Journal Homepage: -www.journalijar.com

INTERNATIONAL JOURNAL OF ADVANCED RESEARCH (IJAR)

Article DOI:10.21474/IJAR01/2752
DOI URL: http://dx.doi.org/10.21474/IJAR01/2752

RESEARCH ARTICLE

CHECKLIST OF FLOWERING PLANTS SURROUNDING THE WETLANDS IN VADODARA DISTRICT.

Mamta K. Joshi[1],Rupesh Maurya[1], Umerfaruq Qureshi[1] and Hitesh A. Soalnki[2].

1. Research Scholar, Department of Botany, University School of Sciences, Gujarat University, Ahmedabad-380 009.
2. Professor, Department of Botany, University School of Sciences, Gujarat University, Ahmedabad-380 009.

Manuscript Info

Manuscript History

Received: 15 November 2016
Final Accepted: 17 December 2016
Published: January 2017

Abstract

Wetland is the most productive ecosystems in the world. Aquatic plants are vital components for the proper management of wetland ecosystem for biological productivity and support various organisms. In the present study, diversity of flowering plants surrounding the wetlands in Vadodara District was carried out at selected 19 wetlands in 6 talukas.

Introduction:-

Wetlands are "lands transitional between terrestrial and aquatic systems where the water table is usually at or near the surface or the land is covered by shallow water." Its features were (a) at least intermittently, the land supports chiefly hydrophytes (b) the substrate is chiefly undrained hydric soil (c) the substrate is non-soil and is saturated with water at some time throughout the growing season of the year.

Over the last era significant struggle which directed to the conservation and wise use of wetlands (Jonauskas, 1996; Finlayson, Hall and Bayliss 1998; Blackman, 1995). However, available knowledge or information for some wetlands are at the most basic level, as information on physical and ecological features, values and benefits, land tenure and uses, threats and disturbances, and monitoring and restoration of all wetlands is not available (Finlayson, Hall and Bayliss 1998). The wise use and conservation of wetlands will be partly needful on a greatly expanded information base. Data on the ecological character of wetlands, which is the amount of wetland loss and degradation, conservation measures and the success of monitoring strategies will be required. Moreover, this information base requires linkage and integration with executive processes (Finlayson, 1995). Classification and account of wetlands are processes designed to deliver a key point on wetlands and their resources (Finlayson, 1933). Aquatic biodiversity is dependent on hydrologic regime; geological conditions and efforts are being made to conserve the biodiversity found in wetlands, streams and rivers. The goal of this irreplaceable biodiversity is to minimize its loss through sustainable management and conservation practices. The first step in conservation of biodiversity is to assess the diversity of natural resources present and identify those, which are important and most irreplaceable (Groombridge & Jenkins 1998). The total numbers of aquatic plant species exceed 1200 and a partial list of animal for aquatic and wetland system is given by Gopal (1995). Wetlands are also important as resting sites for migratory birds. Avifauna species found in India have been listed by Gopal (1995).

Wetlands are one of the most valuable and important natural environments. They provide suitable habitats to innumerable organisms including birds.Wetlands in India cover an area of 58.2 million hectares (Prasad et al., 2002). Of 1340 bird species found in India (Ali and Ripley, 1987), 310 species are known to be wetland birds (Kumar et al., 2005). Mitsch and Gosselink (2000) stated that wetlands help in maintaining biodiversity of flora and

Corresponding Author:- Hitesh A. Soalnki.
Address:- Professor, Department of Botany, University School of Sciences, Gujarat University, Ahmedabad-380 009.

fauna and it was further emphasized in the study that countless species of birds, mammals, reptiles, amphibians, fish and invertebrate species depend on water and wetland vegetation for their survival. Similar observations on wetlands were also made by Buckton (2007).

Materials and Methods:-

Study Area: Vadodara is situated on the banks of the river Vishwamitri (whose name is derived from the great saint Rishi Vishwamitra). The city was once called Chandravati, after its ruler Raja Chandan, then Viravati, the abode of the brave, and then Vadpatra because of the abundance of banyan trees on the banks of the Vishwamitri. From Vadpatra it derived its present name Baroda or Vadodara. It is located at 22.30°N 73.19°E in western India at an elevation of 39 meters (123 feet) Occupying an area of 4138 sq. km.

In the present study 6 talukas are undertaken which are Vadodara, Karjan, Padra, Savli, Vaghodiya and Dabhoi.

Figure No 1: Map showing talukas of Vadodara District

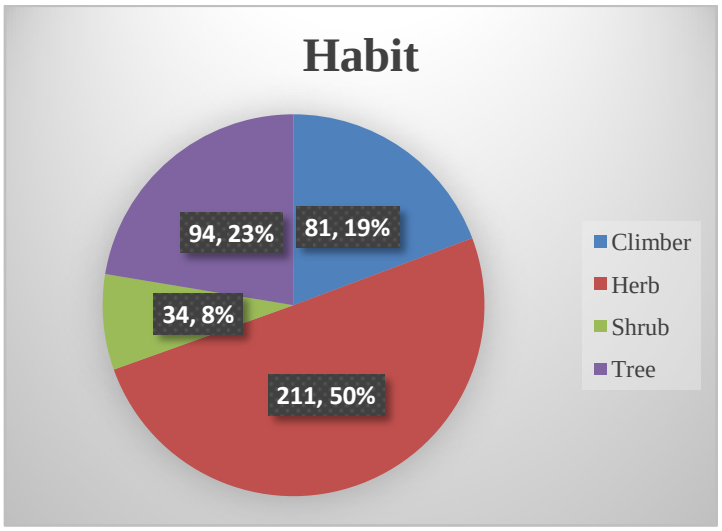
Methodology: The study has been conducted in wetlands of different talukas of Vadodara district during 2012-14.

Flora: During the field study, plants were documented and plant specimens were also collected along with their flowering and fruiting parts for preparing herbarium. These herbaria are useful for identifying the specimens from the flora. The herbarium sheets were labelled, numbered and deposited in the Herbarium of Gujarat University. The plant species were identified with the help of available literature in the library (Department of Botany, Gujarat University, Ahmedabad). Photographs of plants were captured with a SLR camera.

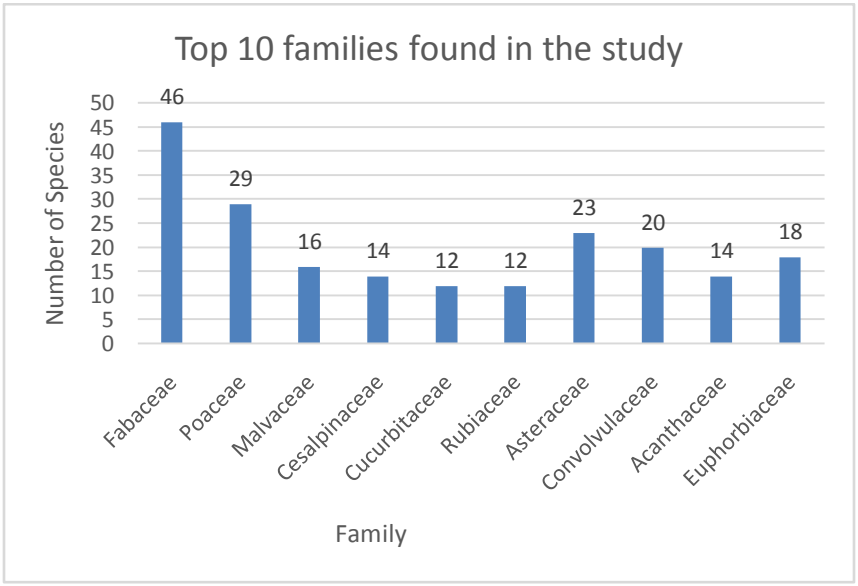
Fauna: Observations were made by conducting field visits at regular intervals. Fieldwork was conducted from 2012 - 2014. Field visits were made every month during the study period, to monitor three distinct seasons (i.e. winter, summer and monsoon). The observations were carried out with a pair of binoculars and the species were identified using recognized field guides like those of Ali & Ripley (1983), Grimmett et al. (1998), Rasmussen & Anderton (2005), etc.

Result and Discussion:-

In the present study 420 species and 330 genera of vascular plants belonging to 91 families were reported. Out of 420 species, there are 211 herbs, 94 trees, 81 climbers and 34 shrubs reported (Graph No. 1). List of plants found in the present study were listed in Table No. 1 along with Botanical name, family and local name. In the present study Fabaceae is found largest family (46 species), followed by Poaceae (29 speceae), Asteraceae (23species), Convolvulaceae (20 species) and rest are below 20 species.



Graph No. 1: Graph showing the habit of flowering plants.



Graph No. 2: Graph showing the top 10 families found in the present study.

Table No. 1: List of flowering plants found nearby the wetlands in Vadodara district.

List of vascular plants surrouding the Wetlands in Vadodara district.			
Sr. No.	**Family**	**Botanical Name**	**Comman name**
1	Menispermaceae	Cocculushirsutus (L.) Theob.	Vevdi
2		Cocculuspendulus (Forst.) Diels	Orad,Valur
3		Tinosporaglabra (Burm . f.) Merril	Gulvel, Gadu, Gudaj vel
4		Nymphaeanauchali Burm. f.	Kamal,Poyana, Kamalful
5		Nymphaeapubescens Willd.	Kamal,Poyana, Kamalful
6	Nelumbonaceae	Nelumbonucifera Gaertn.	Vado kamalful, Suryakamal
7	Papaveraceae	Argemonemexicana L.	Darudi
8	Cleomaceae	Cleome rutidosperma DC.	
9		Cleomeviscosa L.	Pili -Tilvan
10	Cochlosprmaceae	Cochlospermumreligiosum (L.) Alst.	
11		Carseariagraveolens Dalz.	Tandol
12	Flacourtiaceae	Flacourtiaindica (Burm. f.)Merr.	Kirambira Kirmira
13	Portulacaceae	Portulacagrandiflora Hk. f.	Chini-Gulab
14		Portulacagranulato-stellulata (Poelln.) Ricceri & Arrigoni	
15		Portulacaoleracea L.	Motiluni, Lakha luni
16		Talinum portulacifolium (Forssk.) Asch.ex Schweinf.	
17	Malvaceae	Abelmoschusesculentus (L.) Moench.	Bhinda, bhindi
18		Abutilonglaucum (Cav.) Sw.	
19		Abutilonindicum (L.) Sw.	Khapat, Dabaliar
20		GossypiumherbaceumL .*var.* acerifolium (Guill. & Perr.) Chevalier	Kapas, Desi Kapas
21		Hibiscuscannabinus L.	Ambadi
22		Hisbisuslobatus (Murr.) O. Ktze.	Tali
23		Hibiscusrosa-sinesis. L.	Jasund, Jasvanti
24		Hibiscussabdariffa L.	Khati Bhindi, Lal-Ambadi
25		Hibiscusschizopetalous (Masters) Hk . f.	
26		Malachracapitata (L.) L.	Pardeshi Bhindo
27		Malvastrumcoromandelianum (L.) Garcke	
28		Pavoniaodorata Willd.	Kalavala, Sugandh Bala
29		Sidaacuta Burm.f.	Bala
30		Sidacordata (Burm.f.) Boiss	Bhoyabala
31		Sidacordifolia L.	Bala, Baladana, Kharenti
32		Urenalobata L.	Vagadau Bhindo
33	Bombacaceae	Salmaliarubra (Buch.-Ham.) S. Dutta & P. Harvey	Savar, Shimlo
34		Helicteresisora L.	Maradsing, ati, Atai
35		Melochiacorchorifolia L.	Chuncha,Khapat
36		Sterculiaurens Roxb.	Kadai, Kadio, Kadaya
37	Tiliaceae	Corchorusaestuans L.	Chunch, Chhadhari chunch
38		Corchoruscapsularis L.	Bor Chhunchi
39		Corchorusolitorins L.	

40		Corchorustridens L.	
41		Grewiatiliaefolia vahl.	Dhaman
42		Microcospaniculata L.	
43		Triumfettapentandra A. Rich.	
44		Triunfettarhomboidea Jacq.	
45	Malpighiaceae	Hiptagebenghalensis (L.) Kurz.	
46	Zygophyllaceae	Tribulusterrestris L.	Gokharu
47	Oxalidaceae	Biophytumsensitivum (L.) DC.	
48		Oxaliscorniculata L.	
49	Balsaminaceae	Impatiens balsamina L.	
50		Impatiensminor (D.C.) Bennet.	
51	Rutaceae	Aeglemarmelos (L.) Correa	Bil
52		Citrus limon (L.) Osbeck	Limbu
53	Balanitaceae	Balanitesaegyptiaca (L.) Del.	Ingoriyo
54	Burseraceae	Boswelliaserrata Roxb. ex Colebr.	Salai gugal
55		Garugapinnata Roxb.	Kakad
56	Meliaceae	Azadirachtaindica Juss.	Limbado
57		Meliaazedarach L.	Bakam limdo
58	Celastraceae	Cassineglauca (Rottb.) O. Ktze.	Bhutzad
59		Celastruspaniculatus Willd.	
60	Rhamnaceae	Ventilagodenticulata Willd.	
61		Ziziphusmauritiana Lamk.	Bor
62		Zizyphusoenoplia (L.) Mill.	
63		Zizyphusrugosa Lamk.	Ghatbor
64	Vitaceae	Cayratiatrifolia (L.) Domin.	
65		Cissusquadrangularis L.	Had-sakal
66		Cissusrepanda Vahl	
67	Sapindaceae	Cardiospermumhalicacabum L.	
68		Sapindusemarginatus Vahl	Aritha
69		Sapinduslaurifolius Vahl.	Aritha
70	Anacardiaceae	Anacardiumoccidentale L.	Kaju
71	Asteraceae	Lanneacoromandelica (Houtt.) Merr.	Modal
72		Mangiferaindica L.	Ambo
73		Semecarpusanacardium L.f.	
74		Spondiaspinnata (L.f.) Kurz.	Ambado
75	Moringaceae	Moringaoleifera Lamk.	Sargavo
76	Fabaceae	Abrusprecatorius L.	Chanothi
77		Aeschynomeneindica L.	
78		Aeschynomene Americana	
79		Alysicarpusheyneanus Wt. & Arn.	
80		Alysicarpuslongifolius (Rott.ex Spr.) Wt. & Arn.	
81		Alysicarpusvaginalis (L.) DC.	
82		Arachishypogea L.	Magfali
83		Cajanusscarabaoides (L.) Thouars.	
84		Cajanuscajan (L.) Huth	Tuver
85		Buteamonosperma (Lamk.) Taub.	Kesudo
86		Canavaliagladiata (Jacq.) DC.	
87		Canavaliacathartica Thouars	
88		Cicerarietinum L.	Channa
89		Clitoriaannua Graham	
90		Clitoriaternatea L.	
91		Crotalariaalbida Heyne ex. Roth	
92		Crotalariafilipes Bth. var. trichophora (Bth. ex Baker) Cooke	

93		Crotalariajuncea L.	
94		Crotalaria medicaginea Lamk.	
95		Crotalariaprostrata Rottl.	
96		Crotalariatriquetra Dalz.	
97		Dalbergialatifolia Roxb.	Sisam
98		Dalbergiasissoo Roxb. ex DC.	Sisoo
99		Dalbergiavolubilis Roxb.	Patarali
100		Derrisscandens (Roxb.) Bth.	
101		Desmodiumgangeticum (L.) DC.	
102		Erythrinasuberosa Roxb.	Pangaro
103		Erythrinavariegata L.	Pangaro
104		Indigoferacordifolia Heyne ex Roth	
105		Indigoferaglandulosa Roxb.	
106		Indigoferatinctoria L.	
107		Paracalyxscariosus (Roxb.) Ali	
108		Pterocarpusmarsupium Roxb., var. acuminata Prain	Biyo
109		Rhynchosiaminima (L.) DC.	
110		Rhynchosiarothii Benth. ex. Ait	
111		Sesbaniabispinosa (Jacq.) Wight	
112		Sesbaniagrandiflora (L.) Pers.	
113		Sesbaniasesban (L.) Merrill.subsp.sesban var. bicolor (W. &A.) F. W. Adrews	
114		Smithiasensitiva Ait. var. flava (Dalz.) Cooke	
115		Tephrosiatinctoria (L.) Pers.	
116		Tephrosiavillosa (L.) Pers.	
117		Teramnuslabialis (L.f.) Spreng.	
118		Vignaradiata (L.) Wilizeck.	
119		Vignaradiata (L.) Wilizeck. var. sublobata (Roxb.) Verdc.	
120		Vignatrilobata (L.) Verdc.	
121		Vignavexillata (L.) A.Rich.	
122	Caesalpiniaceae	Bauhiniapurpurea L.	Kanchnar
123		Bauhiniaracemosa Lamk.	Ashitro
124		Bauhiniatomentosa L.	
125		Caesalpiniapulcherrima (L.) Sw.	Galtaro
126		Cassiafistula L.	Garmalo
127		Cassiamimosoides L.	
128		Cassiaoccidentalis L.	
129		Delonixregia (Boj. G. HKP) Raf.	Gulmohar
130		Peltophorum sp. (Vogel)Benth.	
131		Peltophorumpterocarpum (DC.) Baker ex Heyne	Tamrafali
132		Sennasiamea (Lamk.) Irwin & Barnby	Kasid
133		Senna auriculata Roxb.	Aval
134		Sennatora (L.) Roxb.	Kuvadiyo
135		Tamarindusindica L.	Amli
136	Mimosaceae	Leucaenaleucocephala (Lamk.) De Wit.	Subaval
137		Mimosapudica L.	Lajamani
138		Pithecellobiumdulce (Roxb.) Benth.	Goras-aamli
139		Prosopisjuliflora (Sw.) DC.	Gando-baval
140		Vachelliafarnesiana (L.) Wight & Arn.	Aniyar
141		Vachellialeucophloea (Roxb.) Rashmi Sharma	
142		Vachellianilotica (L.) P. J. H. Hurter & Mabb.	Baval
143		Vachelliapennata (L.) U.C. Bapat & Rashmi Sharma	Kher-vel
144	Vahliaceae	Vahliadigyna (Retz.) O.Ketz.	
145		Anogeissussericosa Brandis	Adrukh

146	Asclepiadaceae	Calycopterisfloribunda Lamk.	
147	Combretaceae	Terminaliacatappa L.	Badam
148	Myrtaceae	Psidiumguajava L.	Jamfal
149		Syzygiumcumini (L.) Skeels	Jambu
150	Lythraceae	Ammanniabaccifera L.	
151		Lagerstroemiaspeciosa (L.) Pers.	
152		Lagerstroemialanceolata Wall.	
153		Rotaladensiflora (Roxb.) GRRS Koehne	
154		Woodfordiafruticosa (L.) Kurz.	
155	Onagraceae	Ludwigiaperennis L.	
156	Caricaceae	Caricapapaya L.	Papaya
157	Cucurbitaceae	Citrulluscolocynthis (L.) Schrad.	
158		Citrulluslanatus (Thunb) Matsumara & Nakai	
159		Cocciniagrandis (L.) Voigt	Tindola
160		Cucumis melo L.	
161		Cucumissativus L.	Kakadi
162		Cucurbitamaxima Duch. ex. Lamk.	Kolu
163		Lagenaria siceraria (Molina) Standl.	Dudhi
164		Luffa cylindrica (L.) M.J. Roem.	Turiya
165		Momordicadioica Roxb. ex. Willd.	
166		Solenaheterophylla Lour.	
167		Trichosanthes cucumerina L.	Jangli parval
168		Trichosanthesdioica Roxb.	
169	Begoniaceae	Begoniacrenata Dryand	
170	Molluginaceae	Glinuslotoides L.	
171		Glinusoppositifolius (L.) A. DC.	
172		Mollugopentaphylla L.	
173		Trianthemaportulacastrum L.	
174	Umbelliferae	Cuminumcyminum L.	Jira
175		Daucuscarota L.	Gajar
176		Foeniculumvulgare Miller	Variyali
177	Alangiaceae	Alangiumsalviifolium (L.f.) Wangerin	Ankol
178	Rubiaceae	Borreriaarticularis (L.f.) F. N. Will.	
179		Catunaregam spinosa (Thunb.) Tirveng.	
180		Gardeniaresinifera Roth.	
181		Ixorabrachiata Roxb.	Ixora
182		Ixoracoccinea L.	Ixora
183		Meynalaxiflora Robyns	
184		Mitragynaparvifolia (Roxb.) Korth.	Kalam
185		Morindacitrifolia L.	Aal
186		Morindatomentosa Heyne ex Roth	Aal
187		Oldenlandiacorymbosa L.	
188		Oldenlandiaherbacea (L.) Roxb.	
189		Xeromphisuliginosa (Retz.) Maheshwari	
190	Asteraceae	Acanthospermumhispidum DC.	
191		Ageratumconyzoides L.	
192		Bidensbipinnata L.	
193		Blumeaeriantha DC.	
194		Blumealacera (Burm. f.) DC.	
195		Caesuliaaxillaria Roxb.	
196		Conyzastricta Willd.	
197		Cyathoclinepurpurea (D.Don.) O. Ktze.	
198		Echinopsechinatus Roxb.	Kanto-selio

199		Ecliptaprostrata (L.) L.	Bhrungraj
200		Elephantopusscaber L.	
201		Emiliasonchifolia (L.) DC.	
202		Gnaphaliumluteo-album L.	
203		Grangeamaderaspatana (L.) Poir.	
204		Launeaprocumbens (Roxb.) Ramayya & Rajgopal	
205		Partheniumhysterophorus L.	Congres grass
206		Plucheatomentosa DC.	
207		Sphaeranthusindicus L.	Gorakh-mundi
208		Spilanthescalva DC.	Akalkarar
209		Synedrellanodiflora (L.) Gaertn.	
210		Tricholepisamplexicaulis Cl.	
211		Tridax procumbens (L.) L.	
212		Vernoniacinerea (L.) Less.	
213	Plumbaginaceae	Plumbagozeylanica L.	Chitrak
214	Sapotaceae	Manilkarahexandra (Roxb.) Dub.	Khirni, Rayan
215		Manilkarazapota (L.) var. royen	Chiku
216		Mimusopselengi L.	Borsali
217		Diospyrosmontana Roxb.	Timbaru
218	Oleaceae	Jasminumhirsutum L.	
219		Nyctanthersarbortristis L.	Parijatak
220	Salvadoraceae	Salvadoraoleoides Decne	Pilu
221		Salvadorapersica L.	Pilodi
222	Apocynaceae	Pergulariadiamea (Forssk.) Chiv.	Utarani, Kurmuda, Rankaral
223		Cascabela thevetia (L.) Lippold	Pili karen
224		Tylophoradalzellii Hook.f.	
225	Periplocaceae	Cryptolepisdubia (Burm.f.) Almeida	Kali-kauli, Krishna-sariva
226		Hemidesmusindicus (L.) Schult.	Kauli, Anantmul, Uparsal
227		Hemidesmusindicus (L.) Schult. var. pubescens (Wt. & Arn.) Hk.f.	Kaulicha-vel
228	Asclepiadaceae	Calotropis gigantea (L.) Dryand.	Akado
229	Amaranthaceae	Dregeavolubilis (L. f.) Bth. ex. Hk. f.	
230	Asclepiadaceae	Pergulariadaemia (Forsk).	Amar-dudheli
231		Saricostemmaacidum (L.) Holm.	
232		Telosmapallida (Roxb.) Craib	
233	Gentianaceae	Canscora diffusa (Vahl) R.Br. ex Roem. & Schult.	
234		Enicostema axillare (Poir. ex Lam.) A.Raynal	
235		Exacumpedunculatum L.	
236	Menyanthaceae	Nymphoidesparvifolium (Griseb.) O. Ktze.	
237	Hydrophyllaceae	Hydroleazeylanica (L.) Vahl.	
238	Ehretiaceae	Cordiadichotoma Frost.	Gunda
239	Boraginaceae	Cordia sinensis Lam.	
240		Ehretiaaspera Roxb.	
241		Coldeniaprocumbens L.	
242		Heliotropiumindicum L.	Hathisundi
243		Heliotropiumpaniculatum R. Br.	
244		Trichodesma indicum (L.) R. Br.	
245	Convolvulaceae	Argyreiasericea Dalz.	
246		Evolvulusalsinoides (L.) L.	Sankhpushpi
247		Evolvulusnummularins (L.) L.	
248		Ipomeaaquatica Forsk.	

249		Ipomeabatatas (L.) Lam.	Sakariya
250		Ipomeacairica (L.) Sw.	
251		Ipomoeaeriocapa R. Br.	
252		Ipomoeafistulosa Mart. ex Choisy	
253		Ipomoeahederifolia L.	
254		Ipomoeaindica (Burm.) Mem.	
255		Ipomoeanil (L.) Roth.	
256		Ipomoeaobscura (L.) Ker-Gawl.	
257		Ipomeapes-tigridis L.	
258		Ipomoea marginata (Desr.) Verdc.	
259		Ipomoeatriloba L.	
260		Merremiahederacea (Burm.f.) Hall. f.	
261		Merremia tridentata (L.) Hall. f.	
262		Merremiavitifolia (Burm. f.) Hall. f.	
263		Operculina turpethum (L.) Silva	
264		Riveahypocrateriformis. Choisy	
265	Cuscutaceae	Cuscutachinensis Lam.	Amarvel
266	Solanaceae	Capsicumannuum L.	Marcha
267		Physalisminima L.	
268		Solanumnigrum L.	
269		Withaniasomnifera (L.) Dunal	
270	Scrophulariaceae	Bacopa monnieri (L.) Wettst.	Bam, Jalnaveri
271		Lindenbergiaindica (L.) O. Ktze.	Pirsadedi, Zamarval, Patharchati
272		Linderniaantipoda (L.) Alst.	
273		Linderniaciliata (Colsm.) Pennell	
274		Linderniaparviflora (Roxb.) Haines	
275		Scopariadulcis L.	
276		Sopubiadelphinifolia (L.) G. Don.	
277		Verbascumchinese (L.) Santapau	Kalhar, Kolhala
278		Veronicaanagallis- aquatica L.	
279	Orobancaceae	Strigaangustifolia (D. Don) Saldhana	Dholo agio, Kunvario agio
280	Bignoniaceae	Dolichandronespathacea (L.f.) K. Schum.	Medsingi
281		Millingtoniahortensis L.	Deshi Buch
282		Oroxylumindicum (L.) Vent.	Tetu
283		Tabebuiapentaphylla (L.) Hemsl.	
284		Tecoma stans (L.) Juss. ex Kunth	
285	Pedaliaceae	Pedaliummurex L.	Ubhu Gokhru
286		Sesamumindicum L.	Tal
287	Martyniaceae	Martyniaannua L.	Vinchhudo
288	Acanthaceae	Adhatodavasica (L.) Nees.	Ardusi
289		Blepharis maderaspatensis (L.) B.Heyne ex Roth.	Untigan, Utanjan chokd
290		Elytrariaacaulis (L.f.) Lindau	
291		Hygrophilaauriculata (Schum.) Heine	
292		Justiciagendarussa Burm. f.	
293		Justicia japonica Thunb.	
294		Lepidagathiscristata Willd.	
295		Lepidagathistrinervia Wall.	Harancharo, Paniru
296		Neuracanthussphaerostachyus (Nees.) Dalz.	Ganthera
297		Ruelliatuberosa L.	Fatkai
298		Rungiapectinata (L.) Nees	Khadsello

299		Rungiarepens. (L.) Nees	
300		Thunbergiaerecta (Bth.) T. Anders.	
301		Thunbergiagrandiflora (Roxb ex Rottl.) Roxb.	
302	Verbenaceae	Clerodendruminerme (L.) Gaertn.	
303		Clerodendrumserratum (L.) Moon	Bharungi
304		Gmelinaarborea Roxb.	Sivan
305		Gmelinaasiatica L.	
306		Gmelina phillippensis Cham.	
307		Lantanacamara L. var. aculeata (L.) Mold.	Lantana
308		Vitexnegundo L.	Nagod, Nagud
309	Lamiaceae	Hyptissuaveolens (L.) Poit.	
310		Leucas aspera (Willd.) Link.	Kubi
311		Leucas biflora (Vahl) Sm.	
312		Plectranthusmollis (Ait.) Spreng.	
313		Pogostemonparviflora Bth.	
314	Nyctaginaceae	Boerhaviadiffusa L.	Satodi
315		BoerhaviaChinensis (L.) Rottb.	
316		Mirabilisjalapa L.	Gulbas
317		Pisoniamitis L.	Velati, Salet
318	Amaranthaceae	AchyranthesasperaL.	Anghedi
319		Aervalanata (L.) Juss.ex Sch.	Kapuri madhuri
320		Amaranthus spinosus L.	
321		Amaranthusviridis L.	
322		Gomphrenacelosioides Mart.	
323		Pupalialappacea (L.) Juss.	
324	Basellaceae	Basellarubra L.	Poi
325	Polygonaceae	Antigononleptopus Hook. & Arn.	Ice cream creeper
326		Persicariaglabra (Willd.) Gomez.	
327	Loranthaceae	Dendrophthoefalcata (L. f.) Ettingsh.	Vando
328		Viscumarticulatum Burm.f.	
329	Santalaceae	Santalumalbum L.	Chandan
330	Euphorbiaceae	Acalyphaciliata Forsk.	Dadari
331		Acalyphaindica L.	Dadari
332		Brideliaspinosa Willd.	Asan
333		Brideliasquamosa (Lam.) Gehrm.	Asan
334		Chamaesycehirta (L.) Millsp.	
335		Chamaecycethymifolia (L.) Millsp.	
336		Chrozophorarottleri (Geis.) Juss.	Okharad
337		Euphorbiaantiquorum L.	Thor
338		Euphorbianeriifolia L.	Thor
339		Jatrophagossypiifolia L.	
340		Kirganelliareticulata (Poir) Bail.	Pichrun
341		Mallotusphilippensis (Lamk.) Muell.-Arg.	Kapilo
342		Pedilanthustithymaloides (L.) Poit.	Vilayati-kharsan
343		Phyllanthusemblica L.	Aavla
344		Phyllanthuserecta (Medic.) Almeida	Bhonya amli
345		Phyllanthusmaderaspatensis L.	Bakarato
346		Ricinuscommunis L.	
347		Securinegaleucopyros (Willd.) Muell.-Arg. in DC.	Chhini, Shenvi
348	Ulmaceae	Holopteleaintegrifolia (Roxb.) Planch.	Kanjo, Papda
349		Tremaorientalis (L.) Blume	Gol
350	Moraceae	Artocarpusheterophyllus Lamk.	Phanas, Jack-fruit
351		Ficusbenghalensis L.	Vad

352		Ficuscarica L.	Anjir
353		Ficushispida L.f.	Dhedh Umbaro
354		Ficusracemosa L.	Umbaro
355		Ficusreligiosa L.	Pipal
356		Ficusvirens Dryand	Payar
357		Morusalba L.	Shetur
358		Streblusasper Lour.	Harero
359	Costaceae	Costusspeciosus (Koen. ex Retz.) Smith	Pavuta
360	Amaryllidaceae	Crinumasiaticum L.	
361	Taccaceae	Taccaleontopetaloides (L.) Kuntze	
362	Liliaceae	Gloriosasuperba L.	
363	Pontederiaceae	Eichhorniacrassipes (Mart.) Solms.	Kanphutti
364	Commelinaceae	Amischophaceluscucullata (Roth) Rolla Rao & Kammathy	
365		Commelinabenghalensis L.	
366		Commelinadiffusa Burm.f.	
367		Commelinaerecta L.	
368		Cyanotiscristata (L.) D. Don	
369		Murdannianudiflora (L.) Brenan	
370	Arecaceae	Arecacatechu L.	Sopari
371		Borassusflabelifer L.	Tad
372	Typhaceae	Typhadomingensis Pers.	
373	Araceae	Amorphophalluscommutatus Engler	
374	Lemnaceae	Lemnagibba L.	
375	Lemnaceae	Wolffiaarrhiza (L.) Wimmer	
376	Potamogetonaceae	Potamogetoncrispus L.	
377	Cyperaceae	Cyperusalternifolius L.	Umbrella plant
378		Cyperusbulbosus Vahl	
379		Cyperuscompressus L.	
380		Cyperuscorymbosus Rottb.	
381		Cyperusdifformis L.	
382		Cyperusesculentus L.	
383		Cyperusexaltatus Retz.	
384		Cyperusiria L.	
385		Cyperusrotundus L.	Chido
386		Eleocharisatropurpurea (Retz.) Presl.	
387		Fimbristylisbis-umbellata (Forsk.) Bub.	
388		Fimbristylisdichotoma (L.) Vahl, Cooke	
389		Fuirenaciliaris (L.) Roxb.	
390		Schoenoplectusarticulatus (L.) Palla	
391		Apludamutica L.	Harantodi, Godval
392	Poaceae	Aristidaadscensionis L.	
393		Bambusaarundinacea (Retz.) Willd.	
394		Brachiariaramosa (L.) Stapf	
395		Chlorisbarbata Sw.	Mindadiu
396		Chrysopogonfulvus (Spreng.) Chiov.	Draf, Kharalu
397		Coixlachryma-jobi L.	Kahudo, Kasai
398		Cymbopogoncitratus (DC.) Stapf	Lili chaha
399		Cynodondactylon (L.) Pers.	Darbh
400		Dactylocteniumaegypticum (L.) Willd.	
401		Dendrocalamusstrictus (Roxb.) Nees	Narvans
402		Desmostachyabipinnata (L.) Stapf in Dyer	Manga, Darbha
403		Dichanthiumannulatum (Forssk.) Stapf	
404		Digitariaciliaris (Retz.) Koeler	

405		Echinochloacolona (L.) Link	Samo
406		Eleusinecoracana (L.) Gaertn.	Nagli
407		Eleusineindica (L.) Gaertn.	Ukdo
408		Eragrostistenella (L.) P. Beauv. ex Roem. & Schult.	
409		Eragrostisuniloides (Retz.) Nees ex Steud.	
410		Eremopogonfoveolatus (Delile) Stapf	
411		Heteropogoncontortus (L.) P. Beauv. ex Roem. & Schult.	
412		Ischaemumrugosum Salib.	
413		Oplismenuscompositus (L.) P. Beauv.	
414		Oryzasativa L.	Bhat, Chokha
415		Paspalidiumflavidum (Retz.) A. Camus	Jinko-samo
416		Pennisetumglaucum (L.) R.Br.	Bajra
417		Saccharumofficinarum L.	Sherdi
418		Setariaglauca (L.) Beauv.	
419		Sorghumhalepense (L.) Pers.	Baru
420		Triticumaestivum L.	Ghahun

Conclusion:-

In the present study 420 species and 330 genera of flowering plants belonging to 91 families which provide basics for survival for others animal including birds, reptiles, amphibians and insects. Many wetlands are vital bird's habitats and bird's usage them as migratory resorts for breeding, nesting and rearing young once. Some water birds like Grebes have adapted to wetlands to such range to survive as an individual species depends on the accessibility of food and shelter in certain types of wetlands within their geographic ranges.

References:-

1. Ali S and Ripley SD (1987) Compact Handbook of the Birds of India and Pakistan. Oxford University Press, Bombay.
2. Blackman JG, Gardiner SJ, Morgan MG (1995) Framework for biogeographic inventory, assessment, planning and management of wetland systems: The Queensland approach. Wetland research in the Wet-Dry tropics of Australia.
3. Brown M and Dinsmore JJ (1986) Implications of marsh size and isolation for marsh bird management. The Journal of Wildlife Management, 1:392-7.
4. Bryce SA, Hughes RM, Kaufmann PR. Development of a bird integrity index: using bird assemblages as indicators of riparian condition. Environmental management. 2002 Aug 1;30(2):294-310.
5. Cherry JA (2012) Ecology of wetland ecosystems: water, substrate, and life. *Nature Education Knowledge*, 3(10):16.
6. Cooke T (1967) The Flora of the Presidency of Bombay. Volume I, II and III. Botanical Survey of India, Calcutta.
7. Finlayson CM (1995) Wetland research in the wet-dry tropics of Australia. In Workshop, Jabiru NT, 22-24.
8. Finlayson CM (1999.) Information needs for wetland management. Max Finlayson and Abbie Speirs.
9. Finlayson CM, Hall R, Bayliss B (1998) Regional review of wetlands management issues: wet-dry tropics of northern Australia. Land and Water Resources Research and Development Corporation.
10. Gonzalves EA and Joshi DB (1985) The seasonal sucession of the algae in a tank of Bandra. Journal of Bombay Natural History Society. 46: 154-176.
11. Gopal B (2005) Biodiversity in Freshwater Ecosystems Including Wetlands, Biodiversity and Conservation in India, A Status Report.
12. Gosselink JG and Turner RE (1978) Role of hydrology in freshwater wetland ecosystems. Freshwater wetlands.
13. Groombridge B and Jenkins M (1998) Freshwater biodiversity: a preliminary global assessment.Mitsch WJ and Gosselink JG (2000) The value of wetlands: importance of scale and landscape setting. Ecological Economics, 35(200): 25–33.
14. Nirmal Kumar JI, Kumar RN, Bhatt I (2005) Study of Cultural Eutrophication in Relation to Plant Diversity of Wetland: Ratheshwar in Central Gujarat. Aquatic Biodiversity in India: *The Present Scenario*, 243.
15. Parikh P, Unadkat K and Nagar P (2015) Study of aquatic weeds in two ponds of Vadodara, Gujarat. *IJAPRR (International Peer Reviewed Refereed Journal)*, 2(1);1-7.

16. Prasad SN, Ramachandra TV, Ahalya N, Sengupta T, Kumar A, Tiwari AK, Vijayan VS and Vijayan L (2002) Conservation of wetlands of India-a review. Tropical Ecology, 43(1):173-86.
17. Shah GL (1978) The flora of Gujarat State. Vol-I and II. Sardar Patel University Press, Vallabh Vidhyanagar, Anand, India.
18. Singh DH (2003) Marine Protected Areas of India: Status of Coastal Wetland Conservation. *Gujarat Ecological Education and Research Foundation*, Gandhinagar.
19. Solanki HA (2001) Study on pollution of soils and water reservoirs near industrial areas of Baroda. *Ph.D Thesis submitted to Bhavnagar University,Bhavnagar*.
20. Soni HB, Dabhi M and Thomas S (2013) Surface water quality assessment and conservation measures of two pond ecosystems of Central Gujarat. *International Research Journal of Chemistry*, 3(3):69-81.
21. Verboom J, Foppen R, Chardon P, Opdam P and Luttikhuizen P (2001) Introducing the key patch approach for habitat networks with persistent populations: an example for marshland birds. Biological conservation, 100(1):89-101.