Biological Forum – An International Journal **15(1): 526-534(2023)**

ISSN No. (Print): 0975-1130
ISSN No. (Online): 2249-3239

Uses of Ethno-Medicinal and nutritive Plants by Tribals of Dungarpur District, Rajasthan

Jayana Upadhyay[1] and C.S. Kapoor[2*]
[1]Department of Botany, Gurukul College,
Govind Guru Tribal University, Banswara (Rajasthan), India.
[2]Department of Life Sciences,
Pacific Academy of Higher Education and Research University, Udaipur (Rajasthan), India.

(Corresponding author: C.S. Kapoor)*
(Received: 11 December 2022; Revised: 15 January 2023; Accepted: 18 January 2023; Published: 21 January 2023)
(Published by Research Trend)

ABSTRACT: The southern Rajasthan is very rich in ethno-medicinal plants' wealth. The Mewar of Rajasthan are inhabited by many tribes, like Meena, Bhil, Garasia, Damor and out of these Kathodia is major tribe. In their daily lives, these tribes employ the plants for a variety of uses. The majority of rural people still rely on traditional medicine as their main source of healthcare, while the tribal people still rely on the forests for their means of subsistence. The study emphasises the region's abundant plant resources and the enormous amount of ethnobotanical knowledge held by the numerous tribes there. The use of these natural herbs is said to be the cause of the tribal communities' innate health, vigour, and longevity. However, due to environmental changes and lack conservation, many of plants have entered in the category of rare, threatened and endangered. The goal of this investigation is to give a complete account of the plant resources and the portions employed, as well as the form of administration, that the tribal groups in Rajasthan have claimed to be successful for treating a range of ailments by combining floristic and sociological methodologies. Functional foods control various diseases either by controlling their source or origin or by controlling their pathway. Additionally, they strike a balance between beneficial nutrients and bodily toxins. Diabetes mellitus is one of the diseases caused by a sedentary lifestyle that wrecks lives.

Keywords: Ethno-Medicinal plants, Aravalli hills, Tribals, *Calotropis procera.*

INTRODUCTION

India offers a rich variety of herbal resources because of its diverse ecological and climatic conditions. The tradition of using herbs for healing is possibly the oldest in Indian culture and folklore. The majority of the rural and urban populations still rely on their regional conventional medical systems today particularly, the tribes of remotest areas of India mostly depend on locally available herbs for their health-care. Herbal drugs normally designated as plant materials or herbalism, utilizes the whole plant or parts of plants, to treat injuries or cure illness. Indigenous treatments are favoured by both urban and rural populations in China, India, and many other parts of the world because they are reliable, affordable, and safe.

The state of Rajasthan has a potential source of ethno-medicinal plants. This region exhibits great diversity in ethno-medicinal plants due to variations in geological, physiographical , climatic, edaphic and biotic factors. Tribal population of the Rajasthan accounts about 12.44% of overall population of the state. Herbal medicines are the principal method of providing primary healthcare throughout much of the world and it is an estimate that around 80% of people worldwide still rely on conventional medicine. Plants, animals and minerals are used in medicines by man since pre-historic time but in specific utility plants provide a variety of wonderful potent drugs, can treat illnesses where synthetic medications are ineffective, as well as prevent them. The South Rajasthan has densely vegetated forest region which lies in wide range of Aravali hills. The biodiversity is very rich in these regions which are covered by dense deciduous forests. Many important plants of medical/nutritive value are abundant in areas proposed under study. These plants also form a means of livelihood (as forest produce) for the local population. Unfortunately, the knowledge about such plant is restricted to local population and healers. Being in unorganized sector and due to

improper transportation facilities marketing of these products is not at a profitable level. Because of this natural forest resources are over-exploited as the local population do not get sufficient value for their marketed product. So, to consolidate all of the above aspects present study has been undertaken for betterment of the tribal population and updating the knowledge.

The importance of medicinal plants in traditional health-care practices, providing clues to new areas of drug research and scientific validation of traditionally claimed is well-recognized. During the review of literature following landmark work have been encountered: Sebastian and Bhandari (1984) studied medicinal plant lore of Udaipur district, Rajasthan. Trotter and Logan (1986) reviewed informant consensus: A new approach for identifying potentially effective medicinal plants. In: Etkin N.L., editor. *Plants in Indigenous Medicine and Diet: Biobehavioural Approaches.* Joshi and Awasthi (1991) stated that the indigenous people of the Aravalli hills utilised specific life-supporting plant species during times of hunger. Nagda (1992, 2004) gave an account of social malaise by plants of tribal region. Basu *et al.* (1994) studied perceptions of health and health seeking behaviour of tribal population of Madhya Pradesh. Katewa and Guria (1997) made ethno-medicinal observations of a few untamed plants from Rajasthan's southern Aravalli hills. Harsha *et al.* (2002) studied ethnomedical knowledge of plants used by Kunabi Tribe of Karnataka in India. Kala *et al.* (2004) reviewed prioritization of medicinal plants on the basis of available knowledge, existing practices and use value status in Uttaranchal, India. Pieroni and Quave (2005) studied traditional pharmacopoeias and medicines among Albanians and Italians in southern Italy: A compar-ison. Bhogaonkar and Kadam (2006) studied Ethnopharmacology of the Banjara tribe in Yavatmal, Maharashtra, for the treatment of reproductive issues. These tribes also use the many plants for the treatment of sperm count, enhancement, ovulation enhancement, etc. Katewa and Galav (2006) reported additions to the traditional folk herbal medicines from Shekhawati region of Rajasthan. *Fagoina indica* is used by the folk womans' menstruation problem to regulate the menstruation cycle and inducing abortion. Sharma and Khandelwal (2010) studied weeds of Rajasthan and their ethno-botanical importance. Jain *et al.* (2011) reported Some Rajasthani tribal people practise snake-lore and natural snakebite cures. Zade *et al*. (2013) studied Native herbal medicines used by the tribal people of the Melghat area of the Amravati district to control antifertility and aphrodisiac activity. Chandra *et al*. (2013) reviewed ethno-botanical resources as supplementary foods and less known wild wdible fruits in District Rudraprayag, Uttarakhand. Kapoor and Lakhera (2013) reported ethno-medicinal plants of Jodhpur district, Rajasthan used in herbal and folk remedies. Thakur *et al.* (2014) studied ethnobotanical study of herbaceous flora along an altitudinal gradient in bharmour forest division, district chamba of Himachal pradesh. Porte (2014) mentioned folk medicine used for typhoid in India. Meena *et al.* (2014) studied ethno-medicinal the plants that tribal's in Pratapgarh, Rajasthan. Tarafdar *et al.* (2015) reported antidiabetic plants used among the ethnic communities of Unakoti district of Tripura, India. Chakraborty *et al.* (2016) Analyzing traditional knowledge of the anti-diabetic plants of the Himalayas in Darjeeling and Sikkim in light of recent phytochemical and pharmaceutical developments. Kumar and Duggal (2019) studied the Kiratas and Hindu-Gujjar tribes of the Dharampur region of the Mandi District, Himachal Pradesh, possess ethnobotanical wisdom (India). Mittal, *et al.* (2021). A brief review of the medicinal potential of saffron. The study reveals that numerous plant species will essential in the everyday life of the tribes living in lower hills of western Himalayas (Kumar and Duggal 2019a). Ethnobotanical studies have a main role to play in new drug development (Radha *et al.*, 2021).

Kumar *et al.* (2022) investigate the species diversity in the traditional homegardens and their traditional uses by the locals in Berung village of Arunachal Pradesh.

The Use of Ethnomedicinal Plants for Curing Diseases in the Indian Himalayas and Its Role in Sustainability of Livelihoods and Socioeconomic Development was reported (Kumar *et al.*, 2021). This suggests a risk of losing important knowledge from previous generations regarding plants and their use in traditional medicine. The goal of this study is to compile a list of the techniques used by Garhwal Himalayan residents as part of their customary medical practises. Snowball sampling was used to collect data, and a questionnaire along with unstructured interviews were used.

METHODOLOGY

Study Area. The western section of India and the southern part of Rajasthan both contain the third-smallest district in Rajasthan, a tribal rural area called Dungarpur. The district's pre-Cambrian Aravalli geology is shown in its semi-arid, dry climate, which has an extremely hot summer and an average annual rainfall of 761.7mm. It is situated between 73.22′ and 74.23′E longitude and latitude between 23.20′ and 24.01′N. It shares a common border with Gujarat state on its south and west, and is bordered on the north by the Udaipur district and the east by the Banswara district. The Dungarpur district, which has a population of 1,388,906 and an area of 3781 square kilometres, is distinguished by a significant portion of mountainous terrain (2011).

Fig. 1. Study area of Dungarpur Rajasthan.

Table 1: Ethno-medicinal uses of the plants used by the tribal of Southern Rajasthan India.

Common Name of plant	Images of Ethnomedical plants	Botanical Name of Plant	Family	Usable Part	Uses of Ethno-Medicinal plants
Khair, Kattha, Black cutch		*Acacia catechu*	Mimosaceae	Bark, heartwood extract	Heartwood extract and bark paste are administered locally for stomatitis, cough, bronchitis, diarrhoea, and dysentery. In the event of a challenging labour, the plant's exudates are administered orally (Katewa and Jain 2006)
Banyan, Indian banyan		*Ficus benghalensis*	Moraceae	Bark, Leaves	The stubborn, analgesic and anti-inflammatory effects of tender ends of aerial roots, latex, fruits, leaves, and bark are employed in vomiting, piles, boils, and blisters. A few drops of latex administered orally are used to treat impotence during sexual activity. Bark extract is helpful for burning feeling and unpleasant skin conditions, while leaf extract is administered orally in the event of diarrhoea.

Aakdo, Madar		*Calotropis procera*	Asclepiadaceae	Flowers, Leaves, Root	Oral intake of fresh flowers acts as an anti-venom for snakebites. The powdered leaves hasten the healing of wounds. The leaf-ash is used as a cold and cough remedy. Malaria fever remedies include roots and flowers (Jain and Jain 2017).
Shisham, North Indian rosewood		*Dalbergia sissoo*	Fabaceae/Leguminosae	Leaves, bark	Bark and leaves are applied to swollen mammary glands. Cumulative flavonoids in leaves mend broken bones and give health benefits.
Gum arabic tree, Babul		*Acacia nilotica*	Mimosaceae	gum, bark, fruit	In cases of dysentery, fruit powder and sugar are taken orally. Bark and latex are used to treat cholera and burn issues.
Jamun, Indian blackberry		*Eugenia jambolana*	Myrtaceae	fruit, leaves	Patients with diabetes consume its fruits. Fruit juice can be used to make vinegar, which is beneficial for treating dyspepsia, spleen enlargement, and other conditions. Dysentery patients are given leaf juice. Diabetes treatment also uses the seeds. In addition to being used in tanning, the bark is also administered as a medication for diarrhoea and dysentery.
Neem,		*Azadirachta indica*	Meliaceae	Leaves, Inflorescence	Twigs and leaves are used to treat boils, abscesses, eczema, adenitis, and fungal diseases. It is revered as a heavenly tree, a magnificent gift from nature, and a "all-cure" for all human ills.
Doob grass, Bermuda grass		*Cynodon dactylon*	Poaceae	Root, Leaves	For piles, fistula, fissure, chronic gleet, etc., the entire plant and roots are utilised.
Palash, Dhak, Flame of the forest		*Butea monosperma*	Fabaceae Papilionaceae	Root, Flowers, Bark, Seeds	Flowers are used to treat diarrhoea, leprosy, and gout, while roots are used to treat night blindness, piles, and antifertility. According to Gupta *et al.* (2017), wood pulp is used to treat liver diseases, gonorrhoea, wound infections, and snake bites, whereas bark is used to treat dyspepsia, ulcers, and snake bites. All

					types of tumours, piles, kidney stones, inflammation, skin, and eye issues were treated by Tiwari *et al.* and seeds in 2019. In addition to having antihelminthic characteristics that are effective in eliminating parasitic worms from the digestive tract, seeds contain antihyperglycemic actions that lower blood sugar (Minizhi *et al*., 2015)
Tilpushpi, Foxglove		*Digitalis purpurea*	Plantaginaceae	leaves	Digoxin extract from foxglove foliage is treated congestive heart failure (CHF) and certain heart rhythm abnormilites (atrial arrhythmia) Jain and Jain (2019)
Sadabahar, Barahmasi		*Catharanthus roseus*	Apocynaceae	Leaves, Flower	Extract from leaves is used to relieve stomach aches and prevent diabetes. Gajalakshmi *et al.* (2013) Numerous alkaloids are used medicinally. Vinblastine and Vincristine, two anti-cancer substances, are among the chemicals. Magnotta *et al*. (2006) Vincristine has a role for treating leukemia in children.
Datura, Thorn apple, Jimsonweed		*Datura stramonium*	Solanaceae	Leaves, Fruit, seed	The leaves are used to treat gout and rheumatic pain, while the smoke from burning leaves is used to treat asthma and bronchitis. Fruit juice is applied to the scalp to treat dandruff, painful cuts, and ulcers. Additionally, a hallucinogenic medication was used to treat parkinsonism, epilepsy, depression, and asthmatic bronchial spasms as well as to relax the smooth muscles of the bronchial tube (Soni *et al.* 2012)
Satyanashi, Darudi, Hemavati, Shialkanta		*Argimone mexicana*	Papaveraceae	Root, Leaves, Seeds, Yellow juice	The yellow latex has anti bacterial properties to use for skin infection, eczema and leaf extract is used in wound healing, Ghosh *et al*. (2005) insect bites, seed extract have larvicidal properties to use in mosquito repellent. Tea is used to treat malaria. Willco *et al.* (2011); Brahmachari *et al*. (2013) Whole plant is used as treatment of Jaundice (Tewari *et al.*, 2017).

Giloy, Guduchi, Amrit-bel		*Tinospora cordifolia*	Menispermaceae	Root, Stem, whole plant	The leaves decoction treats leucorrhoea, and the stem treats jaundice, diabetes, fever, malaria, pnumonia, rheumatoid arthritis, and asthma (Jain and Jain 2013, 2017, 2019)
Tulsi, Holy Basil, Queen of all herbs		*Ocimum sanctum*	Lamiaceae	Root, Stem, Leaves, Inflorse nce, Whole plant	The whole plant is used to treat inflammation, cardio protection, antiseptic, and antiallergy. The root is used as a diaphoretic in malaria fever, the stem as an anti convulsant, the leaves as a remedy for the common cold, immunological disorders, skin diseases, bronchial asthma, chronic fever, and cancer, and the seeds as an analgesic, antiulcer, and cancer (Gahlawat and Dahiya 2015)
Amaltas, Rajvraksha, Golden shower		*Cassia fistula*	Caesalpinaceae	Leaves, Bark, Flower s, Fruit, Seed	According to Mozaffarpur *et al.* (2012) the fruit pulp is used as a purgative and to relieve constipation It has been used in herbalism for millennia to treat hyperacidity, self-medication, lessen fever symptoms, and speed up wound healing. Heart problems benefit from amalt as, due to their anti-inflammatory and antioxidant effects (Khatib *et al*. 2010; Akhilla and Aleykutty 2015).
Harsingar, Parijat		*Nyctanthes arbor-tristis* L.	Oleaceae	Leaves, Bark	Leaf powder is used for coughs, fevers, malaria, sciatica, joint discomfort, and anti-stress tea. Bark extract is useful for indigestion and constipation (Katewa and Jain 2006)
Amla, Indian Gooseberry		*Phyllanthus emblica* L.	Phyllanthaceae	Fruit	Fruit provides vitamin C, which helps with immunity, allergies, constipation, asthma, high blood pressure, hair health, and dyspepsia and leucorrhoea (Jain, 2013)

Guvarpatha, Ghritkumari		*Aloe vera*	Xanthorrhoeaceae	Leaf	The pulp of succulent Xerophytes and leaves contains a transparent gel that is used to treat skin issues, hair loss, and wounds Rahmani *et al*. (2014), constipation, gastritis, diabetes, digestive disorders.

RESULT AND DISCUSSION

Ethno-botany studies the most significant plant species that have the potential for widespread use and show that everything in nature possesses some kind of force, spirit, or characteristic. Therefore, it is important for the preservation of genetic resources that aid in the quest for new sources of medicines, foods, and other species that support life. Verma *et al.* (1995) used. The botanical name of the species was supplied, followed by the local name, the parts used, the method of preparation, and any ethno medicinal applications. Saikia *et al.* (2006) studied an essential requirement for maintaining traditional medicine as a medical and cultural resource is the preservation of herbal medicinal plants and the traditional knowledge of how to use them. Jain (1991; 1995) evaluated the traditional knowledge held by the ethnic group is crucial for accurate and speedy resource identification, as well as for defining the field of ethnobotany. According to Biswas and Mukherjee (2003) observed Drugs used in Ayurvedic medicine to treat wounds are derived from plants 70% of the time, minerals 20% of the time, and animal products 10% of the time. According to the assessment, Southern Rajasthan is abundant in medicinal plants that treat a variety of human illnesses Katewa and Jain (2006). Although several unexploited or pteridophytic plants are employed as folk medicines, relatively little research has been done on their antibacterial properties (Parihar *et al.*, 2010).

Annamalai (2004) reported Locals who are uninformed of the value of medicinal plants in the ecosystem are taking advantage of some kinds of medicinal plants. Danish *et al.* (2011) review of the traditional use, phytochemistry, and pharmacological characteristics of *Cassia fistula* Linn. (amulthus), a significant medicinal herb. Rahmani *et al.* (2014). A prospective double-blind clinical experiment examined the effects of aloe vera ointment on chronic anal fissure pain, wound healing, and haemorrhaging upon defection. The plants are prized for their use in herbal medicines, food, feed, gums, resins, essential oils, dyes, fatty oils, sauces, and spices, among other things. These medicinal herbs can be consumed as juice, powder, decoction, or paste to treat common and immediate diseases Jain and Jain (2019). Patil and Rathod (2019) reviewed an ethnobotanical search for medicinal plants used by traditional healers in Dadra and Nagar- Haveli (UT), India. Panigrahi, Parul *et al.* (2021) review on the agronomic and medicinal properties of Eucalyptus. Singh and Rai (2022) studied *Trichoderma asperellum's* (in-vitro) antagonistic ability against fungi that infect key medicinal plants is evaluated. The combination of various plant parts is also used to make medications or is consumed as juice, powder, decoction, or paste. These are used by rural people to treat ailments like fever, colds, and coughs, skin conditions, dysentery, pain, and diarrhoea.

CONCLUSION

The state of Southern Rajasthan is abundant in ethno-medical plants. The locals and tribal populations of Rajasthan value these plants as herbal and folk traditional medicines, which are widely used by them. The goal of the current inquiry is to increase public knowledge of the ethno-medical importance of medicinal plants.

Acknowledgements. I would like to thank co-author for their ideas and valuable suggestions during the writing of paper. **Conflict of Interest.** None.

REFERENCES

Akhilla, S. and Aleykutty, N. A. (2015). Antidiabetic activity studies on *Cassia fistula* fruits. *Adv. J. Pharm. Life Sci.*, *3*(3), 1-8.

Annamalai, R. (2004). Tamil Nadu Biodiversity Strategy and Action Plan Forest Biodiversity. Tamil Nadu Forest Department, Government of India, Chennai.

Basu, S., Jindal A. and Kshatriya, G. (1994). Perceptions of health and health-seeking behaviour of tribal population of Madhya Pradesh and Orissa in Basu (ed.), *Tribal Health in India, Manak Publications Pvt Ltd., Delhi.*

Bhogaonkar, P. Y. and Kadam, V. N. (2006). Ethno-pharmacology of Banjara tribe of Umerkhed taluka, district Yavatmal, Maharashtra for reproductive disorders. *Indian Journal of Traditional Knowledge*, *5*(3), 336- 341.

Biswas, T. K. and Mukherjee, B. (2003) Plant Medicines of Indian Origin for Wound Healing Activity: A Review. *International Journal of Lower Extremity Wounds*, *2*, 25-39.

Brahmachari, G., Gorai, D. and Roy, R. (2013). *Argemone mexicana*: chemical and pharmacological aspects. *Rev. bras. farmacogn*, *23*(3), 559-575.

Chakraborty, R., Roy, S. and Mandal V. (2016). Assessment of traditional knowledge of the antidiabetic plants of Darjeeling and Sikkim Himalayas in the context of recent phytochemical and pharmacological advances. *J. Integr. Med. , 14*, 336–358.

Chandra, K., Nautiyal, B. and Nautiyal, M. C. (2013). Ethno-botanical Resources as Supplementary Foods and Less Known Wild Edible Fruits in District Rudraprayag, Uttarakhand, India. *J. Hum. Ecol., 42*, 259–271.

Danish, M., Singh P. and Mishra G. (2011). *Cassia fistula* Linn.(amulthus)-An important medicinal plant: a review of its traditional uses, phytochemistry and pharmacological properties. *Journal Nat. Prod. Plant Resour, 1*(1), 101-118.

Gahlawat, D. and Dahiya, P. (2015). Ethanomedicinal uses of *Ocimum sanctum* Linn. *Journal of Basic ciences, 2*, 69-73.

Gajalakshmi, S., Vijaylakshmi, S. and Rajeshwari, V. (2013). Pharmacological Activites of *Catharanthus roseus*:A perspective review. *Int. J. Pharma Bio., 4*(2), 431-439.

Ghosh, T., Dash, G. K., Bose A. and Panda, B. R. (2005). Wound healing properties of *Argemone maxicana*. *Indian Journal Nat Prod,. 20*, 3-6.

Gupta, A., Singh, S. and Gaur, K. (2017). A Review on pharmacognostic study of *Butea monosperma*. *International Journal Res Ayurveda Pharm., 8*(2), 196-199.

Harsha, V. H., Hebbar, S. S., Hegde, G. R. and Shripathi, V. (2002). Ethnomedical knowledge of plants used by Kunabi Tribe of Karnataka in India. *Fitoterapia, 73*, 281–287.

Jain, A., Katewa, S. S., Galav, P. K. and Jain, V. (2011). Snake-lore and indigenous snakebite remedies practiced by some tribal of Rajasthan. *Indian Journal of Traditional Knowledge*, *10*(2), 258-268.

Jain, V. and Jain, S. K. (2013). Ethanobotany: A brief introduction. Deep Publications, New Delhi, pp.1-104.

Jain, S. K. (1991). Dictionary of Indian Folk Medicine and Ethnobotany. Deep Publications, Paschim Vihar.

Jain, S. K. (1995). Ethnobotany: Its Scope and Various Sub-Disciplines. In: Jain, S.K., Ed., A Manual of Ethnobotany, Scientific Publishers, Jodhpur, 1-11.

Jain, S. K. and Jain, A. K. (2013). An Introduction to Ethanobotany. Deep Publications, New Delhi.

Jain, S. K. and Jain, V. (2013). Methods and Approches in Ethanobotany. Deep Publications, New Delhi. pp 201-211

Joshi, P. and Awasthi, A. (1991). Life support plant species used in famine by the tribals of Aravalli. *Journal of Phytological Research*, *42*(2), 193-196.

Kala, C. P., Farooquee, N. A. and Dhar, U. (2004). Prioritization of medicinal plants on the basis of available knowledge, existing practices and use value status in Uttaranchal, India. *Biodivers. Conserv.,13*, 453–469.

Kapoor, B. B. S. and Lakhera, S. (2013). Ethno-medicinal plants of Jodhpur district, Rajasthan used in herbal and folk remedies. *Indian Journal of Pharmacy & Biological Research*, *1*(4), 71-75.

Katewa, S. S. and Jain, A. (2006) Traditional Folk Herbal Medicines. Apex Publishing House, Udaipur, India.

Katewa, S. S. and Galav, P. K. (2006). Additions to the traditional folk herbal medicines from Shekhawati region of Rajasthan. *Indian Journal of Traditional Knowledge*, *5*(4), 494-500.

Katewa, S. S. and Guria, B. D. (1997). Ethno-medicinal observation from certain wild plants from Southern Aravalli hills of Rajasthan. *Vashundhara, 2*, 85-88.

Khatib, N. A., Wadulkar, R. D. and Joshi R. K. (2010). Evaluation of methanolic extract of *Cassia fistula*bark for cardioprotective activity. *IJRAP., 1*(2), 565-571.

Kumar, Gulshan and Duggal, Sampy (2019). Ethnobotanical Wisdom among the Kiratas and Hindu-Gujjar Tribes in Dharampur Region of Mandi District, Himachal Pradesh, (India). *Biological Forum – An International Journal, 11*(1), 156-171.

Kumar, Gulshan and Duggal, Sampy (2019a). Ethnomedicinal Diversity of Aromatic Plants in Foot Hill Regions of Himachal Pradesh, India. *International Journal of Theoretical & Applied Sciences, 11*(1), 18-39.

Kumar, Y., Mohammed, H., Singh, A. P., Singh, T. J. Tatan, T., Kabir, K., Sagar Tasing, Telek Yoka and Hashim Mohammed S. (2022). Plant Composition in Traditional Homegardens of Berung Village, East Siang, Arunachal Pradesh. *International Journal of Theoretical & Applied Sciences, 14*(1), 01-07.

Kumar, M., Rawat, S., Nagar, B., Kumar, A., Nazir A., Pala, Jahangeer, A., Bhat, Rainer, W. Bussmann, Marina Cabral-Pinto and Kunwar, R. (2021). Implementation of the Use of Ethnomedicinal Plants for Curing Diseases in the Indian Himalayas and Its Role in Sustainability of Livelihoods and Socioeconomic Development, *Int J Environ Res Public Health. 18*(4), 1509.

Magnotta, M., Murata, J., Chen, J. and De Luca, V. (2006). Identification of a law vindoline accumulating cultivar of *Catharanthus roseus* (L.)GDon. by alkaloid and enzymatic profiling. *Phytochemistry, 67*(1758-1764).

Minaxi, A., Brinda, S. and Gitika, D. (2015). Evalution of Butea monosperma as an immunomodulatory agent. *World Journal of Pharmaceutical Sciences*, *2*, 1159-1162.

Mittal, D., Magotra, T., Singh, U. P., Sharma, S., Chourasia, A. and Sharma, Vikas (2021). SAFFRON: A Mini Review on its Medicinal Potential. *Biological Forum – An International Journal, 13*(1), 363-367.

Mozaffarpur, S. A., Naseri., M. and Esmaeilidooki, M. R. (2012). The effect of *Casssia fistula* emulsion on pediatric functional constipation in comparison with mineral oil: a randomized, clinical trial. DARU. *Journal of Pharm. Sciences*, *20*(1), 83(1-9).

Nagda, B. L. (2004b). Tribal Population and Health In Rajasthan Stud. *Tribes Tribals, 2*(1), 1-8.

Nagda, B. L. (1992a). Symptoms of a Social Malaise. Social Welfare, No. 4.5, New Delhi: Central Social Welfare Board.

Parihar, P., Parihar, L. and Bohra, A. (2010). In Vitro Antibacterial Activity of Leaves of Some Important Pteridophytes. *Journal of Microbiology and Antimicrobials*, *2*, 19-22.

Parul, A., Panigrahi, N., Jena, C., Tripathi, S, Tiwari, V. and Sharma, V. (2021). Eucalyptus: A Review on

Agronomic and Medicinal Properties. *Biological Forum – An International Journal, 13*(1), 342-349.

Patil, Vijaykumar P. and Rathod, Mayuri C. (2019). An Ethno-botanical Survey of Dadra and Nagar- Haveli (UT), India for Medicinal Plants in use by Traditional Healers. *Biological Forum – An International Journal, 11*(1), 187-193.

Pieroni, A. and Quave, C. (2005) Traditional pharmacopoeias and medicines among Albanians and Italians in southern Italy: A comparison. *J. Ethnopharmacol, 101*, 258–270.

Porte, S. M. (2014). Overview of folk medicine used for typhoid in India. *International Journal of Research. Ayurveda and Pharmacy*, *5*(2), 219-224.

Radha, Salena Janjua, Mansoor Ali, Mamta Thakur, Radhika Jamwal, Sonia Rathour, Akshay Kumar Pubral, Neeraj Kumari, Sunil Puri, Ashok Pundir and Manoj Kumar (2021). Documenting Traditional Knowledge before they are Forgotten: A Study on the Ethnomedicinal uses of Wild Plants by Rural People of Jubbarhatti in District Shimla, Himachal Pradesh, India. *International Journal of Theoretical & Applied Sciences*, *13*(1), 37-51.

Ragupathy, S., Steven, N. G., Maruthakkutti, M., Balasubramaniam, V. and Ul-Huda, M. M. (2008). Consensus of the 'Malasars' traditional aboriginal knowledge of medicinal plants in the Velliangiri holy hills, India. *J. Ethnobiol. Ethnomed., 4*, 8.

Rahmani, N., Khademloo, M., Vosoughi, K. and Assadopour, S. (2014). Effects of Aloe vera cream on chronic anal fissure pain,wound healing and hemorrhaging upon defection:a prospective double blind clinical trial. *Eur. Rev. Med. Pharmacol. Sci*., *18*(7), 1078-1084.

Saikia, A. P., Ryakala, V. K., Sharma, P., Goswami, P. and Bora, U. (2006). Ethnobotany of Medicinal Plants Used by Assamees People for Various Skin Ailments and Cosmetics. *Journal of Ethnopharmacology, 106*, 149-157.

Sebastian, M. K. and Bhandari, M. M. (1984). Medicinal plant lore of Udaipur district, Rajasthan. *Bulletin of Medico-Ethno botanical Research*, *5*(3/4),122-134.

Singh, N. and Rai, D. (2022). Evaluation of Antagonistic Potential of Trichoderma asperellum (in-vitro) against Fungal Diseases of Important Medicinal Plants, *Biological Forum – An International Journal 14*(1), 57-61.

Sharma, L. and Khandelwal, S. (2010). Weeds of Rajasthan and their ethno-botanical importance. *Ethno-medicinal*, *4*(2), 75-79.

Soni, P., Soni, V. and Siddiqui, A. A. (2012). Pharmacological properties of *Datura stromonium* L. as a potential medicinal tree: An overview. *Asian Pacific Journal of Tropical Biomedicine, 2*(12), 1002-1008.

Tarafdar, R. G., Nath, S., Das, Talukdar A. and Choudhury, M. D. (2015). Antidiabetic plants used among the ethnic communities of Unakoti district of Tripura, India. *J. Ethnopharmacol., 160*, 219–226.

Tewari, D., Mocan, A., Parvanov, E. D., Sah, A. N., Nabavi, M., Huminiecki, L., Lee, Y. Y., Horbanczuk, J. O. and Astanasov, A. G. (2017). Ethanopharmacological Approaches for Therapy of Jaundice:Part1. *Frontiers in Pharmacology*.

Thakur, K. S., Kumar, M., Bawa, R. and Mohammed, O. B. (2014). Ethnobotanical Study of Herbaceous Flora along an Altitudinal Gradient in Bharmour Forest Division, District Chamba of Himachal Pradesh, India. *Evid. Based Complement. Altern. Med.*, 1–7.

Tiwari, P., Jena, S. and Sahu, P. K. (2019). *Butea monosperma;* Phytochemistry and Pharmacology. *Acta Scientific Pharmaceutical Science*, *3*(4), 19-26.

Trotter, R. and Logan, M. (1986). Informant consensus: A new approach for identifying potentially effective medicinal plants. In: Etkin N.L., editor. *Plants in Indigenous Medicine and Diet: Biobehavioural Approaches.* Redgrave Publishers; Bedfort Hills, NY, USA: pp. 91–112.

Verma, P., Khan, A. A. and Singh, K. K. (1995). Traditional phytotherapy among the Baiga Tribe of Shahdol District of Madhya Pradesh, India. *Ethnobotany, 7*, 69-73.

Willco, M. L., Graz, B., Falquet, J., Diakite C., Giani, S. and Diallo, D. (2011). A reverse pharmacology approach for developing an anti-malarial phytomedicine. *Malaria Journal*, *10*(1), S8-1-10.

Zade, V., Dhore, M., Dabhadkar, D., Pare, S., Wikhe, M., Deshmukh, V. and Chede, S. (2013). Indigenous herbal remedies used by Tribals of Melghat region of Amravati district for regulation of antifertility and aphrodisiac activity. *International Journal of Research in Pharmaceutical and Biomedical Sciences*, *4*(4), 1104-1109.

How to cite this article: Jayana Upadhyay and C.S. Kapoor (2023). Uses of Ethno-Medicinal and nutritive Plants by Tribals of Dungarpur District, Rajasthan. *Biological Forum – An International Journal, 15*(1): 526-534.