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Medicinal Plants of Bangur P.G. College Campus and Nearby Area in Pali Rajasthan (India)

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Abstract: A study was undertaken to explore the medicinal flora of the Government Bangur P.G. College, Pali and nearby area. The native medicinal plants, and the medicinal plants of perennial duration dominated over medicinal plants of annual and biennial duration on the campus and nearby area. A total of 52 plant species belonging to 38 families were identified and recorded during the study. Study based on random surveys.

KEYWORDS: *Plant, Medicinal, Leaf, Fruit, Root, Bark.*

Rajasthan has rich biodiversity consisting of a large number of plants, some of which are used for their medicinal value. Although flora of Rajasthan has been complied by Bhandari (1978, 1990) and Sharma (2002) but detailed information about their medicinal properties are lacking. Rapid deforestation and exploitative trade of medicinal plants has significantly reduced the availability of the medicinal plants of Rajasthan (Srivastava, 1977; Sinha, 1999). Knowledge about the medicinal properties of these plants is confined only to local people. Generally the local people are well acquainted with the medicinal properties of their surrounding vegetation particularly for their well-being (Jain, 1991; Mishra and Kumar, 2001; Ashwani Kumar 2009; Mishra & Shukla Afri; Sharma & Kumar 2011; Prateek and Trivedi 2011; Sharma and Chakraborty 2021; Jain et al. 2009; Gupta and Kumar 2002; Choudhary et. al. 2008; Sharma 2002; Goyal et. al. 2011).

The present paper is an attempt to prepare an index of all the medicinal plants of Bangur P.G. College, Pali Campus and nearby area, which will be helpful for chemists and pharmacologists to undertake for their research on these medicinal plants to explore the prospect of their exploitation on a commercial scale. It is also hoped that the information presented herein will also be useful for a layman, government and other agencies engaged in the economic development of the area.

Materials and methods: The information presented here in about the plants and their medicinal value is based on the survey carried out by the author, experiences of the local inhabitants, practitioners and scattered literature. The plants are indexed in a uniform, systematically followed by their local names, family, part used and their medicinal value in consecutive columns. For achieving the goals of present study surveys were carried out form January 22 to December 22 for proper and reliable documentation photographs of observed plants were taken out. The species identification was based on various field guides.

Study area- Pali is a district of Rajasthan State (India) situated at 25.7781º N and 73.3311º E, the district covers an area of about 12,387 Kilometers. Pali district is surrounded by Nagur district, Rajsamand district, Jodhpur district, Sirohi district, Udaipur district and Ajmer district (fig-1). In Pali district the type of soil mainly found is sierozems (Sandy loam or clay) with an annual rainfall of 50-70 cm. (higher than desert).

Abbreviations used:

WP	:	Whole plant
R	:	Root
B	:	Bark
L	:	Leaf
Fl	:	Flower
Fr	:	Fruit
Sd	:	Seeds
RB	:	Root Bark
LO	:	Leaf Oil
SO	:	Seed Oil
Tu	:	Tuber
Rh	:	Rhizome
Gm	:	Gum
Pd	:	Pods
Th	:	Thorns
St	:	Stem

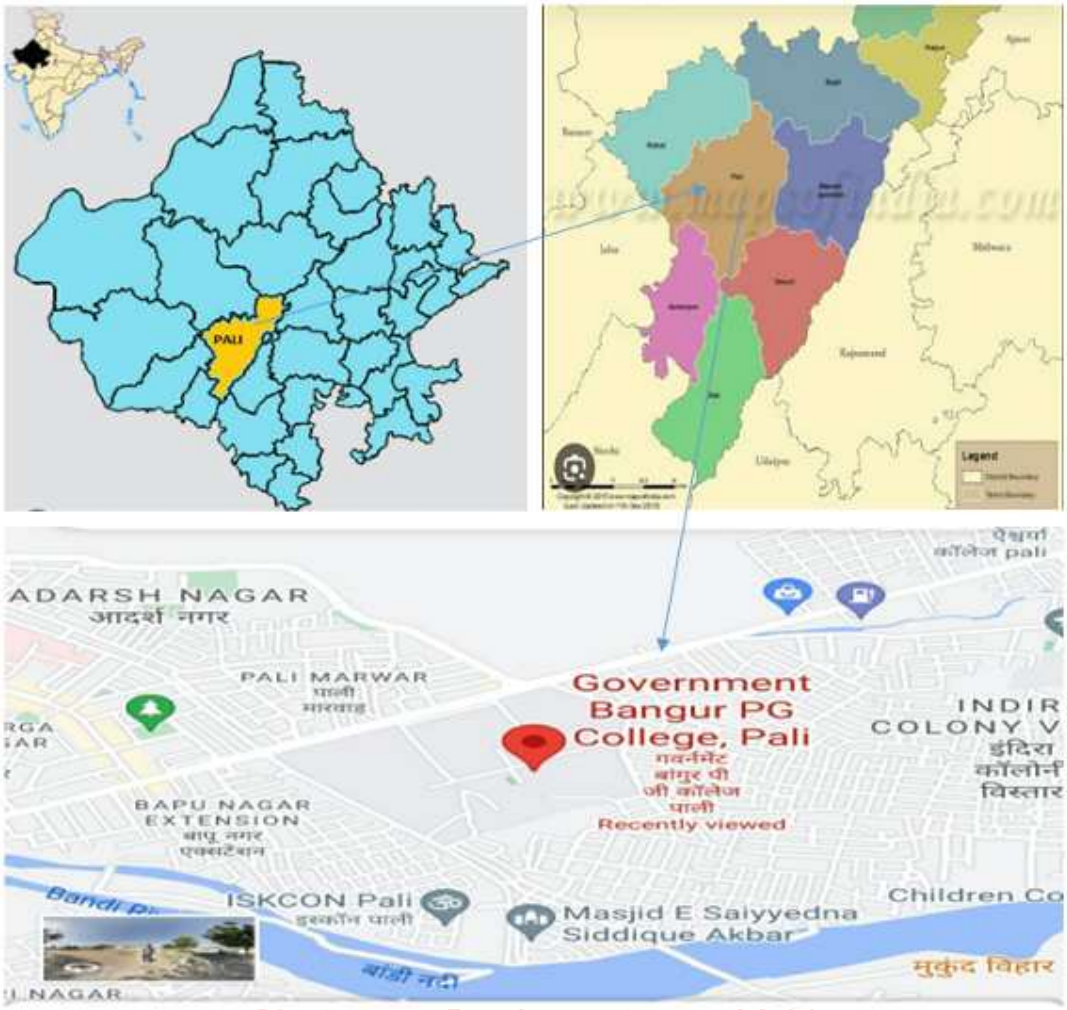

Fig-1: Figure Showing study area in the map.

Table: Index of medicinal plants of Bangur P.G. College, Pali Rajasthan, India and nearby area.

S. No.	Botanical Name/Local Name	Family	Parts Used	Traditional uses as medicine
1.	*Acacia nilotica* Linn (Babool)	Mimosaceae	B	Astringent, Demulcent
			Gm	Asthma, Diarrhoea, Dysentery, Diabetes
			Th	Joint Pain, Heavy sweating
			Pd	Sexual impotency, Urino-genital disorders
2.	*Aloe vera* Linn Gheeganwar)	Liliaceae	WP	Rheumatism, Anthelmintic, Aphrodisiac Purgative, Alexiteric, Opthalmia
3.	*Amaranthus virdis* Linn (Janglichauli)	Amaranthaceae	L	Laxative
4.	*Argemone maxicana* Linn (Satyanasi)	Nelumbonaceae	WP	Diuretic, Purgative, Aphrodisiac, strangury, leukoderma
5.	*Azadirachta indica* A. Juss (Neem)	Meliaceae	B	Anthelmintic, Maturant, Diuretic, Blood skin disease, Leprosy
			L	Anthelmintic, Ulcers, Insecticidal, Opthalmia, Biliousness
			Fl	Anthelmintic
6.	*Barleria cristata* wight (Raktajhinti)	Acanthaceae	WP	Inflammation, fever, Bronchitis, Biliousness, Tympanitis
7.	*Brassica campestir* Linn (Sarson)	Brassicaceae	WP	Cholagogue, Vermifuge Leucoderma, Piles, Ulcer, Epilepsy, Toothache
			SP	Rheumatism
8.	*Capparis deciduas* Edgew, (Ker)	Capparaceae	WP	Carminative, Aphrodisiac, Appetisor, Emmenagogue, Alexipharmic, Lumbago, Rheumatism Hiccup.
			B	Analgesic, Diaphoretic, Alexiteric, Laxative, Anthelmintic, Ulcer, cough, Asthma, Piles
			Fr	Biliousness, Cardic troubles

9.	*Catharanthus roseus* G. Don (Sadabhar)	Apocynaceae	R	Hypotensive, Sedative
			L	Tranquilizer, Anti-diabetic, Anti-cancer
10.	*Cynodon dactylon* Pers (Dub)	Poaceae	WP	Astringent, Diuretic, Dropsy
11.	*Datura stramonium* Linn (Dhatura)	Solanacea	L	Antispasmodic, Narcotic
			Sd	Asthma, Anodyne
			Fr	Sedative, Intoxicant, Carbuncles
12.	*Euphorbia caduaifolia* Linn (Thor)	Euphorbiacea	WP	Carminative, Laxative, Appetizer, Alexipharmic, Bronchitis, Tumours, Delirium, Leucoderma, Piles, Spleen enlargement, Anaemia, Ulcer, fever
13.	*Ficus benghalensis* Linn (Bargad)	Moracea	WP	Biliousness, Ulcer, Erysipelas
			R	Veginal complaints Fevers
			B	Gonorrhoea, Syphilis, Liver troubles
			L	Diabetes
			Sd	Ulcer, Leprosy, Piles, Cooling Tonic
14.	*Ficus religiosa* Linn (Peepal)	Moracea	WP	Leucorrhoea, Biliousness, Ulcers
			R	Disease of vagina and uterus
			RB	Gout
			Fr	Stomatitis, Ulcer, Leucorrhoea Alexipharmic, Biliousness
			Sd	Disease of blood and heart. Urinary discharge
15.	*Moringa oleifera* Lam (Sanjna)	Moringacea	RB	Aphrodisiac, Alexiteric, Analgesic
			L	Anthelmintic, Ulcers, Heart troubles
			Fl	Ophthalmia, Hallucination
			Fr	Muscular & spleen disease.
16.	*Ocimum basilicum* Linn (Tulsi)	Labiatae	WP	Anthelmintic, Alexipharmic, Antipyretic Disease of heart & blood
			R	Diuretic, Biliousness, Leucoderma
			Fl	Bowel complaints
			Sd	Stimulant, Diuretic, Gonorrhoea, Diarrhoea, Dysentery
17.	*Prosopis cineraria* macbr (Khejri)	Mimosaceae	B	Rheumatism
			Pd	Astringent
18.	*Revea ornate* choisy (Aparajita)	Convolvulaceae	WP	Biliousness, Bronchitis, Heart disease
19.	*Ricinus communis* Linn (Arand)	Euphorbiaceae	R	Carminative, Asthma, Bronchitis, Leprosy, Rectal disease, Fever
			B	Purgative, Skin disease
			L	Galactagogue
			Sd	Cathartic, Aphrodisiac
			SO	Aphrodisiac, Anthelmintic Tumours
`20.	*Rumex nepalensis* spreng (Palank)	Polygonaceae	L	Colic, Syphilitic Ulcers, Billiharziasis
21.	*Sesamum indicum* Linn (Til)	Pedaliaceae	R	Aphrodisiac, Spleen troubles, Piles, Bleeding, Menorrhoea
			Sd	Diuretic, Diaphoretic, Cooling, Hair growth
			SO	Diarrhoea, Ulcers, Dry cough, Asthma, Lungs disease, Small pox, Syphilis, Ulcers
22.	*Zizyphus Mauritiana* Lamk (Bor)	Rhamnaceae	R	Ulcer, Wounds, Fever
			B	Diarrhoea
			Fr	Digestive, Blood Purifier
23.	*Zizyphus mauritiana* Burm.f.(Jari-bor)	Rhamnaceae	L	Cough, Cold, skin diseases
			Fr	Astringent, Cooling, Biliousness, Sores, Ulcerated gums
24.	*Cassia fistula* Linn (Amaltas)	Caesalpiniaceae	R	Syphilis, Leprosy, Skin diseases
			L	Laxative, Antiperiodic
			Fl	Rheumatism
			Fr	Antipyretic, Leprosy, Purgative, Leprosy
			Sd	Heart diseases, Carminative, Appetizer
25.	*Tinospora cordifolia* willd (Amrita gulbel/giloy)	Menispermiaceae	R	Emetic, Visceral obstruction
			Fr	Rheumatism, Jaundice
26.	*Murraya koenigii* (Curry tree/Metha neem)	Rutaceae	L	Anti-inflammatory, Heart and liver diseases, Hair, Anaemia, Diabetes
27.	*Vacheillia nibtica* (Babool)	Fabaceae	L	Anti-inflammatory
			B	Antibacterial

28.	*Cordia myxa* (Gondi/Lassura)	Boraginaceae	F	Asthma, Cough, Fever, Skin allergies.
29.	*Calotropis procera* R.Br. (Madar/Ankra)	Asclepiadaceae	R	Toothache
			L	Stomachic
			Fl	Appetiser, Piles, Asthma, Tonic
30.	*Delonix regia* (Gulmohar)	Fabaceae	L	Antidiabetic, Hepatoprotection Anti-diarrheal, Antifungal, Malaria, Pneumonia, Constipation, Rheumatoid, Arthritis
31.	*Prosopis cineraria* Macbr (Khejri)	Mimosaceae	B	Rheumatism
			Pd	Astringent
32.	*Syzygium cumini* (Jamum)	Myrtaceae	Fr	Increases haemoglobin, Digestive, Respiratory, Cardic, Skin problems, Teeth, Gum, Diabetes management.
33.	*Eucalyptus globulus* (Eucalyptus tree)	Myrtaceae	L	Antibacterial, Antimicrobial, Decongestant, Pain reliever
34.	*Salvadora persica* (Miswak/tooth brush)	Salvadoraceae	L	Tooth aches, Decay Strengthens gums
35.	*Saraca asoca* (Roxb) de wilde (Ashoka)	Caesalpiniaceae	B	Uterine tonic, Menorrhagia, Sedative, Astringent
36.	*Momordica charantia* Linn (Karela)	Cucurbitaceae	Fr	Diabetes
			L	Anti-helmintic, Piles, Jaundice
37.	*Mentha piperita* Linn (Podina)	Labiatae	WP	Carminative, Flavouring agent, Antiseptic, Refrigerant, body heat, Toothache, Intestinal worms.
38.	*Lawsonia inermis* Linn (Mehandi)	Lythraceae	L	Hair dye, Hair conditioner, Headache, Astringent, Gargle, Cooling
39.	*Punica granatum* Linn (Anar)	Punicaceae	WP	Astringent, Anthelmintic, Diarrhoea, Dysentery, Stomachic, Cough, Digestive, Piles, Pimples, Dysentery.
40.	*Citrus aurantifolia* Linn (Nimbu)	Rutaceae	F	Refrigerant, Appetiser, Antiseptic, Stomachic anti-ascorbic
41.	*Tecomella undulata* (G. Don) Seem (Rakt Rohira)	Bignoniaceae	B	Eczema, Abdominal & liver problems
			Sd	Liver Complaints, laxative
			St	Anthelmintic, Abscess, Ulcers, Blood and Eye disease
42.	*Alstonia scholaris* R. Br. (Saptparni)	Apocynaceae	B	Febrifuge, Astringent, Malarial fever, Chronic dysentery, Diarrhoea
43.	*Calotropis gigantean* (L) W. Aiton (Safed Oak)	Asclepiadaceae	L	Rheumatism
			Fl	Digestive problems
44.	*Nerium indicum* Mill (Kaner)	Apocynaceae	R	Ulcer, Leprosy, Piles,
			L	Skin disease
			RB	Skin disease
45.	*Eclipta prostrata* Linn (Bhringraj)	Asteraceae	L	Blood pressure, Cholesterol Hair growth
46.	*Pedalium Murex* Linn (Gokhru)	Pedaliaceae	WP	Gonorrhea, Dysurea, Cough, Cold
47.	*Cyprus rotundus* Linn (Nagarmotha/Nutgrass)	Cyperaceae	L	Fever, Digestive disorders, Dysmenorrhea, Muscle relaxation, Nausea
			Tu	Antibacterial
48.	*Convolculus pluricavlis* Choisy (Shankhpushpi)	Convolvulaceae	WP	Improves memory, Epilepsy, Headache, Vomiting Diabetes, Analgesic
49.	*Pithecellobium dulce* (Roxb) Benth (Manila tamarind/Jalebi tree)	Fabaceae	B	Astringent, Antipyretic,
			L	Prevent miscarriage
			Fr	Astringent, Haemostatic
			Sd	Ulcers, diarrhoea, Tuberculosis
50.	*Phyllanthus niruri* Linn (Bhumi Amla)	Phyllanthaceae	WP	Liver disorders, Ulcers
51.	*Hibiscus rosa sinensis* Linn (China rose)	Malvaceae	Fl	Hair growth, Ulcers, Gut health.
52.	*Cissus quadrangularis* L. (Hadjod)	Vitaceae	WP	Fracture healing, Astringent

Conclusion: Phototherapy is an art practiced by our elderly people, who are familiar with the sign and symptoms of various common disease and ill conditions and cure or allay symptomatically these illness with the locally available plant drugs. From the collected data a list of 52 plants distributed into 38 families with their uses, part used, is prepared in alphabetical order. It was observed during the survey that these healers now represent a disappearing oral tradition which is not passed on to the next generation, obviously because the younger generation usually consider the belief in plant remedies a sort of superstition and less effective as compared to modern medicine. It is essential that this valuable knowledge regarding medicinal uses of plants be recorded before the time tested uses of herbal drugs are lost forever. The rapid degradation of forest has resulted in the depletion of resources. So conservation of these plants should be viewed seriously and urgent need to embark on large scale cultivation of these plants through high socio-economic value and creation of herbal garden in Pali. The government should take sincere action to protect the forest and its wealth and need for developing a code of practices for growing, harvesting, collecting, handling, packaging, storing these medicinal plants because many of them are at the verge of threat due to over-exploitation.

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