Hydrophytes of Dhansura Taluka, District Arvalli (North Gujarat) India

Arati Bhagat[1], Khyati Patel[2], Dr M.S.Jangid[3]
[1, 2, 3] Dept of BOTANY
[1, 2, 3] Sir P T Science College, Modasa-383315. (Gujarat)India

Abstract- *The present study was conducted to explore the some Hydrophytes of Dhansura taluka. Qualitative taxonomic surveys were accomplish during 2018 -2019 in Dhansura taluka. Total 17 families and 31 aquatic plants species were recorded in present study. During the field work and collection special attention was given to record the characters of aquatic plants.*

Keywords- Hydrophytes, Dhansura Taluka.

I. INTRODUCTION

Dhansura Taluka is situated in north part of Gujarat state.The atmosphere is arid and semi-arid.There is multi seasonal climate in this taluka. Major area of the taluka is well rain fed and having good capacity moisture retaining. There are two rivers (Vatrak and Mazum.),ponds, lake and stream flowing through Dhansura taluka. Aquatic plants require special adaptation for living submerged in water or in soil that is permanently saturated with water. The present study of aquatic angiosperm found in fresh water body. Aquatic angiosperm are most powerful and grow in free floating, floating rooted, submerged, muddy, marshy area.

II. STUDY AREA

Dhansura is situated on 23^0 21'0'' N latitude and $73^0$12'0''E longitude. Total population of Dhansura Taluka is 96,389 living in 18,320 Houses, Spreadsacross 71 total villages.Males are 50,310 and Females are 46,079.The total area of the Dhansura taluka is 400.44 sq.km, total forest area 49,688 hector. Dhansura town is located 44 KM towards South from District Himmatnagar. 66KM from State capital Gandhinagar towards west.Dhansura taluka is bounded by Bayad taluka towards South, Talod taluka towards west, Modasa Taluka towards North, Malpur Taluka towards East. Modasa City, Kapadvanj City,Prantij City,Himatnagar City are the nearby Dhansura taluka.

III. MATERIAL AND METHODS

The present study is the result of few years survey with serious observation and collection. Identification was done with help of flora. The field study were arrange during year 2018-2019 each month survey carried out and collect the aquatic plants. The seasonal variation of plant species in wetland have been studied and find out that the species richness in this year. In the enumeration ,the collected plants were arranged family wise. The botanical name, family, habitat were given in Table-1.

IV. OBSERVATION AND DISCUSSION

Hydrophytes angiosperms plant species of ponds in Dhansura Taluka are indigenous and naturalized plants. The study area shows plant diversity comprises of 24 genera and 31 species belong to 17 angiosperm families.Aquatic angiosperms plant species found in habitat as floating stage 08 species, submerged species 03,Mid marsh species 03,Marsh species 11, Reed swamp species 04, Moist soil area found 2 species. In most of the season Nelumbo, Eichhornia species cover the water surface, Lemna also cover water surface, Typha species seen tallest among the all aquatic species. In winter and starting of summer new emergent plant species grown in moist soil, where water level decrease in periphery. After summer and in rainy season when water logged, plant species grows and aquatic vegetation shows dense species richness.

V. ACKNOWLEDGEMENTS

Authors are thankful to tribal and rural people of this area for their kind co-operation.

REFERENCES

[1] Hooker , J. D. (1872-1896) : The flora of British India. Vol 1 – VII Reeve 7 Co. Kent .England.
[2] Bhadri R. B., Singh R. B. and Desai B. L. 1962. Water plants. New Delhi.
[3] Cooke, Th. (1958) : The flora of Bombay Presidency, Calcutta (reprinted), Vol.
[4] Santapau, H. (1962): Flora of Saurashtra , Part-I, Saurashtra Research Society, Rajkot.
[5] Shah, G. L. (1978) : The flora of Gujarat State. Part I and II, Sardar Patel University

[6] Bole, P. V. and Pathak, J. M. (1988) : Flora of Saurashtra, Vols. II & III,Botanical survey of India,Calcutta.
[7] Vyas L. N., Sankhla S. K. and Paliwal P. P. 1989. Hydrobiological studies of Udaipur lakes. In J. S. Singh & B. Gopal (eds.), Perspectives in ecology. Jagmander Book Agency, New Delhi: 389-410.
[8] Bandyopadhyay S. and Gopal B. 1991. Ecosystem studies and management problems of coastal lagoon, the lake Chilika. In B. Gopal & V. Asthana (eds.) Aquatic sciences in India. Indian Assoc. Limnol. Oceanogr., New Delhi: 117-172.
[9] Anon. 2011. Tourism in forest areas of Western Ghats. Equations, January 2001, Bangalore
[10] Singh, M.P., Singh, B.S and Dey, S. 2002. Plant diversity and Taxonomy. Daya Publishing House, New Delhi, pp. 108- 121.
[11] Dhoti, S. and Dixit, S. 2007. Water quality improvement through Macrophytes: A case study. Asian J. Experim. Sci. 21 (2): 427- 430.
[12] Manhas, R. K., Gautam, M. K. and Kumari, D. 2009. Plant diversity of fresh water swamp of Doon Valley, India. J. Amer. Sci. 5 (1): 1-7.
[13] Niroula, B. and Singh, K. L. B. 2010. Contribution to aquatic macrophytes of Biratnagar and adjoining areas, Eastern Nepal. Ecoprint 17: 23-24
[14] Mishra, S. and Narain, S. 2010. Floristic and ecological studies of Bakhira Wetland, Uttar Pradesh, India. Ind. Forest

TABLE:1 PLANT LIST WITH BOTANICAL NAME,FAMILY AND HABITAT

Sr No.	Plant species	Family	Habitat
1	*Lemna minuta Kunth*	Araceae	Floating
2	*Alternanthera sessilis(L.)DC.*	Amaranthaceae	Marsh
3	*Ceratophyllum demersum L.*	Ceatophyllaceae	Floating
4	*Ipomoea aquatic Forssk*	Convolvulaceae	Marsh
5	*Ipomoea carnea Jacq.*	Convolvulaceae	Marsh
6	Cyperus compressus L.	Cyperaceae	Reed swamp
7	*Cyperus corymbosus Rottb.*	Cyperaceae	Moist soil
8	*Cyprus rotundus L.*	Cyperaceae	Marsh
9	*Carex nubigana D. Don*	Cyperaceae	Reed swamp
10	*Scirpus mucronatus (L.) Palla*	Cyperaceae	Reed swamp
11	*Nymphoides indica (L.) O. Kuntze*	Gentianaceae	Mid marsh
12	*Hydrilla verticillata(L.f.) Royle*	Hydrocharitaceae	Submerged
13	*Vallisnaria nantans(Lour.)Hara*	Hydrocharitaceae	Submerged
14	*Juncus bufonius L.*	Juncaceae	Reed swamp
15	*Lemna minor L.*	Lemnaceae	Floating
16	*Ammania baccifera L.*	Lythraceae	Moist soil
17	*Najas graminea dulile*	Najadaceae	Submerged
18	*Nelumbo nucifera Gaertn.*	Nymphaeaceae	Mid marsh
19	*Nymphaea pubescence Willd.*	Nymphaeaceae	Mid marsh
20	*Nymphaea ampla (Salisb.) DC.*	Nymphaeaceae	Floating
21	*Cortaderia selloana (Schult & Schult.f.)*	poaceae	Marsh
22	*Paspalidium punctatum (Brum.)A. Camus*	poaceae	Marsh
23	*Sartina bakeri Merr.*	poaceae	Marsh
24	*Paspalum distichum L.*	poaceae	Marsh
25	*Polygonum glabrum Willd.*	Polygonaceae	Marsh
26	*Eichhornia carssipes (Mart.) Solm.*	Pontederiaceae	Floating
27	*Monochoria vaginalis (Burm.f.) Presl.*	Pontederiaceae	Marsh
28	*Trapa bispinosa Roxb.*	Trapaceae	Floating
29	*Trapa natans var.bispinosa (Roxb.)*	Trapaceae	Floating
30	*Typha angustata Bony. & Chaub.*	Typhaceae	Floating
31	*Typha angustifolia L.*	Typhaceae	Marsh