

# Taxonomy and Medicinal Uses of Euphorbiaceae (Spurge) Family of Rajshahi, Bangladesh

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**Abstract** Taxonomy and medicinal uses of the family *Euphorbiaceae* growing throughout the Rajshahi city, Bangladesh were studied during September 2012 to August 2013. A total of 16 species under 8 genera belonging to the family *Euphorbiaceae* were collected and identified. Out of the total number of species *Acalypha indica* L., *Euphorbia hirta* L., *Euphorbia thymifolia* L., *Euphorbia tirucalli* L., *Euphorbia pulcherrima* L., *Euphorbia cotinifolia* L., *Croton bonplandianum* Baill., *Codiaeum variegatum* (L.) A. Juss., *Jatropha gossypifolia* L., *Jatropha curcas* L., *Manihot esculenta* L., *Ricinus communis* L. were common and *Acalypha hispida* Burm. f., *Euphorbia helioscopia* L., *Euphorbia milii* L., *Putranjiva roxburghii* L. were rare species in the study area. For each species botanical name, local name, habit, habitat, flower colour, flowering season, chromosome number and medicinal uses have been mentioned. The findings of this study could be used to enhance folk medicine for the betterment of rural or indigenous livelihoods.

**Keywords:** *Euphorbiaceae*, Taxonomy, medicinal plants, folk medicine, Rajshahi, Bangladesh

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## 1. Introduction

*Euphorbiaceae*, the spurge family, is a large family of flowering plants with 300 genera and around 7,500 species. Most spurges are herbs, but some, especially in the tropics, are shrubs or trees. Some are succulent and resemble cacti. This family occurs mainly in the tropics, with the majority of the species in the Indo-Malayan region and tropical America. A large variety occurs in tropical Africa, but they are not as abundant or varied as in these two other tropical regions. However, *Euphorbia* also has many species in non-tropical areas such as the Mediterranean Basin, the Middle East, South Africa, and southern USA [2].

The leaves are alternate, seldom opposite, with stipules. They are mainly simple, but where compound, are always palmate, never pinnate. Stipules may be reduced to hairs, glands, or spines, or in succulent species are sometimes absent. The radially symmetrical flowers are unisexual, with the male and the female flowers usually occurring on the same plant. As can be expected from such a large family, there is a wide variety in the structure of the flowers. They can be monoecious or dioecious. The stamens (the male organs) can number from one to 10 (or even more). The female flowers are hypogynous, that is, with superior ovaries [2].

The genera in tribe *Euphorbieae*, subtribe *Euphorbiinae* (*Euphorbia* and close relatives) show a highly specialized form of pseudanthium ("false flower" made up of several

true flowers) called a cyathium. This is usually a small, cup-like involucre consisting of fused-together bracts and peripheral nectary glands, surrounding a ring of male flowers, each a single stamen. In the middle of the cyathium stands a female flower: a single pistil with branched stigmas. This whole arrangement resembles a single flower. The fruit is usually a schizocarp, but sometimes a drupe. A typical schizocarp is the regma, a capsular fruit with three or more cells, each of which splits open at maturity into separate parts and then breaks away explosively, scattering the small seeds. The family contains a large variety of phytotoxins (toxic substances produced by plants), mainly diterpene esters, alkaloids, glycosides, and ricin-type toxins [2].

A milky latex is a characteristic of the subfamilies *Euphorbioideae* and *Crotonoideae*. This latex is poisonous in the *Euphorbioideae*, but innocuous in the *Crotonoideae*. White mangrove (*Excoecaria agallocha*), or blind-your-eye mangrove latex causes blistering on contact and temporary blindness if it contacts the eyes. Other common names are milky mangrove, *buta buta* (Malay), and *gewa* (Bangladesh). The latex of spurge has been used as a laxative. Recent molecular studies have shown that the enigmatic family *Rafflesiaceae*, which was only recently recognized to belong to order *Malpighiales*, is derived from within *Euphorbiaceae* [2].

A number of plants of the spurge family are of considerable economic importance. Prominent plants include cassava (*Manihot esculenta*), castor oil plant (*Ricinus communis*), Barbados nut (*Jatropha curcas*), and the Para rubber tree (*Hevea brasiliensis*). Many are grown

as ornamental plants, such as poinsettia (*Euphorbia pulcherrima*). Leafy spurge (*Euphorbia esula*) and Chinese tallow (*Triadica sebifera*) are invasive weeds in North America. In medicine, some species of *Euphorbiaceae* have proved effective against genital herpes [2].

The main objectives of this work was to do a detailed study on the taxonomic and medicinal aspects of the family *Euphorbiaceae* occurring in Rajshahi city, Bangladesh.

## 2. Materials and Methods

The present study was based on the intensive field of the study area during the period of September 2012 to August 2013. A total of 16 species under 8 genera belonging to the family *Euphorbiaceae* were collected and identified. The methods employed during the study were designed with the sole purpose of eliciting the precious wealth of information on the medicinal uses of plants practiced by the local people. Detailed survey was made to gather and document information regarding use of the plants as medicine. Usually, the survey in each locality started with the interview of elderly and experienced members, locally known as Hakims. Besides, this, the common people of the surveyed localities who themselves have used these plant-based medicines for health treatments were interviewed to prove veracity of the curative features of plants. Medicinal uses and data about the treatment of various ailments based on the information gathered by using questionnaires are given subsequently.

The collected specimens were identified by studying related taxonomic books and booklets from the library of Rajshahi University. The major collected materials were identified and described up to species with the help of the consulted documents [1,3,5,7,8,10,11]. For the current name and up to date nomenclature [1,6,9] were also consulted. All the collected plant specimens were kept in the Herbarium of the Department of Botany, University of Rajshahi, Bangladesh.

## 3. Results and Discussion

The present research work is based on the local knowledge of most commonly used medicinal plants of *Euphorbiaceae* family. Each medicinal plant species is provided with its scientific name, local name, chromosome number [4], plant parts (such as leaf, root, stem, fruit, latex, whole plant, seed, inflorescence and bark) mostly used and uses.

The results obtained in the investigation need to be rigorously subjected to pharmacological analysis in order to validate their authenticity and future prospects. The paper has only documented the herbal health remedies presently in vogue in the region and does not prescribe or recommend for their use till further determination by the pharmacologist. Data have been gathered on the traditional uses of plant species, especially for asthma, abscess, anthelmintic, astringent, bronchitis, bedsores, cancer, cough, diuretic, diarrhea, dysentery, eczema, earache, headache, inflammations, jaundice, kidney disease, leprosy, paralysis, skin diseases, scabies, toothache, ulcers, ringworm and others.

The examined plant materials collected from the study area using the identification methods and medicinal information was accumulated are described below.

### 3.1. *Acalypha Indica* L

**Taxonomic description:** An annual, erect herb, up to 1 m high. Leaves 2.5-7.5 cm long, ovate or rhomboid-ovate, crenate-serrate. Flowers in numerous lax, erect, elongated axillary spikes, the male minute, clustered near the summit of the spike, the females scattered, surrounded by a large, dentate, cuneiform bracts. Capsules small, hispid.



**Local name:** Muktajhuri.

**Habit:** Small herb, rarely sub-shrub.

**Habitat:** Waste, moist and shady places and river banks

**Flower colour:** Olive green.

**Flowering season:** December-April.

**Chromosome number:**  $2n = 14$ .

**Medicinal Uses:** Plants are emetic, expectorant, laxative and diuretic; useful in bronchitis, pneumonia, asthma and pulmonary tuberculosis. Leaves are laxative and antiparasiticide; ground with common salt or quicklime or lime juice applied externally in scabies. Leaf paste with lime juice prescribed for ringworm. Leaf juice is emetic for children. A decoction of the leaves is given in earache. Powder of the dry leaves is given to children to expel worms; also given in the form of decoction with little garlic. In homoeopathy, the plant is used in severe cough associated with bleeding from lungs, haemoptysis and incipient phthisis. The plant is expectorant, diuretic, emetic and laxative. Fresh leaf juice is useful in arthritis and scabies. Dry leaf powder is used in bed sores.

### 3.2. *Acalypha Hispida* Burm. F

**Taxonomic description:** A much-branched, dioecious shrub, up to 2m tall, young shoots tomentose, sparingly puberulous or glabrescent. Leaves 10-15×7-11 cm, blade broadly rhombic ovate, shortly cuneate at the base, sub-acutely and coarsely serrate, rigidly membranous, 5-nerved from the base, bright green, the veins often reddish, petioles 1-5 cm long, stipules lanceolate, 5-7 mm long. Inflorescence axillary, solitary, spicate, shortly pedunculate. The males not seen, the females 30 cm long, very densely flowered with a puberulous axis and minute ovate bracts, bright red on account of masses of style. Female flowers: sessile, sepals 3-4, triangular, ovate, 0.7 mm long, acute, ovary subglobose, trilobate, styles free to the base, 5-7 mm long, bright red. Fruit a capsule. Seeds with a ventral ridge, albumen fleshy.



**Local name:** Bara Hatisur

**Habit:** Shrub.

**Habitat:** Gardens where it is cultivated as an ornamental plant.

**Flower colour:** Red.

**Flowering season:** December-February.

**Chromosome number:**  $2n = 112$ .

**Medicinal Uses:** Flowers are used in diarrhea and similar disorders, boiled in water or administered in the form of a conserve. Leaves are beaten up with green tobacco leaf and infusion of rice, and applied to invertebrate ulcer.

### 3.3. Euphorbia Hirta L

**Taxonomic description:** A small annual herb, 15-50 cm high, hispid, with white latex. Leaves opposite, 1.3-3.8 cm long, obliquely oblong-lanceolate or obovate-lanceolate, serrulate or dentate. Flowers very small, crowded in small axillary shortly pedunculate globose cymes. Capsules minute, hairy.



**Local name:** Dudhia.

**Habit:** Herb.

**Habitat:** Waste places, fallow lands, paddy fields and roadsides.

**Flower colour:** White.

**Flowering season:** Throughout the year.

**Chromosome number:**  $2n = 12$ .

**Medicinal Uses:** The plant is astringent and haemostatic; as poultice applied to abscesses, inflamed glands, ulcers, oedemas and phlegmons. It is chiefly used in affections of childhood, in worms, bowel complaints and cough. The juice is considered tonic, narcotic, antiasthmatic and febrifuge; effective against dysentery, diarrhoea and colic; especially in amoebiasis. Decoction is useful in asthma and chronic bronchial affections. The extract of this plant has sedative effect on the mucous

membrane of the respiratory and genito-urinary tract and on cardiovascular system.

### 3.4. Euphorbia Thymifolia L

**Taxonomic description:** A small, slender, annual prostrate herb, more or less hispidly pubescent. Leaves opposite, very small, 3-6 mm long, obliquely oblong or elliptic-oblong, erenulate. Involucres axillary, solitary or 2-3 in an axil, campanulate, 0.8 mm long. Capsule minute, hairy.



**Local names:** Shwet kerui, Dudhiya, Swetkan.

**Habit:** Herb.

**Habitat:** Open sunny places.

**Flower colour:** Reddish-purple.

**Flowering season:** April-August.

**Chromosome number:**  $2n = 22$ .

**Medicinal Uses:** The fresh plant is considered vulnerary and galactagogue; used in ophthalmia and other eye troubles, ardor, sores, atrophy, dysentery and breast pain. It is an effective drug for bronchial asthma. Juice of the plant is used for ringworm, diarrhea and dysentery; mixed with fresh goat milk is given to cure blood dysentery. Leaves and seeds are astringent, stimulant, anthelmintic and laxative; given to children in bowel complaints. Root is used in amenorrhea.

### 3.5. Euphorbia Tirucalli L

**Taxonomic description:** A much branched small tree with cylindrical, green, whorled or fascicled branchlets and white latex. Small linear-oblong leaves appear in the rainy season, 6-13 mm long. Involucres clustered in the forks of the branchlets, shortly pedicelled, mostly female, campanulate.



**Local names:** Dudh Bush, Lanka sij.

**Habit:** Large shrub or small tree.

**Habitat:** Dryland where it is grown as hedge plant.

**Flower colour:** Greenish white.

**Flowering season:** January-March.

**Chromosome number:**  $2n=20$ .

**Medicinal Uses:** Juice of the stem is purgative and carminative; useful in gonorrhoea, whooping cough, asthma, dropsy, leprosy, enlarged spleen, dyspepsia, jaundice, colic, tumors and stone in the bladder. The latex is vesicant and rubefacient; used as an application to warts, rheumatism, neuralgia and toothache. It acts as a purgative in small doses, but in large doses it is an acrid irritant and emetic. The root is used as a vesicant. Latex is vesicant and rubefacient and used in the treatment of warts, rheumatism and toothache. Juice of the plant is used in the treatment of asthma, whooping cough, jaundice and enlargement of spleen.

### 3.6. *Euphorbia Helioscopia* L

**Taxonomic description:** An erect, bright green, fleshy annual herb, up to 50 cm tall, sparingly pilose to glabrescent. Stem usually much-branched at the top, stem-leaves alternate, shortly stalked, obovate or spatulate, 1.3-5.0 cm long, lower ones smaller, tip finely toothed. Cyathia very shortly pedunculate to sessile, glands yellow, rounded, entire. Style spreading, recurved, united at the base, 0.7 mm long, bi-partite, the stigma slightly swollen. Fruit a capsule, 3 mm across, smooth, minutely net veined. Seeds ovoid,  $2 \times 1.5$  mm, strongly reticulate, dark brown, transversely ovate.



**Local name:** Euphorbia.

**Habit:** Herb.

**Habitat:** Waste places and roadsides.

**Flower colour:** Yellow.

**Flowering season:** May-October.

**Chromosome number:**  $2n=42$ .

**Medicinal Uses:** The plant is used as hydrogogue, cathartic, and milky juice is applied to eruptions. Seeds are given with roasted pepper for the treatment of cholera.

### 3.7. *Euphorbia Milii* L

**Taxonomic description:** It is a succulent climbing shrub growing to 1.8 m (5 ft 11 in) tall, with densely spiny stems, the straight, slender spines up to 3 cm long, which help it scramble over other plants. The leaves are found mainly on new growth, and are obovate, up to 3.5 cm long and 1.5 cm broad. The flowers are small, subtended by a pair of conspicuous petal-like bracts, variably red, pink or white, up to 12 mm broad. The sap is moderately poisonous. Wat Phrik in Thailand claims to be the home of the world's tallest Christ plant.



**Local names:** Passabuj, Euphorbia.

**Habit:** Shrub.

**Habitat:** Open sunny places.

**Flower colour:** Greenish-white.

**Flowering season:** April-August.

**Chromosome number:**  $2n=22$ .

**Medicinal Uses:** It plays a role in folk medicine. It is a cure for cancer, and it can cure warts.

### 3.8. *Euphorbia Pulcherrima* L

**Taxonomic description:** A shrub or small tree, typically reaching a height of 0.6-4 m. (1 ft 10 in-13 ft 1 in). The plant bears dark green dentate leaves that measure 7-16 cm. (2.8-6.3 in) in length. The colored bracts, which are most often flaming red but can be orange, pale green, cream, pink, white or marbled, are often mistaken for flower petals because of their groupings and colors, but are actually leaves. The colors of the bracts are created through photoperiodism, meaning that they require darkness (12 hours at a time for at least 5 days in a row) to change color. At the same time, the plants require abundant light during the day for the brightest color.



**Local name:** Lalpata.

**Habit:** Shrub.

**Habitat:** Open sunny places.

**Flower colour:** Reddish-purple.

**Flowering season:** April-August.

**Chromosome number:**  $2n=22$ .

**Medicinal Uses:** Its latex can cause an allergic reaction in sensitive individuals. It is also mildly irritating to the skin or stomach and may sometimes cause diarrhea and vomiting if eaten.

### 3.9. *Euphorbia Cotinifolia* L

**Taxonomic description:** *Euphorbia cotinifolia* is a broadleaf evergreen shrub native to Mexico and South America. Treated as a shrub it reaches 10 to 15 ft (3.0 to

4.6 m) but can be grown as a tree reaching 30 ft (9.1 m). Small white flowers with creamy bracts bloom at the ends of the branches in summer. With its woody stems and oval-shaped leaves, this perennial looks a lot like a tree. Like other members of the euphorbia family, it has milky sap and tiny flowers. Most of the appeal comes from the leaf color. dark burgundy on older leaves, a brighter red on new foliage. The foliage generally dies back in winter.



**Local name:** Euphorbia.

**Habit:** Shrub.

**Habitat:** Open sunny places.

**Flower colour:** Yellowish-white.

**Flowering season:** April-August.

**Chromosome number:**  $2n = 22$ .

**Medicinal Uses:** Whole plant is used to remedy sores. Milky latex is strongly purgative. Latex in the roots is more poisonous than in other parts of the plant. The sap can cause irritation if it comes into contact with human skin or eyes. If ingested, the sap can cause severe damage to internal organs.

### 3.10. Croton Bonplandianum Baill

**Taxonomic description:** A much-branched woody herb, 20-50 cm tall, branches moderately stellate-hairy to subglabrous. Leaves alternate or sub opposite, petiolate, petioles 2-6 mm long, slender, sparsely to densely stellate-hairy, leaf blade narrowly ovate-lanceolate. Inflorescence terminal, 5-9 cm long, sparsely stellate-hairy to subglabrous. Flowers laxly distributed. Male flowers pedicellate, slender, glabrous, petals smaller than sepals, white, hairy at the base, stamens 12. Female flowers: present at the base of the inflorescence, stout, densely stellate-hairy, sepals lanceolate, ovary c 1 mm in diameter, broadly ellipsoid, densely hairy. Fruit a capsule, pale brown, sparsely stellate-hairy. Seeds ellipsoid, grey, minutely foveolate.



**Local name:** Bondhone.

**Habit:** herb.

**Habitat:** Dry and sandy exposed areas.

**Flower colour:** White.

**Flowering season:** April-September.

**Chromosome number:**  $2n = 20$ .

**Medicinal Uses:** The plant is used as antiseptic. The leaves, stems and seeds contain alkaloid. The paste of root with decoction of stem bark of *Terminalia arjuna* (3:2) used to treat cholera.

### 3.11. Codiaeum Variegatum (L.) A. Juss

**Taxonomic description:** A much-branched, evergreen shrub, up to 1.5 m tall, twigs pale brownish-grey, young parts evenly pubescent to subglabrous. Leaves 5-27×1-5 cm, variable, ovate-lanceolate to linear, obtuse to acute, rounded-cuneate to attenuate, glabrous, shiny, marked with white, yellow or red, leathery, pinnately veined, stipules minute or absent. Male inflorescence 15-35 cm long, bract minute. Male flowers: pedicels 1-2 cm long, sepals sub orbicular, concave, glabrous, greenish or yellowish-white, petals 5-6, bilobate. Stamens many, filaments 4 mm long, free, white, anthers 0.5 mm long, yellow. Fruit a trilobite or subglobose capsule, smooth, reddish-brown, marbled.



**Local name:** Patabahar.

**Habit:** Shrub.

**Habitat:** Gardens and homesteads.

**Flower colour:** Greenish or yellowish white.

**Flowering season:** April-August.

**Chromosome number:**  $2n = 120$ .

**Medicinal Uses:** The sap is toxic and can cause skin eczema in some people. It is also toxic if eaten, though in small quantities, it has been used in herbal medicine to treat gastric ulcers.

### 3.12. Jatropha Gossypifolia L

**Taxonomic description:** A soft-wooded erect shrub, up to 3 m tall, young shoots sparingly pubescent to subglabrous. Leaves stipulate, stipules slender, multifid, petiolate, leaf blade cordate, dark bronze coloured. Inflorescence leaf opposed, paniculate, peduncles 6-8 cm long, linear-lanceolate, ciliate. Male flowers: calyx lobes elliptic-lanceolate, corolla lobes broadly obovate, rounded, reddish-purple, stamens 8, the outer 2 mm long, the 3 inner c 3 mm long, anthers c 0.6 mm long. Female flowers: calyx and corolla lobes twice as many as in the male flowers, otherwise similar, ovary trilobite-subglobose. Fruits are rounded-trilobate. Seeds compressed, ovoid-ellipsoid, pale grayish-brown.



**Local names:** Lalbherenda, Laljeol.

**Habit:** Shrub.

**Habitat:** Open sunny places.

**Flower colour:** Reddish-purple.

**Flowering season:** April-August.

**Chromosome number:**  $2n = 22$ .

**Medicinal Uses:** The leaves are used on boils and carbuncles, eczema and itches. The Seeds cause insanity and act as an emetic. It is also grown as an ornamental plant. The leaves and the seeds are used as purgative. The stem-juice in nostrils to cure headache.

### 3.13. Jatropha Curcas L

**Taxonomic description:** A large deciduous shrub with succulent stem. Leaves 10-15 cm long, broadly ovate, cordate, acute, usually palmately 3- or 5-lobed. Flowers 7.5 mm across, yellowish-green, in loose, axillary, cymose panicles, 5-12.5 cm long. Fruit 2.5 cm long, ovoid.



**Local names:** Bagh Verenda, Ban Verenda, Chanda, Jamalgota, Sadajeol, Baron.

**Habit:** Shrub.

**Habitat:** Open sunny places.

**Flower colour:** Reddish-purple.

**Flowering season:** April-August.

**Chromosome number:**  $2n = 22$ .

**Medicinal Uses:** Seeds are poisonous. Both roasted seed and seed oil is purgative, more drastic than those of *Ricinus communis*; applied topically in rheumatism, herpes and pruritus. The twigs are used for tooth brushing when the gums are swollen. The sap of the plant and leaves are styptic; applied to wounds and refractory ulcers; very effective in the treatment of scabies, eczema, ringworm and toothache. Hot infusion of the young leaves is drunk to cure fever. Decoction of leaves is antidiarrhoeal; used in stomachache and in cough. The roots are given as emetic and purgative. The stem is chewed as a remedy for toothache.

### 3.14. Manihot Esculenta L

**Taxonomic description:** The cassava root is long and tapered, with a firm, homogeneous flesh encased in a detachable rind, about 1mm thick, rough and brown on the outside. Commercial varieties can be 5 to 10 cm in diameter at the top, and around 15 cm to 30 cm long. A woody cordon runs along the root's axis. The flesh can be chalk-white or yellowish. Cassava roots are very rich in starch and contain significant amounts of calcium (50 mg/100g), phosphorus (40 mg/100g) and vitamin C (25 mg/100g). However, they are poor in protein and other nutrients. In contrast, cassava leaves are a good source of protein (rich in lysine) but deficient in the amino acid methionine and possibly tryptophan.



**Local name:** Cassava.

**Habit:** Shrub.

**Habitat:** Dry and sandy exposed areas.

**Flower colour:** White.

**Flowering season:** April-September.

**Chromosome number:**  $2n = 36$ .

**Medicinal uses:** Cassava root has been promoted as a treatment for bladder and prostate cancer. Cassava root is a good source of carbohydrates, but a poor source of protein. A diet consisting predominantly of cassava root can cause protein-energy malnutrition. In some African countries, cassava leaves are consumed as vegetable.

### 3.15. Putranjiva Roxburghii L



**Local name:** Putranjiva.

**Habit:** Tree.

**Habitat:** Dry and sandy exposed areas.

**Flower colour:** Greenish white.

**Flowering season:** April-September.

**Chromosome number:**  $2n = 22$

**Taxonomic description:** *Putranjiva* is a famous, moderate-sized, evergreen tree, growing up to 12 m in

height. It has pendant branches and dark grey bark having horizontal lenticels. Leaves are simple, alternately arranged, dark green, shiny, elliptic-oblong, distantly serrated. Male flowers, with short stalks, in rounded axillary clusters, female flowers 1-3 in leaf axil. Fruits ellipsoid or rounded drupes, white velvety; seed normally one, stone pointed, rugose, very hard.

**Medicinal uses:** Bark and leaves used as medicine; leaves and fruits used as medicine for rheumatism.

### 3.16. *Ricinus Communis* L

**Taxonomic description:** A tall slender, evergreen, soft-wooded shrub. Leaves large, 30-60 cm diam., palmately lobed; lobes 7 or more, serrate. Flowers monoecious, in terminal sub paniculate stout, erect racemes. Male flowers 1.25 cm diam., crowded in the upper portion of the inflorescence, the female below. Fruit a prickly capsule, 1.25-2.5 cm long, globosely oblong, of three 2-valved cocci.



**Local names:** Reri, Bherenda, Arenda, Gab-bherenda.

**Habit:** Small tree.

**Habitat:** Dry and sandy expose areas.

**Flower colour:** Red.

**Flowering season:** April-September.

**Chromosome number:**  $2n = 20$ .

**Medicinal Uses:** Seed oil is a strong purgative; used externally as a massage for rheumatic pains, joint pain, paralysis and internally for the treatment of constipation. The leaves are used as galactagogue, and in headache. Seeds paste is used as counter irritant. Root bark and leaf also have purgative properties; decoction is used for rheumatism, inflammations and nervous disorders. Juice of tender leaves is given with sugar or sugar candy in dysentery. The toxalbumin and ricin contained in the seed oil possesses anti-cancer properties.

## 4. Conclusions

Taxonomy and medicinal uses of the family *Euphorbiaceae* growing throughout the Rajshahi city, Bangladesh were studied during September 2012 to August 2013. A total of 16 species under 8 genera belonging to the family *Euphorbiaceae* were collected and identified. The present study may be a preliminary contribution of this area using standard research methods, focusing on medicinal plants and their local uses for the healthcare. This detailed information will be helpful for the pharmacognosist, botanist, ethno-botanist and pharmacologist for the collection and identification of the plant for further research works.

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