Journal of Pharmacognosy and Phytochemistry
Available online at www.phytojournal.com

E-ISSN: 2278-4136
P-ISSN: 2349-8234
JPP 2020; SP6: 424-428

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International Web-Conference
On
New Trends in Agriculture, Environmental & Biological Sciences for Inclusive Development
(21-22 June, 2020)

Some less known medicinal herbs of Kandhamal District of Odisha

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Abstract
This paper deals with an enumeration of 26 angiospermic medicinal herbs under 25 genera belonging to 19 families of Kandhamal district of Odisha. Besides, some effective measures for immediate conservation of the medicinal plants have been suggested.

Keywords: medicinal herbs, medicinal plants

Introduction
Kandhamal, one of the centrally located districts of Orissa lies between 190341 N – 200541 N latitudes and 830201 E – 840481 E longitudes. This is a district dominated by the tribal people. Out of 62 tribes identified for the state of Odisha, 29 tribes are concentrated in different pockets in this district. The dominant tribes are Kandha, Ganda, Saora and Kanda-gaud. The tribal population is ca40.43% of the total tribal population of Odisha. The forest cover is ca 7336 sq.kms which is 66% of the total geographical areas of the district. The vegetable wealth is a grand-repository of floristic elements of high economic potentialities, where from the tribals get their food, clothing, medicines etc. Besides the district is a grand repository of medicinal plants. In spite of rich and diverse floristic composition, Haines, the pioneer plant explorer for the state of Bihar and Orissa and Mooney, the subsequent worker could not botanize this region thoroughly and as such various uses of plant by the natives have not been documented in their respective treatise [1, 2]. There is considerable amount of genetic erosion in the plant wealth with the march of urbanization, establishment of factories coupled with the interferences of various categories such as shifting cultivation, illegal falling of tree species for timber and fuel etc. Paradoxically the magnitude of devastation is in increasing order during recent times, quite a good number of medicinal and food plants have already been wiped away. On the other hand, establishment of hospitals in remote areas has fascinated the aboriginal people to adopt the modern medical practices. Hence therapy is almost ignored. Similarly their food habit and utilization of plants and plant products for cultural activities have also been changed due to influence of modern civilization. Hence critical identification as well as conservation of these fast disappearing elements is highly essential. Realising this Jain; Sexen and Dutta; Subudhi and Choudhury and Sahoo have made some sporadic reports on the ethnobotanical aspects of this district [3, 4, 5, 6].

Methodology
Seasonal field explorations were carried out in different forest rich as well as tribal dominated areas of the Kandhamal district in order to study the plants having high therapeutic importance. Due attentions were made towards the distribution pattern and flowering time of the plants. The plants collected, have been identified in consultation with the regional floras [1, 7] and monographs and preserved under ex-situ in AJCBIBG. Information pertaining to the medicinal values of the plants has been collected from the local inhabitants through regular contact. The authenticity of the medicinal importance of the species have also been confirmed

by following standard literatures [4, 8, 9, 10, 11, 12, 13, 14, 15]. In the present treatment, an enumeration of 26 herbs along with their correct nomenclature, brief phytography, phenology, ecology and medicinal uses have been provided. The species are arranged alphabetically and their family names are provided in the parenthesis. The vernacular names have also been given where ever available.

Enumeration

1. Ammannia baccifera L.Sp.Pl.120.1753; Haines, Bot. Bihar and Orissa 2:396.1961; Matthew, Fl.Tam.Carnatic 1:605.1983; Saxena & Brahmam, Fl.Orissa 2:707.1995. "Ramdauni" (LYTHRACEAE) Erect herbs. Leaves oblong-elliptic or oblanceolate, 2-6 x 0.4-0.7 cm, base cuneate, entire, acute. Cymes dichasial, sub-sessile. Fls. 4-merous, dark red. Hypanthium campanulate. Petals absent. Fls. & Frts.: August-December; commonly found in marshy places and rice fields. Leaves are used in removal of kapha, vata and blood troubles. Leaves are used to raise blisters in rheumatic pains and fevers. Leaves are employed to cure herpetic eruptions. Fresh or dried plant is administered in decoction with zinger and cyperus root for intermittent fevers and its ashes are mixed with oil and applied to herpetic eruptions.

2. Bacopa monnieri (L.) Pannel, Proc. Acad. Nat. Sci. Philadelphia 98.94.1946; Cramer in Dassan. & Fosberg, Rev. Handb. Fl.Ceylon 3:421.1981; Saxena & Brahmam, Fl.Orissa 2:1229.1995. *Lysimachia monnieri* L.Cent. Pl.2:9.1756. *Herpestis monnieria* (L.) HBK. Nov. Gen. 2:366.1817; Haines, Bot. Bihar and Orissa 2:652.1961. ("Monniera") (SCROPHULARIACEAE) Glabrous, succulent herbs. Stem creeping, rooting at nodes. Leaves obovate-oblong, entire, sessile, obtuse, 0.9 –2.0 x 0.3 – 1 cm, glabrous. Fls solitary in leaf-axil. Sepals divided to the base; outer one broadly ovate, inner linear-lanceolate. Corolla white, campanulate, glabrous. Fls. & Frts.: August-December; mostly found in sandy areas. The plant is digestive and useful in epilepsy, tumours, ulcers, constipation, asthma, bronchitis, skin diseases, leprosy, leucoderma, syphilis, elephantiasis, sterility, fever.

3. Biophytum sensitivum (L.) DC. Prodr. 1:690.1824; Haines, Bot. Bihar and Orissa 1:161.1961; Veldk. In Steenis, Fl. Males.I.9:162.1971; Saxena & Brahmam, Fl. Orissa 1:219.1994. *Oxalis sensitiva* L.Sp.Pl.434.1753. "Chotta lajakuli" (OXALIDACEAE Erect herbs; branchlets downy pubescent. Leaves petiolate, pinnately compound; leaflets 8-12 pairs, sessile, obtuse, apiculate, and glabrous. Inf. umbellate cyme, each 7-10 fld. Fls. pedicellate, bracteate, regular. Sepals 5, lanceolate, acute, persistent, glabrescent, glandular pubescent. Petals orange-yellow, glabrous, oblong. Fls & Frts.: June-September; very common in marshy places. The seeds are powdered and applied to wounds. The root decoction is given in gonorrhea and lithiasis. Decoction of leaves is used as an expectorant and pounded leaves are applied to wounds and bruises. The decoction of the leaves is given in asthma and snake bite. The plant is used as a tonic and mild stimulant.

4. Blumea lacera (Burm.f.) DC. in Wt... Contrib. 14.1834; Haines, Bot. Bihar and Orissa 1:493.1961; Grierson in Dassan. & Fosberg, Rev. Handb. Fl.Ceylon 1:170.1980; Saxena & Brahmam, Fl. Orissa 2:904.1995. *Conyza lacera* Burm.f.Fl.Ind.180, t.59.f.1.1768. Pokasunga" (ASTERACEAE) Erect aromatic herbs, glandular pubescent; branchlets pubescent. Leaves broadly elliptic or oblanceolate, the lower ones lyrately lobed, attenuate base, apiculate apex, irregularly serrate- dentate, densely sericeous beneath. Heads in terminal close corymbs, yellow. Fls. & Frts.: August-November; usually found in marshy places. The juice of root cures diarrhea if given 1 tea spoonful twice per day.

5. Boerhavia diffusa L.Sp.Pl.3.1753; Haines, Bot. Bihar and Orissa 2:795.1961; Matthew, Fl. Tam. Carnatic 2:127.1983; Saxena & Brahmam, Fl. Orissa 3:1492.1995. "Puruni" (NYCTAGINACEAE) Succulent prostrate herbs. Leaves broadly ovate, 2-4 x 2-3 cm, glabrous, apex acute, base cordate. Inf. axillary or terminal panicle. Fls. pink, regular, bisexual. Perianth campanulate, 5- lobed, glabrous inside. Fls. & Frts.: October-April; very common in marshy places. Leaves are useful in dyspepsia, tumors, enlargement of the spleen, abdominal pains. Leaves are used in opthalmia and for eye wounds, useful in joint pains. The seeds are tonic, expectorant, carminative, and useful in muscular pain, lumbago, scabies, scorpion-sting, purity of blood, hasten delivery. Root is used in jaundice, ascites, anasarca, scanty urine, internal inflammations. The herb is employed as a diuretic in gonorrhea. The root ground in rice water is given internally for snake-bite.

6. Centella asiatica (L.) Urb. In Mart. Fl.Bras. 11(1):287.1879; Krahulik & Theob. In Dassan. & Fosberg, Rev. Handb. Fl. Ceylon 3:484.1981; Manilal, Fl. Silent Valley 124.1988; Saxena & Brahmam, Fl. Orissa 2:778.1995. *Hydrocotyle asiatica* L. Sp.Pl.234.1753; Haines, Bot. Bihar and Orissa 2:423.1961. "Thalkudi" (APIACEAE) Prostrate herbs with long creeping stems, rooting at nodes. Leaves orbicular-reniform, pubescent, cordate base, crenate, apex rotund. Inf. 3-5 flowered, simple umbel. Calyx-lobes 5, triangular. Petals 5, purplish. Fls. & Frts.: October-February; very common in marshy places. The plant is used as cardio tonic. It is administered in insomnia, cardiac debility, epilepsy, hoarseness, asthma, bronchitis, hiccough, abdominal disorders, leprosy, strangury and fever. The leaves are useful in abdominal disorder due to dysentery in children.

7. Cissampelos pareira L. Sp. Pl. 1031.1753; Haines, Bot. Bihar and Orissa 1:17.1961; Babu, Herb. Fl. Dehradun 45.1977. "Akanabindhi" (MENISPERMACEAE) Slender dioecious climbers. Stems terete, glabrescent. Leaves long petioled, alternate, ovate or reniform, entire, rounded apex, palmately nerved. Male Inf. axillary, umbellate cyme. Fls. pedicellate, minute, greenish. Female Inf. axillary drooping raceme. Fls. pedicellate, dull yellow; bracts villous. Fls. & Frts.: June-November. The decoction of root in hot water is taken orally for cure snakebite. The decoction of leaves in cold water is used 3 times for 15 days to cure diarrhea and urinary troubles. A piece of stem is tied to cure headache.

8. Commelina benghalensis L.Sp.Pl.41.1753; Haines, Bot. Bihar and Orissa 3:1125.1961; Manilal & Sivarajan, Fl.Calicut 297.1982; Saxena & Brahmam, Fl. Orissa 3:1985.1995. "Kanisiri" (COMMELINACEAE) Succulent, diffuse or creeping herbs rooting at nodes. Leaves ovate, acute, 2.5-5 x 1.5-3 cm, densely hispid, margin ciliate. Spathes 1-3 together, conduplicate. Fls. blue. Fls. & Frts.: July-November. The plant is useful in leprosy. Medicines are prepared from the plant for treating barrenness in women. It is used in the form of a decoction as drink, lotion, and bath.

9. Crotalaria prostrata Rottl.*ex* Willd. Enum. Hort. Berol. 747.1809; Haines, Bot. Bihar and Orissa 2:240.1961; Matthew, Fl.Tam.Carnatic 1:361.1983; Saxena & Brahmam, Fl.Orissa 1:481.1994. "Vishnukarni" (FABACEAE) Prostrate herbs; branchlets hispid. Leaves simple, oblong-elliptic, appressed pubescent, apex obtuse, margin ciliate. Inf. lateral raceme. Calyx-lobes lanceolate, ciliate. Corolla yellow, hardly exserted, apex emarginated. Fls. & Frts,: September-January. 1 spoonful of decocted root is used in stomach disorder and diarrhea for 5 days. The paste of root with sugar candy is taken to cure burning sensation. The decoction of root cures stomach pain.

10. Eclipta prostrata (L.) L.Mant. Pl. 2:286.1771; Grierson in Dassan. & Fosberg, Rev. Handb. Fl.Ceylon 1:212.1980; Saxena & Brahmam, Fl. Orissa 2:926.1995. *Verbesina prostrata* L.Sp.Pl.902.1753. Eclipta Alba (L.) Hassk. Pl.Jav. Rar.528.1848; Haines, Bot. Bihar and Orissa 2:503.1961. "Keshadura" (ASTERACEAE) Erect, ascending herbs, rooting at nodes. Leaves sessile, opposite, linear-lanceolate, cuneate, entire, densely covered with appressed hairs, 3-5 x 1-2 cm. Heads axillary, solitary or terminal heterogamous, white. Involucral bracts multi-seriate, ovate, obtuse, pubescent. Ray florets; ligulate, female. Disc florets; tubular, bisexual. Corolla tubular-campanulate; lobes 5, oblong. Fls. & Frts.: August-January; common in marshy places and rice fields. The plant is administered in elephantiasis, inflammations, gastropathy, anorexia, skin diseases, wounds, ulcers, fever, and jaundice. Seeds are used in increasing sexual vigour.

11. Euphorbia hirta L. Sp. Pl. 454. 1754; H. 1:147. (152). 1921; G. 2:1275 (892). 1925; Saxena & Brahmam, Fl. Orissa 3:1634. 1995. E. pilulifera auct. Non L. FBI 5:250. 1887. "Chita-kutei" (EUPHORBIACEAE) Ascending pubescent herbs. Leaves opposite, 2-3x1-1.5 cm, obovate-oblong, oblique, serrulate, acute, pubescent. Flowers green, in axillary, peduncled, globose head like cymes. Involucre staminate or hermaphrodite, hispidulous, 4-glanded. Styles 3. Capsules 3-lobed. Fls. & Frts.: August-November. Fairly common weed. The leaf paste is given to the mother against low lactation. Whole plan is used to cure asthma and common cold.

13. Heliotropium indicum L.Sp.Pl.130.1753; Haines, Bot. Bihar and Orissa 2:607.1961; Manilal & Sivarajan, Fl. Calicut 176.1982; Saxena & Brahmam, Fl. Orissa 2:1146.1995. "Hatisundhi" (BORAGINACEAE) Erect herbs; branchlets hirsute. Leaves broadly elliptic-ovate, 7-12 x 5-7 cm, sparsely strigose along the nerves, base truncate to attenuate; lateral nerves 6-pairs. Inf. terminal spike. Fls. liliac, 2-ranked. Corolla salver-form; lobes broadly ovate, obtuse. Fls. & Frts.: August-February; very common in waste places. The plant is employed in all intractable fevers. The leaves are applied externally to ulcers, wounds and local inflammations. The leaves are used in case of fever. Decoction of leaves and young shoots is taken for urticaria. Externally plasters of the roots and leaves are applied to ringworm and for rheumatism. Leaves are used to cure sore throat. Leaves are useful in curing gonorrhea, erysipelas and also applied locally in boils, sores and stings. Boiled leaves mixed with clay are used to stop abortion. An infusion of the flowers is taken for menorrhagia.

14. Hydrolea zeylanica (L.) Vahl. Symb. Bot. 2:46.1791; Haines, Bot. Bihar and Orissa 2:599.1961; Manilal & Sivarajan, Fl. Calicut 175.1982; Saxena & Brahmam, Fl. Orissa 2:1133.1995. *Nama zeylanica* L.Sp. Pl.226.1753. "Languliya" (HYDROPHYLLACEAE) Procumbent or sub-erect, spreading herbs, rooting at nodes. Leaves simple, entire, elliptic-oblong, base truncate, apex acute, glabrous above, 3-5 x 1-1.5 cm. Inf. axillary or terminal lax raceme. Calyx-lobes 5, elliptic-lanceolate, hirsute, acute. Corolla deep-blue; lobes 5, ovate, obtuse. Fls. & Frts.: December-March; very common in marshy places. The leaves beaten into a pulp and applied as a poultice, are considered to have a cleaning and healing effect on neglected and callous ulcers.

15. Hygrophila auriculata (Schum.) Heine, Kew. Bull. 16:173.1962; Manilal *et* Sivarajan, Fl. Calicut 224.1982. *Barleria auriculata* Schum. & Thonn. Besker Guin. Pl.285. 1927. *Asteracentha longifolia* (L.) Nees in Wall. Pl. As. Rar. 3:90.1832; Haines, Bot. Bihar and Orissa 2:704.1961. "Koilikhia" (ACANTHACEAE) Armed, strigose-hispid herbs, thorned at the nodes. Leaves whorled, lanceolate, 12-15 x 1.5-3.0 cm, base cuneate, margin minutely dentate, and apex acute. Fls in axillary whorls. Calyx- lobes 4, unequal, lanceolate. Corolla bluish-purple, widening above. Fls. & Frts.: October-December; common along water courses. The roots are used in dropsy of chronic bright's disease, hyperdipsia, jaundice, dysentery. The leaves are useful in jaundice, dropsy, rheumatism, lumbago, anasarca, diseases of urogenetical tract, arthritis, cough, gastropathy, anaemia. The seeds are used in healing gonorrhea, promoting sexual vigour and strength, arresting abortion, anaemia, diarrhea, dysentery and rheumatism.

16. Knoxia sumatrensis (Retz.) DC. Prodr. 4:569.1830; Panigrahi *et* Murti, Fl. Bilaspur 1:285.1989. *Spermacoce sumatrensis* Retz. Obs. Bot. 4:23.1786; *Knoxia corymboa auct none.* Willd. 1797; Haines, Bot. Bihar and Orissa 2:473.1961. (RUBIACEAE) Erect, annual, pubescent herbs. Stems obscurely grooved. Leaves petiolate, opposite, lanceolate, cuneate, acute, 5-12 x 1.5-2.5 cm, stipules hairy, filiform. Inf terminal corymbose cymes. Fls minute, white or purplish. Calyx-teeth triangular, sub-equal. Corolla-tubes cylindric, hairy within. Fls. & Frts.: August-December. The decoction of the plant is given in bubo for 3 days twice daily. It can cure also stomach trouble.

17. Melochia corchorifolia L.Sp. Pl. 675.1753; Haines, Bot. Bihar and Orissa 1:85.1961; Matthew, Fl.Tam.Carnatic 1:147.1983; Saxena & Brahmam, Fl. Orissa 1: 183. 1994. "Telpuri" (TILIACEAE) Erect under-shrubs; branchlets stellate tomentose. Leaves ovate-lanceolate, coarsely serrate, palmately nerved, acute, margin cordate, truncate. Inf. terminal clustered cyme. Fls. bisexual. Calyx 5-toothed, puberulous. Petals 5, pink, obovate. Stamens 5, connate below. Fls & Frts.: August-December; usually found in marshy places and rice field. The whole plant except root, boiled in oil is taken as a remedy for preventing bad consequences from the bite of water snake.

18. Merremia tridentata (L.) Hall.f.Bot. Jahrb. Syst. 16:552.1893; Austin in Dassan. & Fosberg, Rev. Handb. Fl. Ceylon 1:351.1980; Saxena & Brahmam, Fl. Orissa 2:1193.1995. *Convolvulus tridentatus* L.Sp.Pl.157.1753. *Ipomoea tridentata* (L.) Roth in Roem. Arch. Bot. 1(2):38.1798; Haines, Bot. Bihar and Orissa 2:625.1961. (CONVOLVULACEAE) Plants prostrate or twinning with

woody root stock. Leaves linear or lanceolate, 2-5 to 6 cm long, base truncate or hastate, several toothed, acuminate. Inf. axillary solitary or few flowered cyme. Fls. pale yellow with purple eye. Sepal's glabrous, elliptic-oblong. Corolla campanulate. Fls. & Frts.: August-December. The plant is tonic and laxative. It is used in rheumatism, piles and urinary disorder.

19. Mimosa pudica L. Sp. Pl. 518. 1753; FBI 2:291. 1878; G. 1:421 (298). 1919; H. 2:332 (336). 1922; Rev. Handb. Fl. Ceyl. 1:463. 1980; Saxena & Brahmam, Fl. Orissa 1:430. 1994. "Lajakuli" (MIMOSACEAE). Diffusely branched prostrate herbs armed with prickles. Leaves alternate, pinnae 1-2 pairs, leaflets 12-20 pairs, 6-8x2-3 mm, linear-oblong, appressed hairy beneath, sensitive to touch. Flowers pinkish, small in axillary globose heads. Calyx minute. Petals united below, 2 mm long. Stamens 4, free, much exserted. Ovary stipitate, style filiform, stigma minute. Pods 2- 3x0.2-0.3 cm flat, bristly. Fls. & Frts.: November-March. Fairly common as a weed throughout the district. Root paste is slightly worm and applied on boils for yearly healing. Plant is also used to cure from scorpion bite.

20. Phyllanthus urinaria L. Sp. Pl. 982. 1753; FBI 5:293. 1887; H. 1:125 (129). 1921; G. 2:1289 (902). 1925; Saxena & Brahmam, Fl. Orissa 3: 1676. 1995. "Badianla" (EUPHORBIACEAE) Glabrous herbs. Leaves 0.8-2x0.5-1 cm, oblong, entire, acute, glabrous. Flowers white, dioecious, axillary, males pedicellate, clustered, female sessile, solitary. Perianth lobes 5, linear- oblong. Capsule globose, depressed. Fls. & Frts.: August-November. Paste of whole plan is used to cure dysentery and vomiting.

21. Scoparia dulcis L.Sp.Pl.116.1753; Haines, Bot. Bihar and Orissa 2:668.1961; Cramer in Dassan. & Fosberg, Rev. Handb. Fl.Ceylon 3:439.1981; Saxena & Brahmam, Fl.Orissa 2:1262.1995. "Chirarita" (SCROPHULARIACEAE) Erect herbs. Leaves opposite or whorled, oblanceolate, 1-3.5 x 0.5-1.5 cm, base cuneate, margin serrate, apex acute, punctate beneath. Fls. axillary, 3-4 from each node, white. Calyx- lobes 4, free, oblong, imbricate. Corolla rotate; lobes 4, truncate, obtuse. Fls. & Frts.: August-November. It is used in infusion in ague. The plant is used in gargling to cure tooth ache. The decoction of the root is given in blennorrhagia and in excessive menstruation.

22. Sesamum orientale L.Sp.Pl.634.1753; Babu, Herb. Fl. Dehradun 372.1977; Saxena & Brahmam, Fl.Orissa 2:1313.1995. *Sesamum indicum* L.Sp.Pl.634.1753; Haines, Bot. Bihar and Orissa 2:693.1961. "Khasa" (PEDALIACEAE) Erect, branched, glandular-pubescent herbs upto 1 mt high. Stems obtusely 4-angular. Leaves opposite, petiolate, ovate-lanceolate, base acute, 8-11 x 4-6 cm, margin serrate. Fls. 1-3 together in leaf-axils forming a leafy raceme; pedicels with a pair of yellow glands at base. Calyx-lobes 5, persistent. Corolla white with purple-tinged, glandular-hairy outside. Fls. & Frts.: December-May; found on the road side as an escape. The seeds are grinded and applied to bubo. Oil of the seeds cure eczema.

23. Sida acuta Burm. f. Fl. Ind. 147. 1768; Wt. Ic. t. 95. 1838; G. 1: 90 (64). 1915; H. 1: 61 (63). 1921; Paul & Nayar, Fasc. Fl. India 19:202. t. 49. 1988; Saxena & Brahmam, Fl. Orissa 1:159. 1994. S. carpinifolia Sensu Mast. in FBI 1:323. 1874, non L. f. 1781. "Bajramuli" (MALVACEAE). Branched erect herb. Leaves 3-6 cm. long, lanceolate, serrate, acute apex, stipules of each pair dissimilar. Flowers yellow, solitary, axillary. Calyx cupular, 6-8 mm long, lobes triangular, pubescent. Petals 5, yellow, united at base. Staminal column united below, divided at apex into numerous filaments. Ovary 5-9 loculed, styles as many as carpels, stigma simple. Schizocarp 5-6 mm. diameter, thinly pubescent. Fls. & Frts.: June-November. Fairly common in wastelands, cultivated lands, road sides & cleared forests. Whole plant is boiled in water and allowed to cool. This water used to take bath of children to cure skin disease.

24. Sida cordifolia L.Sp.Pl.684.1753; Haines, Bot. Bihar and Orissa 1:61.1961; Hara & Williams, Enum. Fl.Pl.Nepal 2:68.1979; Saxena & Brahmam, Fl. Orissa 1: 161. 1994. "Bisvokopari" (MALVACEAE) Erect under-shrubs; branchlets with spreading hairs. Leaves cordate or ovate, 1.5-4 x 1-3 cm, serrate-crenate. Fls. axillary solitary. Calyx-lobes triangular, acute, pubescent outside. Fls. & Frts.: August-January. The whole plant is used in rheumatism.

25. Smithia conferta Smith in Rees, Cyclop. 33. n. 2. 1816; Haines, Bot. Bihar and Orissa 2:264.1961; Ohashi in Hara & Williams, Enum. Fl. Pl. Nepal 130.1979; Saxena & Brahmam, Fl. Orissa 1:590.1994. (FABACEAE) Annual diffuse herbs. Leaflets 3-6 pairs, linear-oblong, sub-sessile, obtuse, and densely bristly along the margin. Fls. solitary or 2 in the axil of upper leaves; bracteoles scarious, elliptic- oblong. Corolla yellow, shortly exserted; wings and keels oblong, spurred.Fls. & Frts. September-November. It is used in biliousness, rheumatism, ulcers and sterility in women.

26. Tridax procumbens L. Sp. Pl. 900. 1753; FBI 3:311. 1881; G. 2:711 (500). 1921; H. 2:486 (510). 1922; M. 79. 1950; Rev. Handb. Fl. Ceyl. 1:232. 1980; Saxena & Brahmam. Fl. Orissa 2:964. 1995. "Bisalya karani" (ASTARACEAE) Procumbent pubescent herbs. Leaves opposite, 3-5x2-3.5 cm, ovate-lanceolate, serrate, hispid. Heads solitary, on erect hairy long peduncle, involucral bracts 2-3 seriate, outer ovate- lanceolate, inner lanceolate. Corolla yellowish white, 3-lobed in ligulate females, 5 lobed in bisexuals. Achenes 2-3 mm long, hairy, black, pappus bristles unequal. Fls. & Frts.: October-February. Common weed. Leaf paste is locally applied on fresh cuts, wounds and piles.

Discussion

Although quite a good number of medicinal plants have been wiped away from the district due to operation of various biotic factors still this district is a grand repository of many indigenous medicinal plants. Hence appropriate protection and conservation steps of these species are highly required. These life forms can be conserved by developing medicinal gardens in educational and research complexes in general and Ayurvedic hospitals in particular. These will awake adequate interest among the common people for judicious utilization of medicinal plants, which are on the verge of extinction.

Acknowledgement

The authors wish to express their deep sense of gratitude to Director, Botanical Survey of India, and Kolkata for providing facilities and thanks are also due to the staff of Odisha Forest Department for necessary help and support in the field studies.

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