
*T.rhomboida* Jacq.  
 17. Zygophyllaceae  
*Fagonia indica* Burm.  
*F.schweinfurthii* (Hadidi) Hadidi  
*Tribulus rajasthanensis* Bhandari & Sharma  
*T.terrestris* L.  
 18. Oxalidaceae  
*Oxalis corniculata* L.  
*O.corymbosa* DC.  
 19. Rutaceae  
*Aeglemarmelos* (L.) Corr.  
 20. Simaroubaceae  
*Ailanthus excelsa* Roxb.  
 21. Balanitaceae  
*Balanites aegyptiaca* (L.) Del.  
 22. Burseraceae  
*Boswellia serrata* Roxb. ex Cochl.  
*Commiphora wightii* (Arn.) Bhandari  
 23. Meliaceae  
*Azadirachta indica* A. Juss.  
*Melia azedarach* L.  
 24. Celastraceae  
*Maytenus emarginatus* (Willd.) Ding Hou  
 25. Rhamnaceae  
*Ziziphus mauritiana* Lam.  
*Z.nummularia* (Burm.f.)  
 26. Vitaceae  
*Ampelocissus latifolia* (Roxb.) Planch.  
*Cayratia trifolia* (L.) Domin  
 27. Sapindaceae  
*Cardiospermum halicacabum* L.  
 28. Anacardiaceae  
*Lansea coromandelica* (Houtt.) Merrill  
*Rhus mysurensis* G. Don  
 29. Moringaceae  
*Moringa concanensis* Nimmo ex Dalz. & Gibs.  
 30. Fabaceae  
*Abrus precatorius* L.  
*Aeschynomene indica* L.  
*Alhagimaurorum* Medic.  
*Alysicarpus bupleurifolius* (L.) DC.  
*A. heterophyllus* (Baker) Jaffri & Ali  
*A. longifolius* (Rottl. Ex Spreng.) Wight & Arn.  
*A. monilifer* (L.) DC. var. *venosa* Blatt. & Hallb.  
*A. tetragonolobus* Edgew.  
*A. vaginalis* (L.) DC.  
*Astragalus tribuloides* Del.  
*Butea monosperma* (Lam.) Taub.  
*Canavalia ensiformis* (L.)  
*Clitoria biflora* Dalz.  
*Crotolaria burhia* Buch.-Ham. ex Benth.  
*C.ferruginea* Grah. ex Benth.  
*C.hirta* Willd.  
*C.linifolia* L.f.  
*C.medicaginea* Lam. var. *neglecta* (Wight & Arn.) Baker  
*C.retusa* L.  
*C.triquetra* Dalz.  
*Dalbergia latifolia* Roxb.  
*D.sissoo* Roxb.  
*Desmodium alysicarpoides* Meeuwen  
*D.dichotomum* (Willd.) DC.  
*D.gangeticum* (L.) DC. var. *varmaculatum* (L.) Baker  
*D.procumbens* (Mill.) Hitch  
*D.triangulare* (Retz.) Merr.  
*Dolichos lobatus* L.  
*Goniogyna hirta* (Willd.) Ali  
*Indigofera angulosa* Edgew.  
*I. argentea* Burm.f.  
*I.altropurpurea* Buch. – Ham. ex Horn.  
*I.caerulea* Roxb. var. *monosperma* (Sant.) Sant. var.  
*occidentalis* Gillett & Ali  
*I.cordifolia* Heyne ex Roth  
*I.glandulosa* Willd.  
*I.hochstetteri* Baker  
*I.linifolia* (L.f.) Retz. var. *campbellii* Wight ex Baker  
*I.linnaei* Ali  
*I.oblongifolia* Forsk.  
*I.tinctoria* L.  
*I.trifoliata* L.  
*I.iritia* L.f. ssp. *subulata* var. *subulata* (Vahl ex Poir.) Ali  
*Medicago laciniata* (L.) Mill.  
*M.sativa* L.  
*Melilotus alba* Medik. ex Desr.  
*M.indica* (L.) All.  
*Pongamia pinnata* (L.) Pierre  
*Psoralea plicata* Delile  
*Rhynchosia bracteata* Benth. ex Baker  
*R.minima* (L.) DC. var. *laxiflora* (Camb.) Baker  
*Sesbania bispinosa* (Jacq.) Wight  
*Tephrosia falciformis* Ramaswami  
*T.pumilla* (Lam.) Pers.  
*T.purpurea* (L.) Pers. var. *pumila* (Lam.) Baker  
*T.uniflora* Pers. ssp. *petrosa* (Blatt. & Halb.) Gillett & Ali  
*T.villosa* (L.) Pers. var. *incana* (Garh. Ex Wight & Arn.) Baker  
*Trigonella corniculata* (L.) L.  
*T.occulta* Delile ex DC  
*Zornia gibbosa* Span.  
 31. Caesalpiniaceae  
*Bauhinia purpurea* L.  
*B.racemosa* Lam.  
*Caesalpinia pulcherrima* (L.) Swartz.  
*Cassia auriculata* L.  
*C.fistula* L.  
*C.italica* (Mill.) Lam. ex Andrews  
*C.mimosoides* L.  
*C.obusifolia* L.  
*C.occidentalis* L.  
*C.pumila* Lam.  
*C.senna* L.  
*C.siamea* Lam.  
*Parkinsonia aculeata* L.  
*Peltophorum pterocarpum* (DC.) Baker ex K. Heyne  
*Tamarindus indica* L.  
 32. Mimosaceae  
*Acacia jacquemontii* Benth.  
*A. leucophloea* (Roxb.) Willd.  
*A. nilotica* (L.) Willd. ex Del. ssp. *cupressiformis* (J.L. Stewart) Ali & Faruqi  
*A. senegal* (L.) Willd.  
*Albizia lebeck* (L.) Benth.  
*A. procera* (Roxb.) Benth.  
*Dichrostachys cinerea* (L.) Wight & Arn.  
*Leucaena latisiliqua* (L.) Gillis  
*Mimosa hamata* Willd.  
*Pithecolobium dulce* (Roxb.) Benth.  
*Prosopis cineraria* (L.) Druce  
*P.juliflora* (Swartz)  
 33. Rosaceae  
*Potentilla supina* L.  
 34. Crassulaceae  
*Kalanchoe laciniata* (L.) Pers.  
 35. Combretaceae

36. *Anogeissus latifolia* (Roxb. ex DC.) Wall. ex Guill & Perr.  
*A.pendula* Edgew.  
*Terminalia arjuna* (Roxb. Ex DC.) Wight & Arn.  
 Myrtaceae  
*Eucalyptus alba* Reinw.  
*E. globulus* Labill.
37. Lythraceae  
*Ammannibaccifera* L.  
*A. multiflora* Roxb.  
*Lawsonia inermis* L.  
*Rotala densiflora* (Roth ex Roem. & Schult.)
38. Onagraceae  
*Ludwigia perennis* L.
39. Cucurbitaceae  
*Blastania fimbripila* (Fenzl.) Kotschy & Peyr.  
*Citrullus colocynthis* (L.) Schrad.  
*C. lanatus* (Thunb.) Matsumura & Nakai  
*Coccinia grandis* (L.) J.O. Voigt.  
*Corallocarpus epigaeus* (Rottl. & Willd.) Hook.f.  
*Cucumis callosus* (Rottl.) Cogn.  
*C. melo* L.  
*C. prophetarum* L.  
*C. setosus* Cogn.  
*Dactyliandra welwitschii* Hook.f.  
*Melothria perpusilla* (Blume) Cogn.  
*Momordica balsamina* L.  
*M. dioica* Roxb. ex Willd.  
*Trichosanthes bracteata* (Lam.) Voigt  
*T. dioica* Roxb.
40. Passifloraceae  
*Passiflora foetida* L.
41. Cactaceae  
*Opuntia dillenii* (Ker-Gawler) Haworth
42. Aizoaceae  
*Sesuvium portulacastrum* (L.)  
*S. sesuvioides* (Fenzl.) Verdc.  
*Trianthema portulacastrum* L.  
*T. triquetra* Rottl. Ex Willd.  
*Zaleya decandra* (L.) Burm.f.
43. Molluginaceae  
*Gisekia pharanceoides* L. var. *pseudopaniculata* Jeffrey  
*Glinus lotoides* L.  
*Mollugo cerviana* (L.) Seringe  
*M. nudicaulis* Lam.
44. Rubiaceae  
*Borreria articularis* (L.f.) Mill.  
*B. pusilla* (Wall.) DC.  
*Gallium asperifolium* Wall.  
*Hedyotis hispida* Retz.  
*Kohautia aspera* (Heyne ex Roth)  
*Oldenlandia clausa* Blatt.  
*O. pusilla* Rottl.
45. Asteraceae  
*Acanthospermum hispidum* DC.  
*Ageratum conyzoides* L.  
*Artemisia parviflora* Buch. – Ham. ex D. Don  
*Blainvillea acmella* (L.) Philipson  
*Blumea lacera* (Burm.f.) DC.  
*B. laciniata* (Roxb.) DC.  
*Caesulia axillaris* Roxb.  
*Carthamus oxyacantha* Bieb.  
*Conyza aegyptiaca* (L.) W. Ait.  
*C. lacera* Burm.f.  
*Cotula hemisphaerica* (Roxb.) Wall. ex Benth. & Hook.  
*Dicoma tomentosa* Cass.  
*Eclipta alba* (L.) Hassk.  
*Emilia sonchifolia* (L.) DC.  
*Erigeron asteroides* Roxb.  
*E. bonariensis* L.  
*E. Canadensis* L.  
*Flaveria trinervia* (Spreng.)  
*Glossocardia bosvallea* (L.f.) DC.  
*Gnaphalium luteo-album* L. ssp. *affine* (D. Don) Koestr var. *multiceps* Hook.f. var. *pallidum* Hook.f.  
*Inula cappa* (Buch. – Ham. ex D. Don) DC.  
*Lactuca orientalis* (Boiss.)  
*Lagascea mollis* Cav.  
*Laggera alata* (D. Don) Sch. – Bip. ex Oliver  
*L. aurita* (L.f.) Sch. – Bip. ex Clarke  
*Launaea aspleniifolia* (Willd.) Hook.f.  
*L. procumbens* (Roxb.) Ramayya & Rajagopal
- L. resedifolia* (L.) Kuntze  
*Parthenium hysterophorus* L.  
*Pluchea lanceolata* (DC.) Clarke  
*P. wallichiana* DC.  
*Pulicaria crispa* (Forsk.) Benth. & Hook.f.  
*Senecio nudicaulis* Buch. – Ham. ex D. Don  
*S. wightii* (DC.) Benth. ex Clarke  
*Sonchus oleraceus* L.  
*Sphaeranthus indicus* L.  
*Tridax procumbens* L.  
*Verbesina encelioides* (Cav.) Benth. & Hook.f.  
*Vernonia cinerea* (L.) Less.  
*V. conyzoides* DC.
46. Plumbaginaceae  
*Dyerophytum indicum* (Gibs. Ex Wt.)  
*Plumbago zeylanica* L.
47. Primulaceae  
*Anagallis arvensis* L.
48. Oleaceae  
*Nyctanthes arbor-tristis* L.
49. Salvadoraceae  
*Salvadora oleoides* Decne.  
*S. persica* L.
50. Apocynaceae  
*Catharanthus pusillus* (Murr.) G. Don  
*Plumeria rubra* L.  
*Thevetia peruviana* Merr.  
*Wrightia tinctoria* (Roxb.) R.Br.
51. Asclepiadaceae  
*Calotropis procera* (Ait.) Ait.f. ssp. *hamiltonii* (Wight) Ali  
*Ceropegia attenuata* Hook.  
*Leptadenia pyrotechnica* (Forsk.) Decne.  
*Pentstemon spiralis* (Forsk.) Decne.  
*Pergularia daemia* (Forsk.) Chiov.  
*Sarcostemma intermedium* Decne.  
*S. viminale* (L.) R.Br. ssp. *stocksii* (Hook. f.) Ali  
*Telosma cordata* (Burm.f.) Merrill  
*Tylophora hirsuta* (Wall.) Wt. & Arn.
52. Periplocaceae  
*Cryptostegia grandiflora* R. Br.  
*Periploca aphylla* Decne.
53. Gentianaceae  
*Enicostema axillare* (Lam.) Raynal  
*Hoppeadichotoma* Heyne ex Willd.
54. Boraginaceae  
*Arnebia hispidissima* (Lehm.) DC  
*Cressa cretica* L.  
*Coldenia procumbens* L.  
*Heliotropium bacciferum* Forsk. var. *suberosum* (Clarke) Bhandari  
*H. crispum* Desf.  
*H. curassavicum* L. var. *zeylanicum* Burm.  
*H. indicum* L.  
*H. rariflorum* Stocks  
*H. subulatum* (Hochst. ex DC.) Vatke  
*H. supinum* L. var. *malabarica* (Retz.) Clarke  
*H. zeylanicum* (Burm. f.) Lam. ssp. *paniculatum* (R.Br.) Kazmi  
*Nonea pulla* (L.) DC. ssp. *rudbarensis* Rech. f.  
*Sericostoma pauciflorum* Stocks ex Wight  
*Trichodesma indica* (L.) R. Br.
55. Ehretiaceae  
*Cordia crenata* Delile  
*C. dichotoma* Forst.  
*C. gharaf* (Forsk.) Ehrenb. ex Asch.  
*C. obliqua* Willd. var. *tomentosa* (Wall. ex Roxb.)  
*Ehretia aspera* Willd.  
*E. laevis* Roxb.
56. Convolvulaceae  
*Argyria nervosa* (Burm.f.) Bojer  
*A. sericea* Dalz.  
*Convolvulus arvensis* L.  
*C. blatteri* Bhandari  
*C. deserti* Hochst. & Steud. ex Baker & Rendle  
*C. prostrates* Forsk.  
*C. reptans* L.  
*Cressa cretica* L.  
*Evolvulus alsinoides* (L.) L.  
*Ipomoea alba* L.  
*I. cairica* (L.) Sweet var. *semine-glabra* (Blatt. & Hallb.)  
*I. carnea* Jacq. ssp. *fistulosa* (Mart. ex Choisy)

- I.coptica* (L.) Roth ex Roem. & Schult.  
*Leriocarpa* R. Br.  
*I.indica* (Burm.f.) Merr.  
*Inil* (L.) Roth var. *himalaica* (Clarke) Johri  
*I.pes-caprae* (L.) R.Br  
*I.pes-tigridis* L. var. *capitellata* (Choisy) Clarkevar.  
*hepaticaeifolia*(L.) Clarke  
*I.sindica* Stapf.  
*I.sinensis* (Desr.) Choisy  
*I.triloba* L.  
*I.verticillata* Forsk.  
*Merremia aegyptia* (L.) Urban  
*M.dissecta* (Jacq.) Hall.f.  
*M.emarginata* (Burm.f.) Hall.f.  
*Rivea hypocrateriformis* (Desr.) Choisy  
57. Cuscutaceae  
*Cuscuta chinensis* Lam.  
*C. hyaline* Heyne ex Roth  
*C.reflexa* Roxb.  
58. Solanaceae  
*Datura fastuosa* L.  
*D.ferox* L.  
*D.innoxia* Mill.  
*D.stramonium* L.  
*Lycium barbarum* L.  
*Nicotiana plumbaginifolia* Viv  
*Physalis minima* L.  
*Solanum albicaule* Kotschy ex Dunal  
*S.incanum* L.  
*S.nigrum* L.  
*Withania somnifera*(L.) Dunal.  
59. Scrophulariaceae  
*Anticharis glandulosa* Aschers. var. *caerulea*Blatt. & Hallb.  
*A.senegalensis* (Walp) Bhandari  
*Bacopa monnieri* (L.) Wettst.  
*Kickxia ramosissima* (Wall.) Janchen  
*Lindenbergia indica* (L.) Vatke  
*Striga angustifolia* (D.Don) Saldhana  
*S.gesnerioides* (Willd.) Vatke  
60. Orobanchaceae  
*Orobanchae aegyptiaca* Pers.  
61. Bignoniaceae  
*Jacaranda mimosaefolia* D. Don  
*Kigelia africana* (Lam.) Benth.  
*Millingtonia hortensis* L.f.  
*Tecomella undulata* (Sm.) Seem.  
62. Pedaliaceae  
*Pedaliium murex* L.  
*Sesamum indicum* L  
63. Martyniaceae  
*Martynia annua* L.  
64. Acanthaceae  
*Andrographis paniculata* (Burm.f.) Wall. E. Nees  
*Barleria acanthoides* Vahl  
*B.cristata* L. var. *dichotoma* (Roxb.) Prain  
*B.priantia* L. ssp. *pubiflora* (Benth. ex Hohen.) Brummitt & Wood  
*Blepharis maderaspatensis*(L.)Heyne ex Roth  
*B.repens* (Vahl) Roth  
*Dicliptera bupleuroides* Nees  
*D.roxburghiana* Nees  
*Dipteracanthus prostrates* (Poir.) Nees  
*Hemigraphis crenata* (Benth. ex Hohenack.)  
*H.hirta* (Vahl) T.Anders  
*Hygrophila auriculata* (Schum.) Heine  
*Indoneesiella echioides* (L.) Sreemadh.  
*Justicia heterocarpa* T.Anders  
*J.procumbens* L.  
*J.quinqueangularis* Koenig. ex Roxb. var. *peplioides* (Nees) Clarke  
*J.simplex* D.Don  
*Lepidagathis cristata* Willd.  
*L.trinervis* Wall. ex Nees  
*Peristrophe paniculata* (Forsk.) Brumm.  
*Ruellia tuberosa* L.  
*Rungia parviflora* (Retz.) Nees var. *muralis* Clarke  
65. Verbenaceae  
*Chascanum marrubifolium* Fenzl ex Walp.  
*Clerodendrum phlomidis* L.f.  
*Lantana camara* L.  
*L.wightiana* Wall. ex Clarke  
*Phyla nodiflora* (L.) E.E.Greene  
*Verbena officinalis*L.  
*Vitex negundo*L.  
66. Lamiaceae  
*Anisomeles indica* (L) O. Kuntze  
*A. malabarica* (L.) R.Br. ex Sims  
*Leucas aspera* (Willd.) Link  
*L.cephalotes* (Koen. ex Roth) Spreng.  
*Nepeta hindostana* (Roth) Haines  
*Ocimum basilicum* L. var. *thyrsiflorum* (L.) Benth.  
*O.canum* Sims.  
*Salvia aegyptiaca* L. var. *pumila* (Benth.) Hook.f  
67. Plantaginaceae  
*Plantago ovata* Forsk.  
68. Nyctaginaceae  
*Boerhavia diffusa* L.  
*B.erecta* L.  
*B.procumbens*Banks ex Roxb.  
*B.repens* L.  
*Bougainvillea glabra* Choisy  
*B. spectabilis* Willd.  
*Commicarpus chinensis* (L.) Heimerl  
69. Amaranthaceae  
*Achyranthesaspera* L.  
*A. bidentata* Blume  
*Aerva javanica* (Burm.f.) Juss. ex Schult. var. *bovei* (Webb.) Chiov.  
*A. lanata* (L.) Juss. ex Schult.  
*Alternantherapungens* Kunth.  
*A. sessilis* (L.) R.Br. ex DC.  
*Amaranthuscaudatus* L.  
*A. spinosus*L.  
*A. tricolor* L.  
*A. viridis* L.  
*Celosia argentea* L.  
*Digera muricata* (L.) Mart.  
*Gomphrena celosioides* Mart  
*Nothosaerva brachiata* (L.) Wight  
*Pupalia lappacea* (L.) Juss. var. *orbiculata* (Heyne ex Wall.)Townsend  
70. Chenopodiaceae  
*Chenopodium album* L.  
*C.ambrosioides* L.  
71. Polygonaceae  
*Emexspinosus* (L.) Compd.  
*Polygonum barbatum* L. ssp. *gracile* Danser  
*P. glabrum* Willd.  
*Rumex crispus* L.  
72. Aristolochiaceae  
*Aristolochia bracteolata* Lam.  
73. Loranthaceae  
*Dendrophthoe falcata* (L.f.) Etting.  
74. Euphorbiaceae  
*Acalyphaciliata* Forsk.  
*A. indica* L.  
*Baliospermum montanum* (Willd.) Muell. – Arg.  
*Chrozophora prostrate* Dalz.  
*C.rotleri* (Geis.)A. Juss. ex Spreng.  
*Croton bonplandianum* Baill.  
*C.roxburghii* Balk.  
*Euphorbia caducifolia* Haines  
*E.dracunculoides* Lam.  
*E.heterophylla* L.  
*E.hirta*L.  
*E.indica* Lam.  
*E.milii* Ch.  
*Jatropha gossypifolia* L.  
*Kirganelia reticulata* (Poir.) Baill  
*Phyllanthus amarus* Schum. & Thonn.  
*P.fraternus* Webster  
*Ricinus communis* L.  
*Securinega leucopyrus* (Willd.) Muell. – Arg.  
75. Ulmaceae  
*Holoptelea integrifolia* (Roxb.) Planch.  
76. Cannabinaceae  
*Cannabis sativa* L.  
77. Moraceae  
*Ficus arnottiana* (Miq.)  
*F.benghalensis* L. var. *krishnae* (C.DC.)  
*F. carica* L.  
*F.drupacea* Thunb. var. *pubescens* (Roth) Corner

- F.hispida* L.f.  
*F.pumila* L.  
*F.religiosa* L.  
 78. Hydrocharitaceae  
*Vallisneria spiralis* L. var. *denseserrulata* Makino  
 79. Agavaceae  
*Agave americana* L.  
 80. Liliaceae  
*Aloevera* (L.) Burm.f.  
*Asparagus racemosus* Willd.  
*Asphodelus tenuifolius* Cav.  
*Dipcadi erythraeum* Webbl. & Berth.  
*Gloriosa superba* L.  
*Iphigenia indica* (L.) A. Gray  
*Scilla hyacinthina* (Roth) Macbr.  
*Urginea indica* (Roxb.) Kunth  
 81. Commelinaceae  
*Commelina benghalensis* L.  
*C.forskalaiei* Vahl.  
*Cyanotis cristata* (L.) D. Don.  
 82. Juncaceae  
*Juncas bufonius* L.  
 83. Arecaceae  
*Phoenix sylvestris* (L.) Roxb.  
 84. Araceae  
*Remusatia vivipara* (Roxb.)  
 85. Lemnaceae  
*Spirodela polyrhiza* (L.) Schleid.  
 86. Eriocaulaceae  
*Eriocaulon minutum* Hook.f.  
*E.quinquangularis* L.  
 87. Cyperaceae  
*Bulbostylis barbata* (Rottb.) Clarke  
*Cyperus alopecuroides* Rottl.  
*C. alulatus* Kern  
*C. arenarius* Retz.  
*C. articulatus* L.  
*C. atkinsonii* Clarke  
*C. bubosus* Vahl  
*C. compressus* L.  
*C. corymbosus* Rottb.  
*C. cuspidatus* Kunth.  
*C. difformis* L.  
  
*C. digitatus* Roxb.  
*C. distans* L.f.  
*C. esculentus* L.  
*C. exalatus* Retz. var. *dives* (Del.) Clarke  
*C. Iria* L.  
*C. niveus* Retz.  
*C. rotundus* L.  
*C. stoloniferous* Retz.  
*C. tuberosus* Rottb.  
*Eleocharis acutangula* (Roxb.)  
*E. congesta* D. Don  
*E. geniculata* (L.) Roem. & Schult.  
*E. palustris* (L.) R.Br.  
*Fimbristylis aestivalis* (Retz.) Vahl var. *squarrosa* (Vahl)  
 Koyama  
*F. complanata* (Retz.) Link  
*F. falcata* (Vahl) Kunth  
*F. tenera* Schult. var. *oxylepis* (steud.) Clarke  
*Kyllinga bulbosa* Beauv.  
 88. Poaceae  
*Acrachneracemos* (Heyne ex Roem & Schult.)  
*Aeluropuslagopoides* (L.) Trin. ex Thw.  
*Andropogon pumilus* Roxb.  
*Apluda mutica* L.  
*Aristidaadscensionis* L.  
*A. funiculata* Trin. & Rupr. var. *mallica* (Edgew.) Henrard  
*A. setacea* Retz.  
*Arundinella leptochloa* (Nees ex Steud.) Hook.f.  
*A. spicata* Dalz.  
*Bambusa arundinacea* (Retz.) Roxb.  
*Bothriochloa blandhii* (Retz.) S.T. Blake  
*Bracharia ramosa* (L.) Stapf. var. *pubescens* Basappa & Muniyama  
*B. setigera* (Retz.) C.E. Hubbard  
*B. villosa* (Lam.) A. Camus  
*Cenchrus biflorus* Roxb.  
*C. ciliaris* L.  
  
*C. pennisetiformis* Hochst. & Steud.  
*C. prieurii* (Kunth) Maire var. *scabra* Bhandari  
*C. setigerus* Vahl  
*Chloris barbata* Sw.  
*Cymbopogon citratus* (DC.) Stapf.  
*C. jwarancusa* (Jones) Schult. ssp. *olivieri* (Boiss.)  
*C. martinii* (Roxb.) Watson  
*Cynodon arucatus* J.S. Presl. Ex C.B. Presl  
*C. barberi* Rang. & Tad.  
*C. dactylon*  
*Dactyloctenium aegyptium* (L.) Willd.  
*D. aristatum* Link.  
*Desmostachya bipinnata* (L.) Stapf  
*Dichanthium annulatum* (Forsk.) Stapf  
*D. caricosum* (L.) A. Camus  
*D. parviflorum* (R.Br.) de wet & Harlan  
*Digitaria ciliaris* (Retz.)  
*D. pennata* (Hoscht.) T. Cooke  
*D. setigera* Roth ex Roem & Schult..  
*Echinochloa colona* (L.) Link  
*Eleusine coracana* (L.) Gaertn.  
*E. indica* (L.) Gaertn.  
*Eragrostiella bifaria* (Vahl) Bor  
*Eragrostis aspera* (Jacq.) Nees  
*E. ciliaris* (L.) R.Br. var. *brachystachya* Boiss.  
*E. japonica* (Thunb.) Trin.  
*E. pilosa* (L.) P. Beauv.  
*Eriochloa procera* (Retz.) C.E. Hubbard  
*Heteropogon contortus* (L.) P. Beauv. ex Roem. & Schult.  
*Imperata cylindrica* (L.) Raeuschel.  
*Ischaemum bombaiense* Bor  
*Melanocenchrisjacquemontii* Jaub. & Spach.  
*Panicum antidotale* Retz.  
*P. coloratum* L.  
*Paspalidium flavidum* (Retz.) A. Camus  
*P. punctatum* (Burm.f.) A. Camus  
*Paspalum dilatatum* Poir.  
*Pennisetum americanum* (L.) Leeke  
*Perotis indica* (L.) O. Ktze.  
*Phalaris minor* Retz.  
*Polyopogon monspeliensis* (L.) Desf.  
*Saccharum bengalense* Retz.  
*S. spontaneum* L.  
*Sehima nervosum* (Rottl.) Stapf  
*Setaria geniculata* (Lam.) P. Beauv.  
*S. glauca* (L.) P. Beauv.  
*Sorghum bicolor* (L.) Moench.  
*S. halepense* (L.) Pers.  
*Sporobolus coromendelianus* (Retz.) Kunth  
*S. helvolus* (Trin.) Th. Durantl & Schinz  
*Tetrapogon villosus* Desf.  
*Themeda quadrivalvis* (L.) O. Ktze.  
*Tripogon purpurascens* Duthie  
*Urochloa panicoides* P. Beauv  
*Vetiveria zizanioides* (L.) Nash  
 89. Equisetaceae  
*Equisetum ramosissimum*  
 90. Pteridaceae  
*Actinopteris radiata*  
*Adiantum caudatum*  
 91. Marsileaceae  
*Marsilea aegyptiaca*  
*Marsilea minuta*

### Floristic analysis

The present work includes 575 vascular plants belonging to 334 genera under 91 families. It is interesting to note that Monochlamydae is lowest among dicotyledons. The biggest family of this group is Fabaceae represented by 23 genera and 60 species, while families Asteraceae and Convolvulaceae stand on second and third places respectively. The monocot to dicot ratio for species is 1: 3.78; for genera 1: 4.07 while for family it is 1:7. The ratio of total number of genera to species is 1: 1.72 which is rather low in comparison to the corresponding ratio for whole of India which is estimated to be about 1:7, but it is more or less comparable to the flora of Rajasthan 1: 2.4

(Shetty and Singh, 1993). Besides this 5 species of pteridophytes were also collected from the tehsil.

## REFERENCES

- Anonymous, 2009. India state of forest report 2009.FSI, Dehradun.
- Meena, S.L.2004.Some new plants to the flora of Gujarat, India – I *J.Econ.Taxon.Bot.*, 28(2):387 – 388.
- Meena, S.L. 2008. Ethnobotany of Banaskantha District, Gujarat State.*J.Econ.Taxon.Bot.*, 32(1):113 – 127.
- Meena, S.L. 2012. A Chcklist of the vascular plants of Banaskantha District, Gujarat, India. *Nelumbo*, 54 :39 – 91.
- Raghavan, R.S., B.M. Wadhwa, M.Y. Ansari Rolla and S. Rao 1981. A checklist of the plants of Gujarat. *Rec. Bot.Surv.India*, 21(2): 1 – 127
- Shetty, B.V. and V.Singh, 1993. *Flora of Rajasthan*, Vols. 1 – 3 . BSI; Calcutta.

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