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STUDY OF BIOLOGICAL SPECTRUM AND LIFE FORM OF KANKUPURA AREA OF VISNAGAR TALUKA, DIST. MEHSANA (NORTH GUJARAT)

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ABSTRACT

In the present study, forty seven species of vascular flowers were classified after Raunkiaer's idea of life-from classes and organic spectrum of plant life of Kankupura village analysed as "Chamaephanerophytes." besides this the proportion cost of the existence-from training had been as compared and discussed within the light of Raunkiaer's everyday spectrum.

KEYWORDS :- Kankupura, Lifeforms, Biological spectrum.

INTRODUCTION

Plants are one of the very essential components on this earth and are very crucial as they form the main life supporting system for many living things including human race. Plants also plays basic role in ecosystem functioning and fertility of soil. The diversity of floral species is correlates with the stability of ecosystem. Kankupura village of Visnagar taluka repute in the Mehsana district of North Gujarat.It is 80 km north of Ahmedabad it's miles located on river bank of sabarmati river 29 km far from Visnagar town. The general climatic conditions of this place are much like those of semi-desolate tract areas. The soil salinity, although found in excess in some patches of land, is tons decrease than that of semi-desolate tract areas. Kankupura village place is particularly wealthy in sub soil water.

Fore the class of the plants of various regions within the international, distinct structures have been proposed by many ecologists (humboldt-1805, braun- blanquet-1932, raunkiare's-1934, cabrera-1952), but raunkiaer's life-from spectrum has a general applicability. The phytoclimate of a vicinity, consistent with raunkiaer is characterized with the aid of the lifestyles-from (or lifestyles-bureaucracy) that is the organic spectrum of the region excceds the percentage of the same lifestyles-from in the everyday spectrum. The everyday spectrum is defined theoretically because the spectrum given by means of the wholeflore a of the earth. On the idea of raunkiaer's life-from lessons and organic spectrum of plants of kankupura village analysed as "chamaephanerophytes."

MATERIALS AND METHOD

The investigation was based on the survey of years of extensive and intensive, regular excursions of the study area which is enriched with floral components and having ecological significance. I visit the kankupura village grade by grade in distinctive instructions and collect the data. To collect the data for determination of phytosociological characters of angiosperms, belt transect method (Muller-Dombois and Ellenberg, 1974; Kershaw, 1973) was used. I arrange the all plant beneath exclusive life-forms as consistent with class proposed through Raunkier (1934) as given in (Table-1).

REVIEW OF LITERATURE

The floristic and ecological paintings of diverse plant species from Gujarat, North Gujarat and Visnagar turns into important to make gift examine. The records on plant species of diverse location of Gujarat is said by Shah (1978) in "Flowers of Gujarat kingdom" and Cooke (1903) in flora of government of Bombay" the floristic paintings was carried out in north Gujarat location by Saxton (1922), Shah (1994), Yogi (1970), Joshi (1997), Ant (2000), Patel (2000), Patel et. Al (2002) and Punjani (2002), Floristic study on Visnagar metropolis was done via Dr. S. B. Narula, Dabgar et. Al. (2002) examine of positive wild fit to be eaten plant of Taranga hill station of north Gujarat. The prevailing paintings is undertaken to decide chime-climate and biological spectrum of Kankupura village.

Family wise check-list of the plant species collected from Kankupura village corridore.Table :- 1

Sr. No.	Family	Botanical Name	Local Name	Life Form
1	Annonaceae	*Annona squamosa* L.	Sitaphal	Ph
2	Annonaceae	*Polialthia longifolia* B&H	Asopalav	Ph
3	Capparidaceae	*Capparis sepiaria* L.	Kanther	Ch
4	Capparidaceae	*Capparis deciduas* (Forsk.)(Edgew)	Ker	Ch
5	Malvaceae	*Abelmoschus esculentus* (L.) Moench	Bhinda	Th
6	Malvaceae	*Hibiscus rosa-sinensis* L.	Jasud	Ch
7	Malvaceae	*Gossypium herbaceum* Auct. Non (L.)	Kapas	Ch
8	Rutaceae	*Aegle marmelos* (L.) Corr.	Bili	Ph
9	Rutaceae	*Murraya koenigi* (L.) Spr.	Metho limdo	Ch
10	Rutaceae	*Murraya paniculata* (L.) Jack	Kamini	Ch
11	Rutaceae	*Citrus lemon* (L.) Burm.F.	Limbu	Ch
12	Simarubiaceae	*Ailanthus excelsa* Roxb.	Arduso	Ph
13	Meliaceae	*Azadirachta indica* A. Juss.	Kadvo limdo	Ph
14	Celastraceae	*Maytenus emarginata* (Willd.)D.Hou.	Viklo	Ch
15	Rhamnaceae	*Ziziphus mauritiana* (Lam.)	Boydi	Ch

16	Rhamnaceae	*Zizyphus nummularia* (Burm.) F.W.A.	Chani bor	Ch
17	Anacadiaceae	*Mengifera indica* (L.)	Ambo	Ph
18	Fabaceae	*Cajanus cajan* (L.) Millsp	Tuver	Ch
19	Caesalpiniaceae	*Tamarindus indica* (L.)	Khati amli	Ph
20	Caesalpiniaceae	*Parkinsonia aculeata* L.	Rambaval	Ch
21	Caesalpiniaceae	*Caesalpinia pulcherrima* (L.) Sw.	Gultoro	Ch
22	Mimosae	*Acacia catechu* (Roxb.ex.Rottl.) Willd.	Khair	Ph
23	Mimosae	*Acacia nilotica* (L.)Del.	Desi Baval	Ph
24	Mimosae	*Pithecolobium dulce* (Roxb.) Bth.	Vilayati amli	Ph
25	Mimosae	*Prosopis cineraria* (L.) Druce.	Khijado	Ph
26	Mimosae	*Acacia Senegal* Willd.	Gor. baval	Ch
27	Combretaceae	*Terminalia catappa* L.	Desi Badam	Ph
28	Myrtaceae	*Syzygium cumuni* (L.)Skeels.	Jambu	Ph
29	Myrtaceae	*Eucalyptus globules* Labill.	Nilgiri	Ph
30	Myrtaceae	*Psidium guajava* L.	Jamphal	Ph
31	Punicaceae	*Punica granatum* L.	Dadam	Ch
32	Cactaceae	*Opuntia elatior* Mill.	Phafada Thor	Ch
33	Sapotaceae	*Manilkara zapota* L.	Chikoo	Ch
34	Sapotaceae	*Mimusops elengi* L.	Borsali	Ph
35	Sapotaceae	*Madhuca indica* J.F.Gmel.	Mahudo	Ph
36	Salvadoraceae	*Salvadora persica* L.	Piludi	Ch
37	Asclepiadaceae	*Calotropis gigantia* (L.)R.Br.	Akado	He
38	Solanaceae	*Datura metal* L.	Daturo	Th
39	Acanthaceae	*Adhatoda vasica* (L.) Nees	Ardusi	Ch
40	Verbenaceae	*Lantana camara* L.Var. *Sanguinea.*	Indradanu	Ch
41	Verbenaceae	*Clerodendrum innermis* (L.) f.Gaerth.	Vad mendi	Th
42	Euphorbiaceae	*Emblica officinalis* Gaertn.	Amla	Ph
43	Euphorbiaceae	*Euphorbia nerifolia* L.	Kantalo thor	Ch
44	Euphorbiaceae	*Breynia retusa* (Dennst.)Alst.	Kamboi	Th
45	Moraceae	*Ficus benghalensis* L.	Vad	Ph
46	Moraceae	*Ficus religiosa* L.	Piplo	Ph
47	Moraceae	*Morus alba* L.	Shetur	Ch

Life form in the Kankupura village corridor

Out of **47** plant species recorded in Kankupura village, **20** species belong to phanerophytes, **22** species to Chamaephytes, **01** species to Hemicryptophytes and **04** species to Therophytes.

Table :- 2 Biological spectrum of the Kankupura village region

Sr. No	Life from	No. of species	Percentage of species (%)	Normal spectrum
1	Phanerophytes	**20**	**42.55**	**48.0**
2	Chamaephytes	**22**	**46.81**	**09.0**
3	Hemicryptophytes	**01**	**2.13**	**26.06**
4	Geophytes	**-**	**-**	**06.0**
5	Therophytes	**04**	**8.51**	**13.0**
TOTAL		**47**	**100%**	**100%**

RESULT AND DISCUSSION :--

The flora of kankupura village corridore inclusive of 47 naturalised species of vascular flowers belonging to 38 familtes, can be categorized in to the following existence from lessons in step with raunkiaer's machine (desk-2) 22 species are chmaephytes (ch=forty six.81 %), 20 species are phanerophytes (ph = 42.55 %), 01 species hemicryptophytes (h=2.Thirteen %), and 04 species are therophytes (th=8.Fifty one %),

Comparision of the chances of the existence-form training of the plants of kankupura village corridore with raunkiaer's ordinary spectrum (fig) indicates that from the chmaephytes (ch) largest life from class and their percentage is four times greater than (forty six.Eighty one %) that of the everyday spectrum (48 %), the phanerophytes from the second maximum elegance with forty two.55 %, which is much like twice that regular spectrum (nine.Zero %) accordingly, the biological spectrum of the plants of kankupura village shows"chamaephanerophytes" chamae-climate as those two instructions show the finest divergence

from the ordinary spectrum. Phanerophytes (ph=42.55 %) are about two time more than regular spectrum (48.0%), hemicryptophytes (h=2.Thirteen%) are 3 time much less than everyday spectrum (26.6%), and therophytes (t=8.51%) much less than the ordinary spectrum (6.Zero %), the organic spectrum for the plant life of kankupura village corridore shows the –chamae-climate is "chamae-phanerophytes".

THE BIOLOGICAL SPECTRUM OF KANKUPURA VILLAGE COMPARE TO NORMAL SPECTRUM OF RAUNKIAER. Fig :- 1

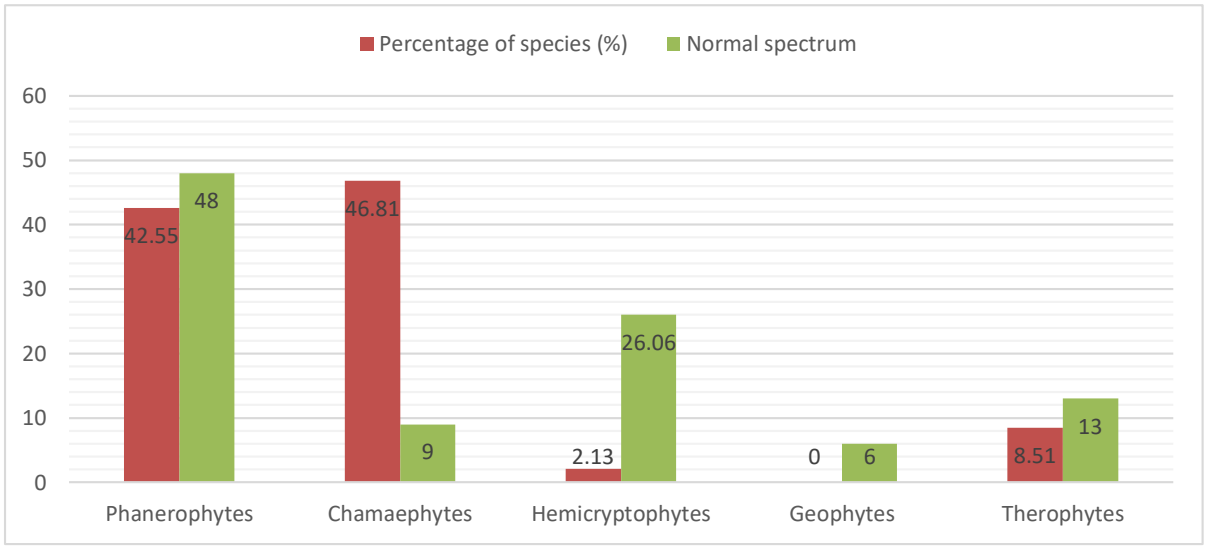
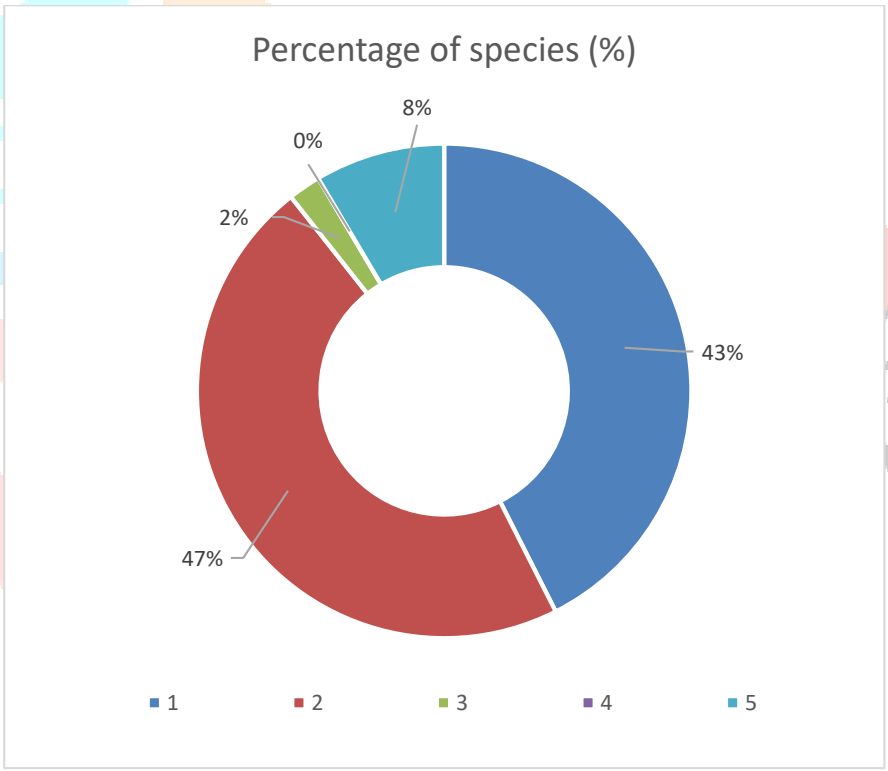


Chart showing different value of life form in percentage. Fig :- 2



Chamaephytes 46.81 % constitute % of the whole plant species. The dominance of chamaephytes over different lifestyles bureaucracy shows a extraordinarily disturbed circumstance of habitat or very dry weat immediately accompanied by phanerophytes (42.55 %).

CONCLUSIONS :-

The organic spectrum of the flowers of kankupura village indicates "chamaephanerophytes" chamae divergence from the ordinary spectrum. Phanerophytes (ph=42.Fifty five %) are approximately two time extra than regular spectrum (48.0%), hemicryptophytes (h=2.Thirteen%) are 3 time less than everyday spectrum (26.6%), and therophytes (t=8.Fifty one%) less than the everyday spectrum (6.0 %), the organic spectrum for the plant life of kankupura village corridore shows the – chamae-climate is "chamae-phanerophytes"

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