



FLORISTIC STUDIES OF TAL CHHAPAR WILDLIFE SANCTUARY OF RAJASTHAN, INDIA

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The Tal Chhapar wild life sanctuary lies in Sujangarh Tehsil of Churu district in the north-eastern part of Rajasthan. This area is protecting a good number of plants and animal species especially Black bucks. The present observation enumerates the floristic diversity of this area. A total of 139 plant species including 19 trees, 21 shrubs, 40 herbs, 24 grasses, 05 sedges, 10 halophytes, 11 cultivated crops, 03 aquatic plants and 06 parasitic plants belonging to 41 families were recorded. It is evident from the result that Poaceae and Fabaceae are the largest and dominant families amongst the monocotyledons and the dicotyledons respectively. The Poaceae is the largest family out of 41 families, is represented by 19 genera and 25 plant species While, Fabaceae by 12 genera and 18 plant species. Poaceae is the most dominant family of the area and followed by Fabaceae, Asteraceae and Cyperaceae.

Key words: Churu, Floristic studies, Rajasthan, Tal chhapar wildlife sanctuary

Introduction

Rajasthan, the largest state in the country in terms of geographical area, is treasured with a wide range of physiographic and climatic conditions. It has unique rich diversity of plants with different habitats. Floristic diversity of Rajasthan has been reviewed and documented earlier by many workers.¹⁻⁵

The Churu district is situated in the north-eastern part of Rajasthan which comes under Rajasthan desert. A lot of work has been done on the exploration of floristic diversity of different places of this region.⁶⁻¹⁵ The present study was designed to record the floristic composition of Tal Chhapar wild life sanctuary area situated in Churu district of Rajasthan.

Tal Chhapar area was a game reservoir for the erstwhile Maharaja of Bikaner state and was declared a

reserved area for the protection of wild animals and birds in the year 1962. The Tal Chhapar wild life sanctuary lies in Sujangarh Tehsil of Churu district in the north-eastern part of Rajasthan. The sanctuary lies on Nokha- Sujangarh highway. It is the only sanctuary in India which houses a good population of Black bucks and covers an area of 719 hectares. The Tal Chhapar has both extremes of climate as it is too hot during summer, cold and dry in winter. High wind velocity, low relative humidity and too scanty rainfall are the climate characteristics of this area. The study area shows great floristic diversity which includes different types of terrestrial as well as aquatic plants. Terrestrial plants include xerophytes and halophytes.

Material and Methods

The voucher plant specimens have been collected and maintained in the

herbarium, P.G. Department of Botany, Dungar College, Bikaner.

The various plants present in the study area have been enumerated in the tables. The botanical name of the plant, its family and local name are given in the Table 1 to 9.

Result and Discussion

It is evident from the tables that Poaceae and Fabaceae are the largest and dominant families amongst the monocotyledons and the dicotyledons respectively. Poaceae is the largest family out of 41 families, is represented by 19 genera and 25 plant species While, Fabaceae by 12

genera and 18 plant species in the study area. Following plant species have been recorded from the study area:

S.No.	Type of Habit	Plant Species
1	Tree	19
2	Shrub	21
3	Herb	40
4	Grass	24
5	Sedge	05
6	Halophyte	10
7	Cultivated Crop	11
8	Aquatic Plant	03
9	Parasitic Plant	06
	Total Species	139

Table 1: Tree Species of Study Area

S. No.	Botanical name	Family	Local name
1	<i>Acacia jacquemontii</i> Benth.	Fabaceae	Banvali
2	<i>Acacia nilotica</i> (Linn.) Del	Fabaceae	Desi babul
3	<i>Acacia senegal</i> (Linn.) Willd.	Fabaceae	Kumbat
4	<i>Acacia tortilis</i> (Forsk.) Hayne.	Fabaceae	Israeli babul
5	<i>Albizia lebeck</i> (Linn.) Willd.	Fabaceae	Sares, Siris
6	<i>Ailanthus excelsa</i> Roxb.	Simaroubaceae	Ardu
7	<i>Azadirachta indica</i> A. Juss.	Meliaceae	Neem
8	<i>Balanites aegyptiaca</i> (Linn.) Del.	Balanitaceae	Hingota, Gangeron
9	<i>Dalbergia sissoo</i> Roxb.	Fabaceae	Sisham, Talli
10	<i>Ficus bengalensis</i> Linn.	Moraceae	Bar, Bargad
11	<i>Ficus religiosa</i> Linn.	Moraceae	Pipal
12	<i>Maytenus emarginata</i> (Willd.) Ding Hou	Celastraceae	Kankero
13	<i>Parkinsonia aculeata</i> Linn.	Fabaceae	Vilayati kikar
14	<i>Prosopis cineraria</i> (Linn.) Druce	Fabaceae	Khejri (State tree), Jaanti
15	<i>Prosopis juliflora</i> Swartz.	Fabaceae	Kikar
16	<i>Salvadora oleoides</i> Decne.	Salvadoraceae	Kharra-Jal
17	<i>Salvadora persica</i> Linn.	Salvadoraceae	Mitha jal/Pilu
18	<i>Tecomella undulata</i> Seem.	Bignoniaceae	Rohira
19	<i>Ziziphus mauritiana</i> Lamk.	Rhamnaceae	Ber

Table 2: Shrub Species of Study Area

S. No.	Botanical name	Family	Local name
1	<i>Abutilon indicum</i> (Linn.) Sweet.	Malvaceae	Kanghi, Atibala
2	<i>Achyranthes aspera</i> Linn.	Amaranthaceae	Lattziran, Putkanda,
3	<i>Aerva persica</i> (Burm.f.) Merrill.	Amaranthaceae	Bui
4	<i>Aerva pseudotomentosa</i> Blatt	Amaranthaceae	Bui
5	<i>Anticharis senegalensis</i> (Walp.)	Scrophulariaceae	Dharno-ghas
6	<i>Argemone mexicana</i> Linn.	Papaveraceae	Satyanasi
7	<i>Bergia odorata</i> Edgew.	Elatinaceae	Kankario
8	<i>Calligonum polygonoides</i> Linn.	Polygonaceae	Phog
9	<i>Calotropis procera</i> (Ait.) R.Br.	Asclepiadaceae	Akra
10	<i>Capparis decidua</i> (Forsk.) Edgew.	Capparaceae	Kair
11	<i>Cassia tora</i> Baker.	Fabaceae	Chakundra, Meral, Punwad
12	<i>Clerodendrum phlomides</i> Linn. f.	Verbenaceae	Arni
13	<i>Datura innoxia</i> Mill.	Solanaceae	Dhatura
14	<i>Datura stramonium</i> Linn.	Solanaceae	Dhatura
15	<i>Euphorbia caducifolia</i> Haines	Euphorbiaceae	Danda-thor
16	<i>Leptadenia pyrotechnica</i> (Forsk.) Decne	Asclepiadaceae	Khimp
17	<i>Lycium barbarum</i> Linn.	Solanaceae	Murali
18	<i>Nerium indicum</i> Mill.	Apocynaceae	Kaner
19	<i>Tephrosia purpurea</i> (Linn.) Pers.	Fabaceae	Sharpunkha
20	<i>Withania somnifera</i> (Linn.) Dunal	Solanaceae	Asgandh
21	<i>Ziziphus nummularia</i> (Burm. F.) Wt. & Arn.	Rhamnaceae	Bordi, Jhar bor

Table 3: Herb Species of Study Area

S. No.	Botanical name	Family	Local name
1	<i>Amaranthus gracilis</i> Desf.	Amaranthaceae	Chaulai
2	<i>Amaranthus spinosus</i> Linn.	Amaranthaceae	Chandelo
3	<i>Amaranthus viridis</i> Linn.	Amaranthaceae	Jangli Chaulai
4	<i>Arnebia hispidissima</i> (Lehm.)DC.	Boraginaceae	Rambui, Rambus
5	<i>Boerhavia diffusa</i> Linn.	Nyctaginaceae	Punarnava, Santa
6	<i>Chenopodium album</i> Linn.	Chenopodiaceae	Chilaro, Bathua
7	<i>Citrullus colocynthis</i> (Linn.) Schrud.	Cucurbitaceae	Tumba
8	<i>Convolvulus arvensis</i> Linn.	Convolvulaceae	Hiranpagi
9	<i>Corchorus depressus</i> (Linn.) Christensen.	Tiliaceae	Cham-ghash, Munderi
10	<i>Corchorus tridens</i> Linn.	Tiliaceae	Kagaroti
11	<i>Crotalaria burhia</i> Buch.-Ham.	Fabaceae	Sinia

S. No.	Botanical name	Family	Local name
12	<i>Digera muricata</i> (Linn.) Mart.	Amaranthaceae	Ghunaro, Khanjru, Kundra
13	<i>Echinops echinatus</i> Roxb.	Asteraceae	Unt Kantalo
14	<i>Eclipta alba</i> (Linn.) Hassk.	Asteraceae	Jal Bhangro, Bhrangraj
15	<i>Euphorbia hirta</i> Linn.	Euphorbiaceae	Dudheli
16	<i>Euphorbia microphylla</i> Heyne.	Euphorbiaceae	Choti Dudheli
17	<i>Fagonia indica</i> Burm. F.	Zygophyllaceae	Dhamaso
18	<i>Farsetia hamiltonii</i> Royle.	Brassicaceae	Hiran chabbo
19	<i>Gisekia pharnaceoides</i> Linn.	Molluginaceae	Balukar-sag, Morang
20	<i>Heliotropium ellipticum</i> Ledebour.	Boraginaceae	Pilibui
21	<i>Heliotropium curassavicum</i> Linn.	Boraginaceae	Kalibui
22	<i>Heliotropium ovalifolium</i> Forsk.	Boraginaceae	Kunden
23	<i>Indigofera cordifolia</i> Heyne. & Roth	Fabaceae	Bekario
24	<i>Ipomoea purpurea</i> Linn.	Convolvulaceae	Railway creeper
25	<i>Mollugo cerviana</i> (Linn.) Seringe.	Molluginaceae	Chirimorio
26	<i>Momordica balsamiana</i> Linn.	Cucurbitaceae	Jungli Karela
27	<i>Pedaliium murex</i> Linn. Syst. ed	Pedaliaceae	Bada Gokhru
28	<i>Phyllanthus niruri</i> Linn.	Euphorbiaceae	Bhuamlki, Bhuiamla
29	<i>Polycarpha corymbosa</i> (Linn.) Lamk.	Caryophyllaceae	Zutniokhad
30	<i>Pulicaria crispa</i> (Cass.) Benth. & Hook.	Asteraceae	Dholalizru (Macadam)
31	<i>Solanum nigrum</i> Linn.	Solanaceae	Chirpoti, Makoi
32	<i>Solanum surattense</i> Burm. F.	Solanaceae	Ringani, Kantkari
33	<i>Solanum virginianum</i> Linn.	Solanaceae	Ringni, Bhuringni
34	<i>Sonchus asper</i> (Linn.) Hill.	Asteraceae	Kali-jibi
35	<i>Trianthema portulacastrum</i> Linn.	Aizoaceae	Safed santo
36	<i>Tribulus pentandrus</i> Forsk.	Zygophyllaceae	Bhankhari
37	<i>Tribulus terrestris</i> Linn.	Zygophyllaceae	Kanti / Chota Gokhru
38	<i>Tridax procumbens</i> Linn.	Asteraceae	Pilo-bayoni
39	<i>Vernonia cinerea</i> Linn.	Asteraceae	Sahadevi
40	<i>Xanthium strumarium</i> Linn.	Asteraceae	Chhota gokhru, Raktapuspi

Table 4: Grasses of Study Area

S. No.	Botanical name	Family	Local name
1	<i>Aristida adscensionis</i> (Linn.)	Poaceae	Lamp, Lampro
2	<i>Aristida funiculata</i> Trin and Rupr.	Poaceae	Lamp

S. No.	Botanical name	Family	Local name
3	<i>Brachiaria ramosa</i> (Linn.) Stapf.	Poaceae	Muret
4	<i>Cenchrus biflorus</i> Roxb.	Poaceae	Bhurat
5	<i>Cenchrus ciliaris</i> Linn.	Poaceae	Dhaman
6	<i>Cenchrus prieuri</i> (Kunth)	Poaceae	Lambio-bhurat
7	<i>Cenchrus setigerus</i> Vahl.	Poaceae	Dhaman
8	<i>Chloris virgata</i> Sw.	Poaceae	Choto- Aranio
9	<i>Cynodon dactylon</i> (Linn.) Pers.	Poaceae	Doob-Ghas
10	<i>Dactyloctenium aegyptium</i> (Linn.) P. Beauv.	Poaceae	Makaro
11	<i>Desmostachya bipinnata</i> (Linn.) Stapf.	Poaceae	Dab, Dabro
12	<i>Dichanthium annulatum</i> (Forsk.)	Poaceae	Karad
13	<i>Digitaria pinnata</i> (Hockst.) T. Cooke.	Poaceae	
14	<i>Eleusine compressa</i> (Forsk.) Aschers. et. Schweinf.	Poaceae	
15	<i>Eragrostis tremula</i> Hochst.	Poaceae	Chirio Ghas
16	<i>Eragrostis ciliaris</i> (Linn.) R.Br.	Poaceae	Under Puncho, Lutia Lamp
17	<i>Heteropogon contortus</i> (Linn.) P. Beauv. Ex Roem. & Schult	Poaceae	Lapeda, Lapia
18	<i>Lasiurus indicus</i> Senr.	Poaceae	Sewan ghas
19	<i>Imperata cylindrical</i> (Linn.) Rauschel	Poaceae	Dab, Rasni-Dab, Kans
20	<i>Panicum antidotale</i> Retz.	Poaceae	Garmano, Mal
21	<i>Panicum turgidum</i> Forsk.	Poaceae	Munt, Garmo, Muratio-gas
22	<i>Saccharum spontaneum</i> Linn.	Poaceae	Dharbighas
23	<i>Sorghum halepense</i> (Linn.) Pers.	Poaceae	Baru
24	<i>Sporobolous coromandelianous</i> Kunth. Rev. Gram.	Poaceae	

Table 5: Sedges of Study Area

S. No.	Botanical name	Family	Local name
1	<i>Cyperus arenarius</i> Retz.	Cyperaceae	Jucchabari, Dachab
2	<i>Cyperus iria</i>	Cyperaceae	Moth
3	<i>Cyperus niveus</i> Retz.	Cyperaceae	Motha
4	<i>Cyperus rotundus</i> Linn.	Cyperaceae	Motha
5	<i>Cyperus triceps</i> Rottb.	Cyperaceae	Nagarmotha

Table 6: Halophytes of Study Area

S. No.	Botanical name	Family	Local name
1	<i>Chenopodium album</i> Linn.	Chenopodiaceae	Bathua
2	<i>Chenopodium murale</i> Linn.	Chenopodiaceae	Goyalo

3	<i>Haloxylon recurvum</i> (Moq.) Bunge ex Bioss.	Chenopodiaceae	Khar
4	<i>Haloxylon salicornicum</i> (Moq.) Bunge ex Bioss.	Chenopodiaceae	Lana
5	<i>Heliotropium curassavicum</i> Linn.	Boraginaceae	Kalibui
6	<i>Portulaca oleracea</i> Linn.	Portulacaceae	Lunkha
7	<i>Salsola baryosma</i> (Roem and Schult.) Dandy.	Chenopodiaceae	Lani
8	<i>Suaeda fruticosa</i> (Linn.) Forsk.	Chenopodiaceae	Lunaki
9	<i>Trianthema portulacastrum</i> Linn.	Aizoaceae	Dhedosanto, Bawra
10	<i>Zygophyllum simplex</i> Linn.	Zygophyllaceae	Luni, Lunwo

Table 7: Cultivated Crops of Study Area

S. No.	Botanical name	Family	Local name
1	<i>Cicer arietinum</i> Linn.	Fabaceae	Chana
2	<i>Citrullus lanatus</i> (Thunb.) Matsumara	Cucurbitaceae	Matira
3	<i>Citrullus fistulosus</i> Stocks.	Cucurbitaceae	Tindasi
4	<i>Cucumis callosus</i> Rottd.	Cucurbitaceae	Kachro
5	<i>Cucumis melo</i> Linn. Var. utilissimum Duthie & Fuller	Cucurbitaceae	Kakri
6	<i>Cyamopsis tetragonoloba</i> Linn.	Fabaceae	Gawar
7	<i>Pennisetum typhoides</i> Rich.	Poaceae	Bajara
8	<i>Sesamum indicum</i> Linn.	Pedaliaceae	Til
9	<i>Vigna aconitifolius</i> Jacq.	Fabaceae	Moth
10	<i>Vigna radiata</i> (Linn.) Wilczek	Fabaceae	Mung
11	<i>Vigna unguiculata</i> (Linn.) Walp.	Fabaceae	Chawla

Table 8: Aquatic Plants of Study Area

S. No.	Botanical name	Family	Local name
1	<i>Hydrilla verticillata</i> (Linn.) Royle	Hydrocharitaceae	Jalpadap
2	<i>Nymphaea nouchali</i> Burm.	Nymphaeaceae	Kumudni, Red waterlily
3	<i>Saccharum spontaneum</i> Linn.	Poaceae	Dharbi-Ghas

Table 9: Parasitic Plants of Study Area

S. No.	Botanical name	Family	Local name
1	<i>Cistanche tubulosa</i> Wight.	Orobanchaceae	Beaphor, Lonki-Ka-Mula
2	<i>Cuscuta hyalina</i> Roth.	Cuscutaceae	Amarbel
3	<i>Cuscuta reflexa</i> Roxb.	Cuscutaceae	Amarbel
4	<i>Striga angustifolia</i> (Don.) Salf.	Scrophulariaceae	Missa
5	<i>Striga gesnerioides</i> (Willd.)	Scrophulariaceae	Missi, Lalagia
6	<i>Orobanche cernua</i> Loefl.	Orobanchaceae	Lonki-mulo

Conclusion

As floristic diversity is the good resource for food, fodder, tannin, gum, resin, medicine etc., it needs to be conserved for human welfare and of course for the coming generations. It is hoped that the present study will contribute to the better understanding of the floristic composition of the Tal Chhappar Wildlife Sanctuary area situated in Churu district of Rajasthan.

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