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FLORAL STUDY OF SAHASTRALINGA TANK, PATAN (NORTH GUJARAT)

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ABSTRACT:

The Patan is historical place. It has so many historical importance. It is situated in the northern Gujarat region of Gujarat state. Here studied angiosperm plants of Sahastralinga Tank areas and found 76 angiosperm plant species. A survey has been conducted in all areas of Sahastralinga Tank, Patan city to collect the information about angiosperm plants. During the study I located and identified species from the Sahastra-ling lake.

KEY WORDS: *Sahastralinga Tank, Angiosperm, Patan city.*

INTRODUCTION:

Patan is well-known for its world heritage site “Rani ki vav” and Patola sarees. Patan is the former capital of Gujarat. This historic town was founded in 796 A.D by Vanraj Chavda and was originally known as Anhilpur Patan or Anhilwad Patan. The Solanki periods, Gujarat’s golden age, served as the pinnacle of Patna’s glory. During those days, the rulers were great patrons of fine arts and Architecture, thus erecting many civic and religion and edifices in the city. Destroyed by time and looted for religion and riches, very little of the cities earlier magnificence remains now. We are carried out field work during year 2017 – 2018. Listed all angiosperm plants from Patan city of Patan taluka. Forest area is 1000812 hectares, Grazing land is 81614 hectare and irrigation area is 37082 hectare of Patan taluka.

STUDY AREA:

The Sahastralinga Tank is located in Patan Taluka of Patan district of Gujarat. It is one of 7 Talukas of Patan district. There are 139 villages and 2 towns in Patan Taluka. Total area of Patan taluka is 1023.87 km². Patan district is located in the northern part of the state with its headquarters at Patan town. The district covers an area of 5,730km² with total population 11,81,941. The district is surrounded by Banaskantha district in the north and northeast, Mehsana in its south and southeast and Kutch and little Ran of Kutch in the east. Total 1037 Wet lands are mapped including 416 small wet lands (<2.25 ha) with 34,268 ha area. This region is having minimum temperature as low as 5°C to 10°C and maximum temperature as high as 40°C to 48°C.

History related to this place:

Sahastra-linga Talav, an artificial tank, was built by the Siddhraj Jaysinh (1093 -1143 AD), the Solanki ruler of Gujarat in Patan. This tank is situated on the north-western part of Patan, on the banks of the Saraswati river. The architecture of this tank integrated the great sense of water management and sanctity of water in Hindu religion. The tank used to receive water from a canal of the Saraswati river and had spread about 5 km with masonry embankments. About thousands of shrines dedicated to the Lord Shiva were constructed on the edge of the water tank, but now there are remains of only some shrines. Looking at the ruins, one can imagine the grandeur of this great water tank. It is a Monument of National Importance protected by Archaeological Survey of India (N-GJ-161). An inscription found in the Shiva temple in Vyala Kua Street of Patan indicates that the lake was part of a much larger work. At present, the Sahastra-linga Talav is dry and the earth work is buried under the sands of the Saraswati river, the same river that was once filled with water. According to some local people, the tank was dry to the curse given by the Jasma Odan. A famous story of Siddhraj Jaysinh and Jasma Odan, a beautiful woman of the tank diggers' community, revolves around this tank. She refused to marry the Siddhraj and committed *Sati* to protect her honour. It is believed that her curse made this tank waterless and the king without an heir to the kingdom of Gujarat.

Structure:

The Sahastra-linga Talav is pentagonal in shape, and marked by a series of mounds showing its shape. The earthworks circumscribe an area of several kilometres and about 1 km broad. The total area of the Talav is about 17 hectares. At its fullest, it would have contained about 4,206,500 cubic metres of water. In the centre of the Talav is a large earth heap, the *Bakasthana*. On a raised platform over it, was built a *rauza*, an octagonal structure of *Lakhori* bricks. The most interesting of the relics are the channels, the well, steps and side elevation of the Talav, and a bridge. The channel runs from north to south and connected the lake to the Saraswati river.

METHODOLOGY:

The collected plant species were photographed wherever possible and collected from study area. The collected species were identified by Saxton and Sedgwick (1918), Sutaria(1941), Cooke(1958), Patel(1971), Shah(1978) and Patel (2001).

RESULT AND DISCUSSION:

This floristic survey conducted for the first time in this study area of **Sahastra-ling lake** in Patan city, Gujarat.

A total of **76 species** in **71 genera** and **29 Angiosperm families** were recorded for the first time during present survey conducted in the area under study. Of total recorded species, **Dicotyledons** consisted of **89.47%** whereas, **Monocotyledons** of **10.53%**.

Dominant family followed by Asteraceae, Solanaceae, Bignoniaceae and Malvaceae in the study area.

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<https://goo.gl/maps/Sr72PCxSuEU2>

<https://goo.gl/maps/hMgjW6A6ezC2>

<https://goo.gl/maps/ThNUn5LUVko>

Table-1: List of Angiospermic Plants

No.	Scientific name	Local name	Family
1	<i>Abutilon indicum</i> (L.) Sweet	Kanski	Malvaceae
2	<i>Acacia nilotica</i> (L.) Delile	Baval	Mimosaceae
3	<i>Achyranthus aspera</i> L.	Andhedi	Amaranthaceae
4	<i>Aerva javanica</i> (Burm.f.) Juss. ex Schult	Gorakhganjo	Amaranthaceae
5	<i>Alternanthera caracasana</i> Kunth.	Khakiweed	Amaranthaceae
6	<i>Alternanthera sessilis</i> (L.) DC.	Jal Jambvo, Pani ni Bhaji	Amaranthaceae
7	<i>Alysicarpus monilifer</i> (L.) DC.	-	Fabaceae
8	<i>Alysicarpus vaginalis</i> (L.) R. Br. ex DC.	-	Fabaceae
9	<i>Argemone mexicana</i> L.	Darudi	Papaveraceae
10	<i>Azadirachta indica</i> A. Juss.	Limdo	Meliaceae
11	<i>Blepharis repens</i> (Vahl) Roth.	Zinku utingan	Acanthaceae
12	<i>Boerhavia diffusa</i> L.	Satodi	Nyctaginaceae
13	<i>Bougainvillea spectabilis</i> Willd.	Bougain vel	Nyctaginaceae
14	<i>Calotropis gigantea</i> (L.) W. T. Aiton.	Moto aakado	Asclepiadaceae
15	<i>Calotropis procera</i> (Ait.) R. Br.	Nano aakado	Asclepiadaceae
16	<i>Capparis decidua</i> (forsk.) Edgew.	Kerdo	Capparidaceae
17	<i>Carpesium abrotanoides</i> L.	-	Asteraceae
18	<i>Cassia auriculata</i> (L.)	Aaval	Fabaceae
19	<i>Catharanthus roseus</i> (L.) G. Don, Gen.	Gulabi barmasi	Apocynaceae
20	<i>Cirsium neomexicanum</i> Gray.	-	Asteraceae
21	<i>Clerodendrum trichotomum</i> Thunb.	-	Verbenaceae
22	<i>Convolvulus microphyllus</i> (Roth.) Sieb. Ex Spr.	Safed sankhawali	Convolvulaceae
23	<i>Cordia dichotoma</i> G. Forst.	Gunda	Bignoniaceae
24	<i>Crotalaria retusa</i> L.	Gughro	Fabaceae

No.	Scientific name	Local name	Family
25	<i>Croton bonplandianum</i> Baill.	Ban tulsi	Euphorbiaceae
26	<i>Ctenolepis cerasiformis</i> (Stocks) C. B. Clarke	Aankh futamani	Cucurbitaceae
27	<i>Cynodon dactylon</i> (L.) Pers.	Dharo	Poaceae
28	<i>Datura innoxia</i> Mill.	Safed dhaturo	Solanaceae
29	<i>Desmostachya bipinnata</i> (L.) Stapf.	Daabhado	Poaceae
30	<i>Echinops echinatus</i> Roxb.	Utkantho	Asteraceae
31	<i>Erythrina variegata</i> L.	Pangaro	Fabaceae
32	<i>Glinus lotoides</i> L.	Mitho okharad	Molluginaceae
33	<i>Hamelia patens</i> Jacq.	Hemelia	Rubiaceae
34	<i>Heliotropium indicum</i> L.	Hathi sundhi	Boraginaceae
35	<i>Hibiscus rosa-sinensis</i> L.	Jasud	Malvaceae
36	<i>Indigofera tinctoria</i> L.	Gali	Fabaceae
37	<i>Justicia procumbens</i> L.	Pitpapdo	Acanthaceae
38	<i>Koeberlinia spinosa</i> Zucc.	-	Koeberliniaceae
39	<i>Lantana camara</i> L.	Indradhanush	Verbenaceae
40	<i>Launaea procumbens</i> (Roxb.) Ramayya & Rajgopal	Bhoypatri	Asteraceae
41	<i>Lindenbergia phillippensis</i> (Cham. & Schltdl.) Benth.	Bhitchati	Orobanchaceae
42	<i>Lycium barbarum</i> L.	Taleti	Solanaceae
43	<i>Mamordica charantia</i> L.	Kareli	Cucurbitaceae
44	<i>Nerium oleander</i> L.	Kanher, Lal Karen	Apocynaceae
45	<i>Ocimum basilicum</i> L.	Damro	Lamiaceae
46	<i>Ocimum gratissimum</i> L.	Aavchi bavchi, Ram tulsi	Lamiaceae
47	<i>Parthenium hysterophorus</i> L.	Congress grass	Asteraceae
48	<i>Pergularia daemia</i> (Forsk.) Chiov.	Chamar dhudheli	Asclepiadaceae
49	<i>Peristrophe bicalyculata</i> (Retz.) Nees.	Kali andhedi	Acanthaceae
50	<i>Phoenix sylvestris</i> (L.) Roxb.	Khajuri	Arecaceae
51	<i>Phyllanthus reticulatus</i> Poir.	Kamboi	Euphorbiaceae
52	<i>Polylthia longifolia</i> (Sonn.) Thw.	Asopalav	Annonaceae
53	<i>Prosopis cineraria</i> L. Druce	Khijdo	Mimosaceae
54	<i>Prosopis juliflora</i> (Sw.) DC.	Gando baval	Mimosaceae
55	<i>Pupalia lappacea</i> (L.) Juss.	Dholo zipto	Amaranthaceae
56	<i>Senna surattensis</i> (Burm. F.) H.S. Irwin & Barneby	Senna	Caesalpiniaceae
57	<i>Sida acuta</i> Burm. F.	Bala	Malvaceae
58	<i>Solanum melongena</i> L.	Ringana	Solanaceae
59	<i>Solanum nigrum</i> L.	Piludi	Solanaceae
60	<i>Solanum surettense</i> Burm f.	Bhoy ringani	Solanaceae
61	<i>Spathodea campanulata</i> P. Beauv.	-	Bignoniaceae
62	<i>Sphagneticola trilobata</i> (L.) Pruski	-	Asteraceae
63	<i>Tecoma stans</i> (L.) H. B. & K.	Vasant, Pili limdi	Bignoniaceae
64	<i>Tecomella undulata</i> (Sm.) Seem.	Ragat rohido	Bignoniaceae
65	<i>Tephrosia purpurea</i> (L.) Pers. Syn. Pl.	Sarpankho	Fabaceae
66	<i>Thevetia peruviana</i> (Pers.) Merrill.	Pili karen	Apocynaceae
67	<i>Thymus mongolicus</i> (Ronniger) Ronniger, Acta Horti Gothob.	-	Lamiaceae
68	<i>Tribulus terrestris</i> L.	Gokharu	Zygophyllaceae

No.	Scientific name	Local name	Family
69	<i>Trichodesma indicum</i> (L.) Lehm.	Undha Phuli	Boraginaceae
70	<i>Tridax procumbens</i> L.	Pardeshi bhangro	Asteraceae
71	<i>Triumfetta rhomboidea</i> Jacq.	Zepti	Malvaceae
72	<i>Tylophora indica</i> (Burm. f.) Merrill	Damvel	Asclepiadaceae
73	<i>Urena lobata</i> L.	Vagadau bhindo	Malvaceae
74	<i>Vernonia cinerea</i> (L.) Less.	Sahdevi	Asteraceae
75	<i>Xanthium strumarium</i> L.	Gadariyu	Asteraceae
76	<i>Ziziphus mauritiana</i> Lam.	Bor	Rhamnaceae



Photo 1: Siddhraj Jaisinh (1093-1143 AD)



Photo 2: Sahastralinga Tank Platform



Photo 3: Sahastralinga Tank

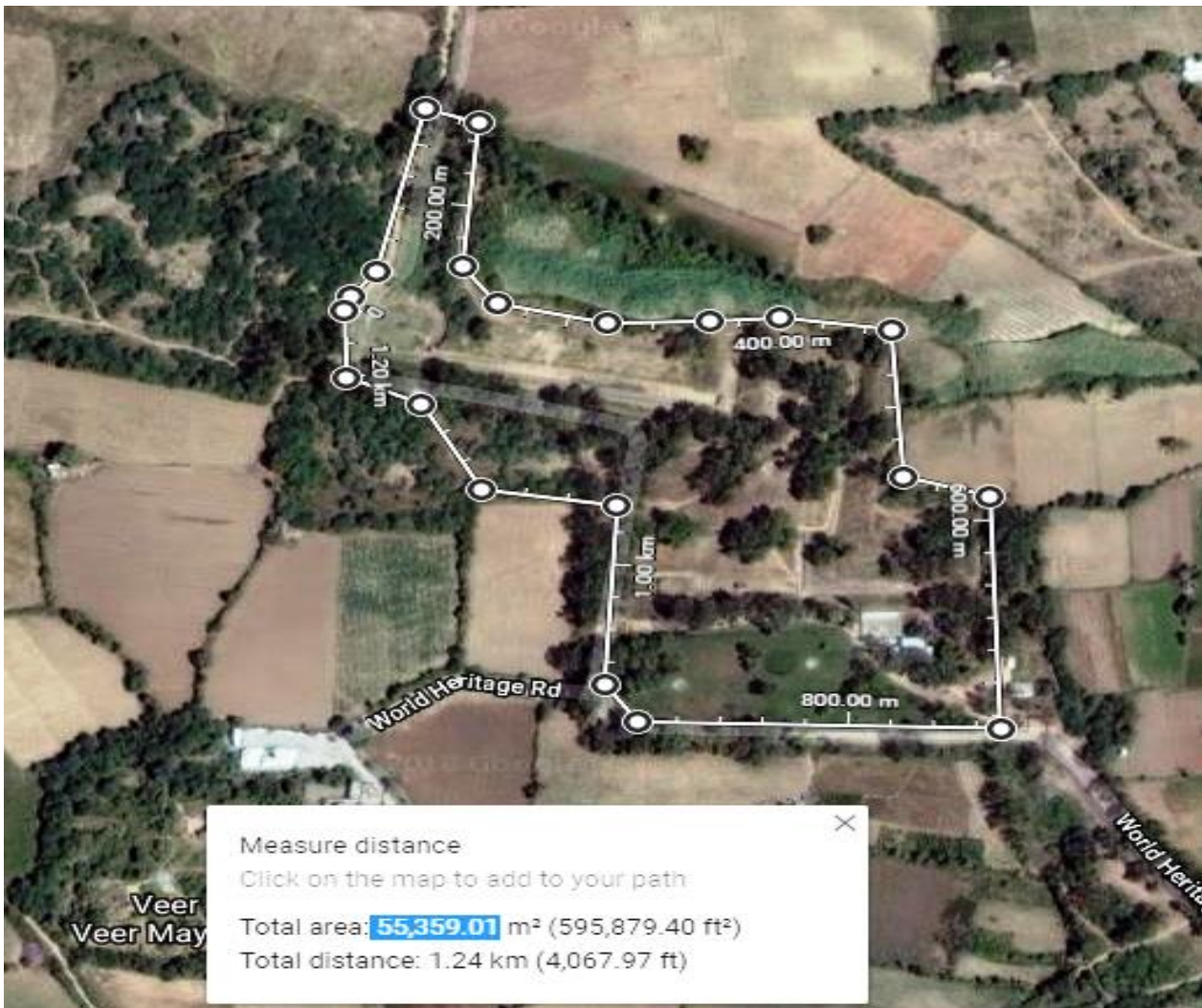


Fig.1: Study area

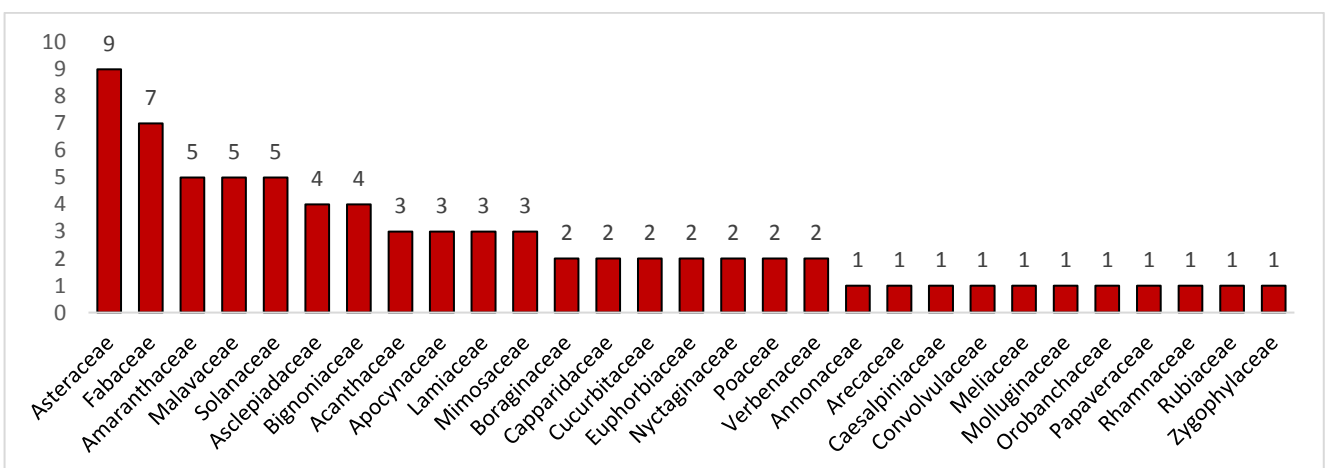


Fig.2: Showing Family wise maximum number of species

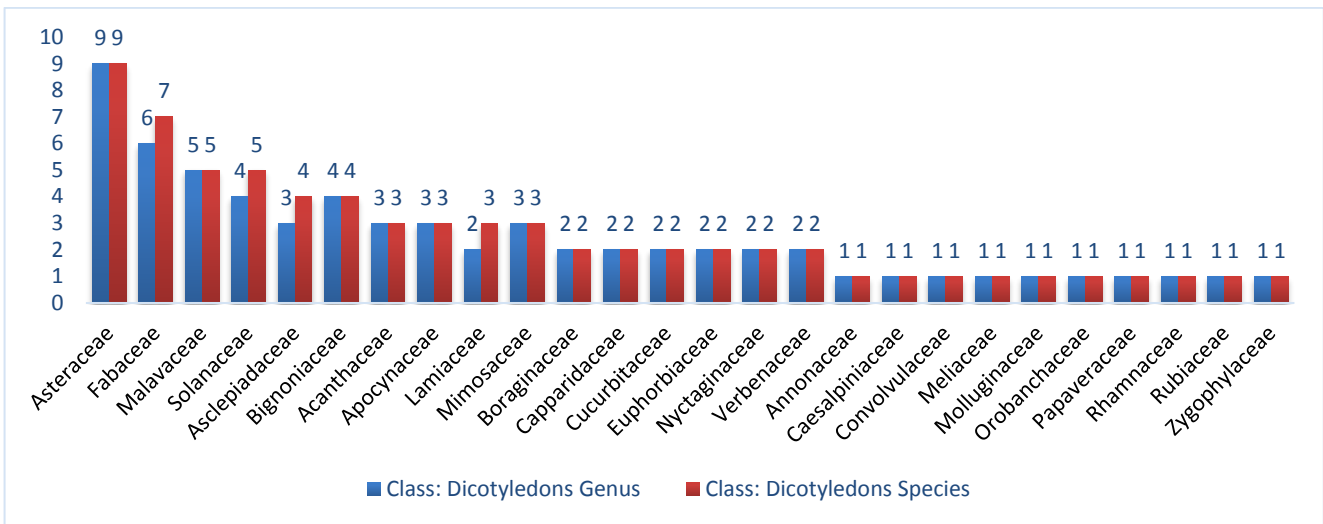


Fig.3: Comparison of Genus & Species of class Dicotyledons

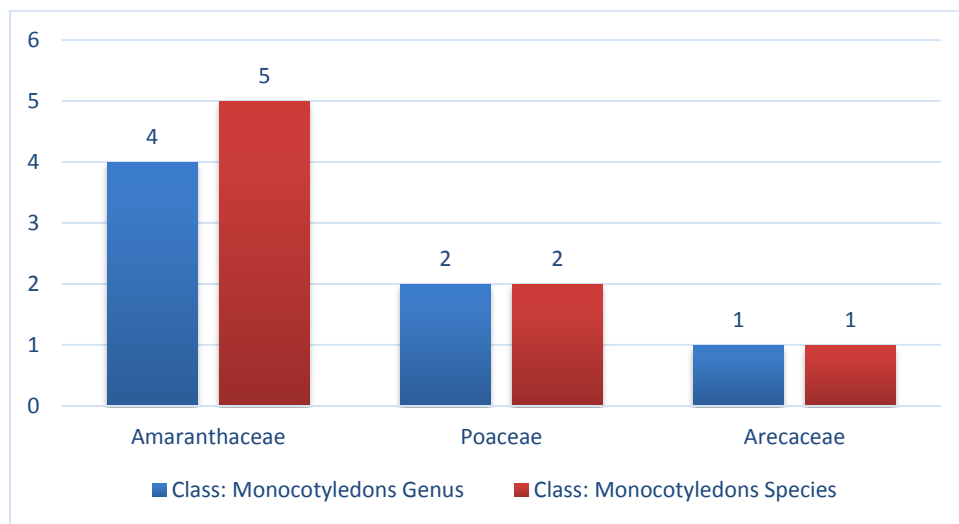


Fig.4: Comparison of Genus & Species of class Monocotyledons

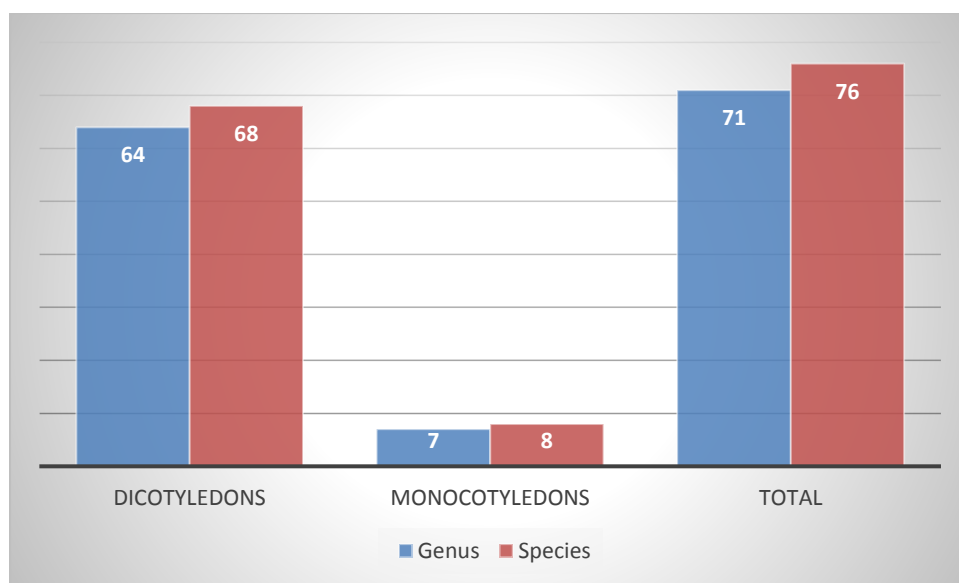


Fig.5: Class wise comparison of Genus & Species