Weeds of Valsad Taluka (Gujarat) India

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Abstract- *The present paper deals with weeds of Valsad taluka. Weeds are known as unwanted plants. Usually weeds grow faster than native plants and successfully compete for the available nutrients, water, space and sunlight. It consists of total 44 families belonging 115 genera and 176 species. Asteraceae, Poaceae, Fabaceae, Malvaceae, Scrophulariaceae, Amaranthaceae, Convolvulaceae are the dominant families of weeds in Valsad taluka. A list of the Botanical names, Families, Common name were given in present paper.*

Keywords- Valsad taluka,Weeds.

I. INTRODUCTION

A weed is the more aggressive, useless plant growing exterior which interferes with the crops especially the utilization of land and water resources and thus adversely affect human welfare.

According to Beal (1910) "A weed is a plant out of place", According to Benchley(1920) weed is a plant that grows so luxuriantly that it chocks out of all other plants that contain more valuable nutritive properties.

Oxford English Dictionary (1933) defines weed is the herbaceous plant not valued for use or beauty, growing wild and regarded as cumbering the ground or hindering the growth of superior vegetation. Bailey and Bailey (1941) pointed out that a weed is an unwanted plant and consequently it is to be destroyed. Salisbury (1942), Webster (1948) and Muenscher (1949) have given similar definition - "A weed is a plant out of place."

Weeds are not desired in arable lands since they compete with crop plants for nutrients, soil moisture, sunlight, and space (Rao, 1983).Man tries to grow only the sort of plants that he wants and the original inhabitantas of the soil become useless to him are named as weeds (Sharma and Khandelwal, 2010). They have often been given special identity as a fast growing troublesome exotic and noxious plant, in other words known as unwanted plants growing among the normal seasonal crops. This weeds cause great loss to cultivated crops and are responsible for less production since weeds have competition with main crops for water, light, and nutrients (Patel Y.B. et al. 2014).

"Weed'' is applied to many plants that grow and reproduce aggressively. In general therefore, a weed is a plant that is considered by the user of the term to be a nuisance.
Valsad taluka is most famous for its natural looking mountains such as Parnera hills and Dungari hills. Parnera is home to the very sceneric and beautiful mountains (triangle shape) two useful rivers Auranga and Parnadi are associated with the Valsad taluka. The Arabian Sea locate in the west side of Valsad taluka.

It is a region which has become hub for mango and Chikoo farming and processing. It also has a very strong network of rice cultivation, dairy and seasonal vegetable producing and marketing.

II. STUDY AREA

Valsad district of South Gujarat is situated in heavy rainfall zone (average rainfall 2000 mm) so it is having good biodiversity. This district is having five talukas-Valsad, Pardi, Dharampur, Kaprada and Umbergaon. Valsad taluka is located at 20.45°N 73.00°E.

The city center is about 4 km inland from the Arabian Sea. This city's longitude and latitude are 72.93 and 20.60 respectively. According to the 2011 India census, total population of Valsad taluka has 3,85,159 where male are 1,98,084 and female are 1,87,095.Valsad taluka is well known for its production of mangoes, sapodilla and teak.
The climate of this area is the subtropical type. The atmosphere during the most part of the year is hot and humid. The minimum temperature ranges from 7.5 C° to 24.0 C° and the most temperature where is between 34.0 C° to 43.5 C°.
The soil is several feet deep and rich in organic matter. The black cotton soils are visible in the plains area of this taluka, the drainage is poor and the soil deeply cracks in the dry season. The average depth of water from ground level is about 20-50 feet. The P^H of soil range between 7.28 to 8.20.

III. MATERIAL AND METHODS

The present study was undertaken during year 2014 to 2016. Different field trips were arranged and collect the weeds plants. The plant images are in camera and samples were correctly identified by usual taxonomic methods and species names given in the Gujarat as well as Bombay flora.

IV. RESULTS AND DISCUSSION

During present work,total 176 species of weeds belonging to 115 genera and 44 Families were recorded. Table-1 provides the list of the plant species [Column-2], Family [Column-3], Local name [Column-4].In dicot Fabaceae family represented the highest number of genera and species(23 species). In monocot Poaceae family represented the highest number of genera and species (13 species).

V. CONCLUSION

Total 176 weed species under 115 genera and 44 families are recorded. All are medicinal plants have been documented with their uses for the cure of more common disease, and some of these are asthma, cough, constipation, dysentery, diarrhea, diabetes, eczema, fever, headache, itches, jaundice, piles, skin diseases, toothache, wound and others. This information will be helpful for the taxonomists and pharmacologist for the collection and identification of the plant species for further research work.

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Table-01. Recorded weed plants during field trip in Valsad taluka (Year 2014-2016)

Sr.No	Scientific Name	Family	Local name
1	*Cocculus hirsutus* (L.) Diels in Pfreich	Menispermaceae	Vevdi
2	*Argemone maxicana* L.	Papavaraceae	Darudi
3	*Lepidium sativum* L.	Brassicaceae	Asalio
4	*Cleome viscose* L.	Capparaceae	Kanfuti
5	*Cleome gyandra* L.	Capparaceae	Gandhatu
6	*Polygala chinensis* L.	Polygalaceae	Pili bhonysan
7	*Polygala eriopteran* L.	Polygalaceae	Bhonysan
8	*Portulaca oleracea* L.	Portulacaceae	Motiluni
9	*Portulaca quadrifida* L.	Portulacaceae	Zini luni
10	*Bergia ammannioides* L.	Elatinaceae	Jal okhrad
11	*Bergia odorata* Edgew.Journ	Elatinaceae	Lavariu
12	*Abutilon indicum* (L.)Sw.Hort.Brit	Malvaceae	Kanski
13	*Hibiscus panduraeformis* L.	Malvaceae	-
14	*Hibiscus subdariffa* L.	Malvaceae	Khati bhindi
15	*Malachra capitata* L.	Malvaceae	Pardeshi bhindo
16	*Sida acuta* Burm. F.	Malvaceae	Bala
17	*Sida alba* L.	Malvaceae	Kantalo bala
18	*Sida orientalis* DC.	Malvaceae	-
19	*Sida cordifolia* L.	Malvaceae	Bhonyabala
20	*Sida cordata* (Burm.f) waalkes	Malvaceae	-
21	*Urena lobata* L.	Malvaceae	Vagdau bhindo
22	*Melochia corchorifolia* L.	Sterculiaceae	Vagadun bhindo
23	*Waltheria indica* L.	Sterculiaceae	-
24	*Corchorus aestuans* L.	Tiliaceae	Chhunch jitali
25	*Corchorus capsularis* L.	Tiliaceae	Bor chhunch
26	*Corchorus fascicularis* L.	Tiliaceae	Nani chhunch
27	*Corchorus olitorius* L.	Tiliaceae	-
28	*Triumfetta rhomboidea* Jacq.	Tiliaceae	Zipto
29	*Triumfetta rotundifolia* Lam.	Tiliaceae	Gokhru

30	*Biophytum sensitivum* (L).DC	Oxalidaceae	Zarero
31	*Oxalis corniculata* L.	Oxalidaceae	Abuti
32	*Leea macrophyllai* Roxb.ex Hornem	Leeaceae	Dino
33	*Cardiospermum halicacabum* L.	Sapindaceae	Kagdolia
34	*Aeschynomens indica L.*	Fabaceae	Nano ikad
35	*Alysicarpus bupleurifolius* (L.) DC	Fabaceae	Khadsamervo
36	*Alysicarpus longifolius* (Sperng.)wight	Fabaceae	Ubho samervo
37	*Alysicarpus* tetragonolobus Edgew.	Fabaceae	Samervo
38	*Crotolaria albida* L.	Fabaceae	-
39	*Crotolaria calycina* Schrank.	Fabaceae	-
40	*Crotolaria filipes* Benth.	Fabaceae	Makhmali adadio
41	*Crotolaria linifolia* L.f	Fabaceae	Adabaushan
42	*Crotolaria triquetra* Dalzell	Fabaceae	-
43	*Desmodium dichotomum* (Willd.)DC.	Fabaceae	-
44	*Desmodium gangeticum* (L.)DC.	Fabaceae	Salparni, Chitakiu
45	*Goniogyne hirta* (Bl.) Mig	Fabaceae	Adadiyo
46	*Indigofera astragallina* DC.	Fabaceae	Runchhadi gali
47	*Indigofera cordifolia* Roth	Fabaceae	Dadio
48	*Indigofera oblongifolia* Forssk.	Fabaceae	Zilo
49	*Medicago hispida* Gaertn.	Fabaceae	-
50	*Melilotus indica* All. Fl.Peden	Fabaceae	Jangli methi
51	*Psoralea corylifolia* L.	Fabaceae	Bavachi
52	*Smithia conferta* Roth	Fabaceae	-
53	*Smithia sensitive* Aiton	Fabaceae	-
54	*Tephrosia pumila* (Lam.)Pers.	Fabaceae	-
55	*Tephrosia strigosa* (Dalzall).	Fabaceae	-
56	*Zornia gibbosa* Span.	Fabaceae	Samarpani
57	*Cassia absus* L.	Caesalpiniaceae	Chimed
58	*Cassia pumila* Lam.	Caesalpiniaceae	Chimedyu
59	*Cassia tora* L.	Caesalpiniaceae	Kunvadio
60	*Neptunia triquetra* (Vahl) Benth	Mimosaceae	Unghari
61	*Ammania baccifera* L.	Lythraceae	Jal agio,
62	*Ammania multiflora* Roxb.	Lythraceae	Zino agio
63	*Ludwigia parennis* L.	Onagraceae	Panlavang
64	*Glinus lotoides* L.	Molluginaceae	Mitho okhrad
65	*Glinus oppositifolius* L.	Molluginaceae	Kadvo okhrad
66	*Mollugo pentaphylla* L.	Molluginaceae	-
67	*Trianthema portulacastrum* L.	Aizoaceae	Satoda
68	*Anotis foetida* Hook.f	Rubiaceae	-
69	*Borreria articularis* (L.f) Williams	Rubiaceae	Gant-hiyu
70	*Borreria stricta* (L.f) Schum	Rubiaceae	-
71	*Oldenlandia corymbosa* L.	Rubiaceae	Parpt
72	*Ageratum conyzoides* L.	Asteraceae	Ajagandha
73	*Bidens biternata*(Loar) Merr. B.	Asteraceae	Kara kokdi
74	*Blumea belangeriana* DC.	Asteraceae	-
75	*Blumea eriantha* DC.	Asteraceae	Kapurio kalhaar
76	*Blumea lacera*(Burm.f.) DC	Asteraceae	Kalhar kapurio
77	*Blumea mambranacea* DC.	Asteraceae	-
78	*Blumea oblique* (L.)Druce	Asteraceae	-
79	*Caesulia axillaris* Roxb.	Asteraceae	-

80	*Cyathocline purpurea* D.Dam	Asteraceae	Okhrad
81	*Eclipta prostrate (L.) L.Mant*	Asteraceae	Bhangro
82	*Erigeron asteroids* Roxb.	Asteraceae	-
83	*Grangea mederaspatana (*L.) Poir.	Asteraceae	Zinki mundi
84	*Launaea fallax* Kuntze	Asteraceae	Motibhoypatri
85	*Sphaeranthus indicus* L.	Asteraceae	Gorakh mundi
86	*Spilanthus paniculata* Wall ex DC	Asteraceae	Akkalgaro
87	*Tridex procumbens* L.	Asteraceae	Pardeshi bhangro
88	*Vernonia cinerea (*L.*)* Less	Asteraceae	Sahdevi
89	*Vicoa indica* L.	Asteraceae	Sonasali
90	*Centaurium centaurioides* Roxb.	Asteraceae	-
91	*Enicostema hyssopifolium* Willd	Gentianaceae	Kadvinai
92	*Hoppea dichotoma* Willd	Gentianaceae	-
93	*Hydrolea zeylanica (*L.)Vahl	Hydrophyllaceae	-
94	*Coldenia procumbens*L.	Boraginaceae	Okhrad
95	*Heliotropium indicum* L.	Boraginaceae	-
96	*Heliotropium ovaliofolium* Forssk.	Boraginaceae	Hathi-Sundhi
97	*Heliotropium supinum* L.	Boraginaceae	Ghedio okhrad
98	*Trichodesma indicum* DC.	Boraginaceae	Undha –Fuli
99	*Trichodesma zeylanicum* (Burn.Fil)	Boraginaceae	-
100	*Cuscuta chinensis* Lam.	Cuscutaceae	Amarvel
101	*Cuscuta reflexa* Roxb.	Cuscutaceae	Amarvel
102	*Ipomea fistulosa* Mart.ex.	Convolvulaceae	Bodi-Fudardi
103	*Ipomea indica* Burm.f	Convolvulaceae	-
104	*Merremia gangetica*(L.) Cufod.	Convolvulaceae	Undarkant
105	*Merremia tridentate* L.	Convolvulaceae	-
106	*Merremia vitifolia* (Burm.fil)	Convolvulaceae	-
107	*Physalis minima* L.	Solanaceae	Popti
108	*Solanum nigrum* L.	Solanaceae	Piludi
109	*Solanum surattense* Burm.f	Solanaceae	Bhoy Ringni
110	*Bacopa monnieri* (L.) Pennel	Scrophulariaceae	Bam
111	*Buchnera hispida* Buch.	Scrophulariaceae	-
112	*Dopatrium janceum* Roxb.	Scrophulariaceae	-
113	*Lindernia antipod* (L.)Alston	Scrophulariaceae	-
114	*Lindernia ciliate (Colsm.)*Pennell	Scrophulariaceae	-
115	*Lindernia multiflora*(Roxb.)Mukrjee	Scrophulariaceae	-
116	*Lindernia oppositifolia* (L.) Mukrjee	Scrophulariaceae	-
117	*Stemodia serrata* Benth.	Scrophulariaceae	-
118	*Stemodia viscose* Roxb.	Scrophulariaceae	-
119	*Striga angustifolia* D.Don	Scrophulariaceae	-
120	*Orobanche cernua* Loefl.	Scrophulariaceae	Pilo agio
121	*Martynia annua* L.	Martyniaceae	Vinchhudo
122	*Blepharis repens* (Vahl) Roth.	Acanthaceae	Zinku utingan
123	*Gantelbua urens* Heyne ex Roxb.	Acanthaceae	-
124	*Haplanthus tentaculatus* L.	Acanthaceae	-
125	*Hygrophilla auriculata* Schumach.	Acanthaceae	Akhro
126	*Rungia pectinata* (L.) Nees.	Acanthaceae	Khadselio
127	*Phyla nodiflora* (L.) Greene	Verbenaceae	Ratvelio
128	*Leaucas aspera* L.	Lamiaceae	Kubo,Kubi
129	*Ocimum basilicum* L.	Lamiaceae	Ramtulsi,Takmaria

130	*Boerhavia diffusa* Var.	Nyctaginaceae	Satodi
131	*Achyranthes aspera* L.	Amaranthaceae	Andhedi
132	*Aerva lanata* (L.) Juss	Amaranthaceae	-
133	*Alternanthera sessilis* (L.)DC.	Amaranthaceae	Jaljambavo
134	*Amaranthus lividus* L.	Amaranthaceae	Adban tandalto
135	*Amaranthus spinosus* L.	Amaranthaceae	Kantalo Dhimdo
136	*Amaranthus tenuifolius* Willd	Amaranthaceae	-
137	*Amaranthus viridis* L.	Amaranthaceae	Tandaljo
138	*Celosia argentea* L.	Amaranthaceae	Limbadi
139	*Digera muricata* L. Mart	Amaranthaceae	Kanejro
140	*Nothosaerva brachiata* L. Wight	Amaranthaceae	-
141	*Chenopodium album* L.	Chenopodiaceae	Chilni bhaji
142	*Acalypha ciliata* Forssk.	Euphorbiaceae	-
143	*Acalypha indica* L.	Euphorbiaceae	-
144	*Chrozophora prostrate* Dalz& Gibson	Euphorbiaceae	-
145	*Chrozophora rottleri* Spreng	Euphorbiaceae	-
146	*Euphorbia hirta* L.	Euphorbiaceae	Dudheli
147	*Euphorbia geniculata* Ortega	Euphorbiaceae	-
148	*Euphorbia parviflora* L.	Euphorbiaceae	-
149	*Euphorbia thymifolia* L.	Euphorbiaceae	-
150	*Phyllanthus fraternus* G.L.Webster	Euphorbiaceae	-
151	*Phyllanthus maderaspatensis* L.	Euphorbiaceae	-
152	*Asphodelus tenuifolius* Cav.	Liliaceae	Dungro
153	*Commelina benghalensis* L.	Commelinaceae	Motun
154	*Commelina diffusa* Burm.f	Commelinaceae	-
155	*Typha angustata* Bony. & Chaub.	Typhaceae	Ghabajariyu
156	*Eriocaulon quinquangulare* L.	Eriocaulaceae	-
157	*Cyperus brevifolius* Rottb.	Cyperaceae	-
158	*Cyperus compressus* L.	Cyperaceae	Moth ni jat
159	*Cyperus difformis* Kuk.	Cyperaceae	-
160	*Cyperus haspan* L.	Cyperaceae	-
161	*Cyperus rotundus* L.	Cyperaceae	-
162	*Fimbristylis miliacea* (L.) Vahl.	Cyperaceae	-
163	*Scripus lateriflorus* J.F.Gmel	Cyperaceae	-
164	*Brachiaria reptans* L.	Poaceae	-
165	*Cenchrus biflorus* Roxb.	Poaceae	Dhaman
166	*Chloris barbata* Sw.	Poaceae	Mindadiu
167	*Chloris quinquestica* Bhide.	Poaceae	-
168	*Cynodon dactylon* Pers.	Poaceae	Durva
169	*Desmostachya bipinnata* (L.)Stapf.	Poaceae	Dabhdo
170	*Dinebra retroflexa* (Vahl) Panz.	Poaceae	Khariyun
171	*Echinochloa colonum* (L.) Link.	Poaceae	Samo
172	*Eragrostis tenlla* L.	Poaceae	-
173	*Heteropogon contortus*Var.hirtus	Poaceae	Dabh suliu, Sukhli
174	*Oryza nivara* S.D.Sharma & Shastry	Poaceae	Adbau danger
175	*Setaria glauca* (L.) P.Beauv	Poaceae	-
176	*Setaria tomentosa* (Roxb.) Kunth.	Poaceae	Kutri

Table-02 Family wise Conclusion of Genus and Species.

SR NO	FAMILY	NO. OF	NO. OF

		GENUS	SPECIES
1	Menispermaceae	1	1
2	Papaveraceae	1	1
3	Brassicaceae	1	1
4	Capparaceae	1	2
5	Polyglaceae	1	2
6	Portulacaceae	1	2
7	Elatinaceae	1	2
8	Malvaceae	5	10
9	Sterculiaceae	2	2
10	Tiliaceae	2	6
11	Oxalidaceae	2	2
12	Leeaceae	1	1
13	Sapindaceae	1	1
14	Fabaceae	12	23
15	Caesalpiniaceae	1	3
16	Mimosaceae	1	1
17	Lythraceae	1	2
18	Onagraceae	1	1
19	Molluginaceae	2	3
20	Aizoaceae	1	1
21	Rubiaceae	3	4
22	Asteraceae	15	19
23	Gentianaceae	2	2
24	Hydrophyllaceae	1	1
25	Boraginaceae	3	6
26	Cuscutaceae	1	2
27	Convolvulaceae	2	5
28	Solanaceae	2	3
29	Scrophulariaceae	6	11
30	Orobanchaceae	1	1
31	Martyniaceae	1	1
32	Acanthaceae	5	5
33	Verbenaceae	1	1
34	Lamiaceae	2	2
35	Nyctaginaceae	1	1
36	Amaranthaceae	7	10
37	Chenopodiaceae	1	1
38	Euphorbiaceae	4	10
39	Liliaceae	1	1
40	Commelinaceae	1	2
41	Typhaceae	1	1
42	Eriocaulaceae	1	1
43	Cyperaceae	3	7
44	Poaceae	11	13

TABLE NO.3 Dominant Families,genus and species.

SR NO	DOMINANT FAMILY	NO. OF GENUS	NO.OF SPECIES

1	Malvaceae	5	10
2	Fabaceae	12	23
3	Asteraceae	15	19
4	Scrophulariaceae	6	11
5	Amaranthaceae	7	10
6	Euphorbiaceae	4	10
7	Poaceae	11	13

REFERENCES

[1] B.H.Karlikar (2015).Weed flora of Gandhinagar district, Gujarat, India IJSR Vol-4 :420-422

[2] Bhatt M.P (1987): A contribution to the Flora of Navsari area with Special reference to Thesis submitted to S.G Univ. Surat.

[3] Branchely W.E (1920): Weeds of farmland. Longmians, Green London.

[4] Gohil T.G.(2010). A study of weed occurrence and crop association of Valsad district, south Gujarat, Lifelets 4:109-118.

[5] Jangid M.S and Sharma S.S. (2011). Weed plants of Modasa taluka District Sabarkantha (Gujarat) Life science Leaflets 13: 435-442.

[6] More P.G.(1972): A contribution to the Flora of Parnera hills, Pardi and Udwada areas in south Gujarat. Thesis submitted to S.P.Univ., Surat.

[7] Patel R.I (1971): Forest Flora of Gujarat State, Published by Gujarat State Forest Department, Gujarat state, Baroda.

[8] Patel R.M (1971): The Flora of Bulsar and its environs. Thesis submitted to S.P Uni., Vallabh Vidhyanagar.

[9] Patel Yogesh B.Patel Nimisha D. and Pandya Himanshu A. (2014). Weeds of the major creal and their economic Gujarat, India. Appl. Sci. res.,2014,6(6):34-39

[10] P.R.Pandya & B.A.Jadeja (2013).Weed flora of Rice, crop field in the Gujarat region. Bharuch District International Multidisciplinary Journal of Applied Reserch. Vol-1 :26-28.

[11] Reddy A.S (1987): Flora of Dharampur Forest. Thesis submitted to S.P Uni. Vallabh Vidhyanagar.

[12] Shah G.L(1978).Flora of Gujarat state.Vol. I and II Sardar Patel Uni.Vidyanagar.

[13] Sharma Leena and khandelwal sitaram (2010). Weeds of Rajasthan and their Ethano botanical Importance. Ethno Med, 4(2):75-79 (2010)

[14] VS Rao (1983). Principles of weed science, Oxford & IBH Publishing Co., India