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Unexplored Ethnobotanical Uses of Some Plants of Family Euphorbiaceae

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ABSTRACT

The present study is based on the ethnobotanical explorations of three species of family Euphorbiaceae, carried out during 2011-2012 in various villages of Himachal Pradesh. For a better understanding of local beliefs and traditional uses of the plants belonging to family Euphorbiaceae, field tours had been organized in different villages of Himachal Pradesh and different categories of people like village heads, medicinemen, old experienced and knowledgeable informants were repeatedly interviewed. The information collated has been presented alongwith local name of the plant, distribution, reproductive cycle, botanical description, parts used, ethnobotanical uses and use/s in literature.

Key Words: Euphorbiaceae, Indigenous, Explorations, Ethnobotanical Uses, Traditional Knowledge

INTRODUCTION

Euphorbiaceae (The Spurge Family) is a large and diverse family of flowering plants with 321 genera and around 7,770 species worldwide. Most of them are herbs, but some, especially in the tropics, are also shrubs or trees. Some are succulent and resemble cacti. Plants are usually characterized by the presence of milky latex. Leaves mostly alternate, sometimes opposite or whorled. Flowers are unisexual and hypogynous. Fruit usually a schizocarpic capsule; sometimes a regma, berry or drupe. Various genera of the family include *Acalypha, Croton, Euphorbia, Jatropha, Mallotus, Phyllanthus, Putranjiva, Ricinus, Sapium* etc. The present work is based on the documentation of unexplored ethnobotanical uses of some members of family Euphorbiaceae including *Mallotus philippensis, Putranjiva roxburghii* and *Ricinus communis.*

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Mallotus philippensis (Lam.) Mull. Arg. (Fig. 1a)

Local Name: Kaambal.
Distribution: India, China, S. E. Asia, Australia; upto 1800 m.
Reproductive Cycle: Fl.- Mar.-May; Fr.- Jun.-Aug.
Botanical Description: Small trees, 5-15m tall. Leaves ovate to lanceolate, leathery and their lower surface densely dotted with minute red glands, margin subentire, apex acuminate. Male flowers 1-5-fascicled; calyx lobes 3 or 4, oblong; stamens 15-30. Female flowers: calyx lobes 3-5, subovate; ovary tomentose and red glandular-scaly; styles 3, plumose. Capsule subglobose, covered with a red glandular-scaly layer.
Parts Used: Fruits, Wood, Leaves, Branches.
Ethnobotanical Uses: 2-5g powder removed from the fruits consumed with butter milk ('Lassi') for stomachache and to expell worms. Half teaspoon of fruit powder given with luke warm water on empty stomach to purify blood. 'Kungu dye' extracted from its fruits is used in various religious rites.
Wood is used as fuel and also for making agricultural implements and tool handles. Leaves are used as bedding material for cattle. Branches are used for scouring teeth.

Figure 1.: a. *Mallotus philippensis* (Lam.) Mull. Arg.; b. *Putranjiva roxburghii* Wall.; c. *Ricinus communis* L.

Uses in Literature: Kamala, a red powder consisting of glandular hairs from the capsules of the plant, used as a drug and dye and has long been used as an anthelmintic and cathartic in traditional medicine (Satyavati *et al*., 1987). Fruit is purgative for animal (Zabihullah *et al*., 2006). Also known to be used as an anthelmintic (vet), aphrodisiac, cathartic, contraceptive, purgative, tonic for pregnant women, red dye from it adorned by women on forehead as a sign of being married, vermifuge; and for anorexia, boils, controlling allergic infections, dysentery, fever, jaundice, leprous eruptions, rheumatism, thoracic pains, ulcers, and vermilion (Sood *et al.,* 2009).

Putranjiva roxburghii Wall. (Fig. 1b)

Local Name: Putranjan.
Distribution: Throughout tropical India; wild and cultivated.
Reproductive Cycle: March-April.
Botanical Description: Evergreen tree with drooping branches; corky bark; coriaceous leaves; small stipules and small, dioecious flowers. Drupes pointed at the apex and narrowed at base; stone very hard.
Parts Used: Seeds, Leaves.
Ethnobotanical Uses: Paste of seeds of *Putranjiva roxburghii* applied on forehead to check pain. Also, its 5 seeds given daily for one month to women for conception. Poultice of its leaves alongwith the leaves of *Dalbergia sissoo* and *Vitex negundo* applied to cure joint pain.
Use in Literature**:** Used so far as sacred (Sood *et al.,* 2012).

Ricinus communis L. (Fig. 1c)

Local Name: Arind.
Distribution: Throughout India, naturalized near habitations upto 2500 m.
Reproductive Cycle: March-August.
Botanical Description: An evergreen shrub or small tree having palmately lobed leaves and monoecious, rather large flowers in terminal subpaniculate, racemes; male flowers crowded in upper portion of the inflorescence, the females below. Fruits a prickly capsule of three 2-valved cocci. Seeds oblong, smooth, mottled.
Parts Used: Stem, Seeds, Leaves.
Ethnobotanical Uses: Stem of *Ricinus communis* used for scouring teeth which is considered effective for expelling intestinal worms. Seed oil used for massage to cure joint pains. Poultice of leaves of *Ricinus communis* and *Calotropis procera* applied to cure body swellings. Seed oil given with milk to cure stomach problems and constipation.
Uses in Literature: So far known as an antidote to food poisoning, contraceptive, carminative, fish poison, edible, fodder, psychoactive, symbolic to ward off evil, and vermicide; and for abortion, aching joints, cholera, conjunctivitis, constipation, dysentery, earache, gout, headache, intestinal worms, irregular menstruation, muscular pain, pneumonia, rheumatism, scorpion bites, skin disease, skin ulcer, sores, swelling, throat problems (vet.), wounds, bone sprain of horses and cough (Sood *et al.*, 2012).

CONCLUSION

Indigenous knowledge systems are engrained in all cultures and societies. The present study revealed that the people are quite aware of the usefulness of traditional knowledge and utilize the plant resources for various purposes. Several studies have been carried out in the state for the documentation of this indigenous knowledge but there are no distinct references on the ethnobotanical explorations of family Euphorbiaceae in Himachal Pradesh. In this article we presented the information regarding three species of the family which comprehends the new records of ethnobotanical uses of these plants in the region. The data presented will provide basic information for future works on this family.

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