

MEDICINAL PLANTS AMONG CERTAIN ADIBASIS IN INDIA

S. K. JAIN*, D. K. BANERJEE

AND

D. C. PAL

Botanical Survey of India, Howrah

ABSTRACT

The authors are engaged in ethnobotanical studies among certain tribal populations of India. Field work was done among the Chenchu, Reddi, Valmiki and Gond tribes in Andhra Pradesh and Saora and Kondh tribes in Orissa States of India.

The indigenous plants used by the Adibasis for food and medicine were particularly studied. The present paper deals with some more important medicinal plants encountered in the area of study. Thirty-two species are discussed; these belong to 21 families and 29 genera of Angiosperms. The botanical name, family, habit, local names (in Telugu, Kui, Saora or Oriya languages), tribal medicinal uses, locality of observation and voucher herbarium specimens are given.

Those tribal uses which do not seem to be recorded in familiar published literature have been marked with an asterisk.

An index to 40 diseases referred in the paper is given.

INTRODUCTION

The authors have been doing ethnobotanical work among Adibasis of India for last several years. Among the numerous uses to which plants are put by the Adibasis those for food and medicine deserve special attention. Many less-known food plants have potentiality of introduction among urban people and wider utilisation (Jain 1964, Jain and De 1964, Pal and Banerjee 1971).

The immense practical utility of the study of medicinal plants among Adibasis has been discussed by several authors (Jain 1965a, Jain 1965b, Jain and Tarafder 1963, Jain and Tarafder 1970, Schultes 1960, Stimson 1971).

The present paper is based on the materials and information gathered by the authors among some Adibasis in the States of Orissa and Andhra Pradesh in India. Some more important medicinal plants encountered in the area of study are discussed.

Orissa and Andhra Pradesh are situated in south-eastern part of India and are among

those states where the tribal people form a considerable part of rural population.

The areas studied by the authors in Andhra Pradesh are inhabited by the Chenchu, Reddi, Valmiki and Gond tribes and in Orissa by the Saora and Kondh tribes.

The method of field work followed in these studies was same as adopted by Jain (1965b). The remote forest areas where the modern system of medicine has hardly influenced the local medicinemen were visited. The local medicinemen or elderly people from the tribal village were requested to accompany us to collect plants and work with us in the forest. Plants and their uses were discussed in the forest and also in the camp. Specimens of plants were collected and preserved. These herbarium specimens with detailed notes on the locality of collection and information on uses are a valuable record for future reference and study; and are hoped eventually to form a library-cum-herbarium of ethnobotanical data. The specimens are deposited in the herbarium of Central Botanical Laboratory, Botanical Survey of India, Howrah.

* Present address : Botanical Survey of India, Shillong

The information recorded in the field has been compared with some important reference works on medicinal plants of India (Chopra *et al.* 1956, Dastur 1951, Jain 1968, Kirtikar and Basu 1935) and other general works on economic plants (Maheshwari and Singh 1964, Uphoff 1959. *Wlth. India* 1948-1972).

Uses, which are not recorded in the above published literature and do not seem to be widely known, are marked with an asterisk.

The purpose of this paper is NOT to prescribe any remedies for diseases but to draw the attention of plant chemists and pharmacologists to these reports for further critical and scientific study.

The species are arranged alphabetically by botanical names. The information is given in the following sequence:

Botanical name, family, habit, local names (language indicated in parenthesis), use, as reported by the tribals, locality where information was recorded, *i.e.* place, altitude, district, state, specimen, giving name of collector and field number.

The following abbreviations have been used in the paper:

A. P.: Andhra Pradesh; C.B.L.: Central Botanical Laboratory (This information is given to distinguish authors' collections of same field number from other states); Kui: Language of the Kondhs; Loc.: Locality; Or.: Oriya language; Sao.: Saora language; Tel.: Telugu language.

1. **Achyranthes aspera** Linn. (Amaranthaceae). Shrub.

Local name: "Uttareni" (Tel.).

The whole plant is mashed in water with fruits of *Piper longum* Linn. Tablets are prepared out of this paste. Three tablets are taken with hot water daily for 3 days to cure effects of bite of mad dog. The mango and mango products should be avoided for nine months.

Loc. Tajangi, ± 750 m, Chintapalli, Visakhapatnam (A. P.), *Banerjee*, C.B.L. 7455.

2. **Andrographis paniculata** Nees (Acanthaceae). Shrub.

Local name: "Bhuilimb", "Rasang" (Sao.); "Bhuingkara" (Kui); "Bhimlimnik" "Nalemi" (Tel.).

(i) The leaves are mashed and applied on body in itches.

Loc. Mohana, Ganjam (Orissa), *Jain & Pal*, C.B.L. 8229.

(ii) The juice of the leaves is used in treatment of fever and colic pain. Else, pea-size pills are prepared from the leaf-paste and taken orally three times daily after food for 2 or 3 days.

Loc. Nandikutkur, Kurnool (A.P.), *Jain & Banerjee*, C.B.L. 7253.

Loc. Mohana, Ganjam (Orissa), *Jain & Pal*, C.B.L. 8229.

(iii) The plant with some other ingredients is believed to be useful in snake-bite.

Loc. Nandikutkur, Kurnool (A.P.), *Jain & Banerjee*, C.B.L. 7253.

3. **Argemone mexicana** Linn. (Papaveraceae). Shrub.

Local name: "Sundesapka" (Kui); "Rak-kisa", "Udasmari" (Or.); "Nyadudid" (Sao).

(i) The leaf juice is used in eye complaints. The latex is applied in scabies.

Loc. Sinkulipada, ± 700 m, Mohana (Orissa), *Jain & Pal*, C.B.L. 8275.

(ii) The leaf juice is mixed with common salt and water (1: 1) and applied in ringworm, scabies and other skin diseases.

Loc. Chompi village, ± 1200 m, Araku (A.P.).

4. **Calotropis gigantea** (Linn.) R. Br. ex Ait. (Asclepiadaceae). Shrub.

Local name: "Pak" (Sao.); "Jilledu chettu" (Tel.).

* (i) The root is pounded in water and liquor made out of "Mohua" (*Madhuca indica*), and applied externally on leprosy, also taken internally.

Loc. Ladrimi, Ganjam (Orissa), *Jain & Pal*, C.B.L. 8225.

(ii) "Konds" use the latex in decay of teeth.

Loc. Ladrimi, Ganjam (Orissa), *Jain & Pal*, C.B.L. 8225.

Also used similarly in A.P.

*(iii) The root is applied on snake and scorpion bite.

Loc. Chinnaboinapally, alt. \pm 450 m, Warangal (A.P.), *Jain & Banerjee*, C.B.L. 7244.

5. **Cardiospermum halicacabum** Linn. (Sapindaceae). Climber.

Local name: "Opelumandu", "Mayajal" (Or.).

(i) The juice of the leaves is taken orally to reduce bulkiness of the body. The result is also achieved by massage of leaves.

Loc. Sunkarimetta, \pm 1200 m, Araku, Visakhapatnam (A.P.).

(ii) The stem is crushed and it is taken with water in ordinary fever.

Loc. Ranajillada, \pm 1200 m, Araku (A.P.), *Banerjee*, C.B.L. 7360.

6. **Cassia occidentalis** Linn. (Caesalpiniaceae). Shrub.

Local name: "Paddakasivinda" (Tel.).

Juice of the roots and leaves is used locally in the treatment of skin diseases, like ringworm, itch and scabies.

Loc. Gaddamputtu, \pm 900 m, Paderu (A.P.), *Banerjee*, C.B.L. 7379.

7. **C. tora** Linn. (Caesalpiniaceae). Shrub.

Local name: "Tellakasirya", "Chenakasi-vinda" (Tel.).

(i) Leaves are pounded with egg albumen and applied externally as a plaster on bone fracture. The plaster is maintained on the broken parts for 3 to 4 days.

Loc. Pacheru, \pm 540 m, Kurnool (A.P.), *Jain & Banerjee*, C.B.L. 7268.

(ii) The root is mashed in lime juice and applied on ringworm.

(iii) The leaves and seeds are applied on skin diseases.

Loc. Guddamputtu, \pm 900 m, Paderu (A.P.), *Banerjee*, C.B.L. 7380.

8. **Cissampelos pareira** Linn. (Menispermaceae). Climber.

Local name: "Parangad" (Sao.); "Sema-yeru" (Tel.); "Akanbindi" (Or.).

(i) The pounded roots (mixed with *Rauvolfia* and one other root) are given to relieve cough, cold and fever.

Loc. Taradsing, Ramgiri (Orissa), *Jain & Pal*, C.B.L. 8254.

(ii) Roots are taken internally in stomach pain and indigestion.

Loc. Damuka village, Anantagiri, Visakhapatnam (A.P.), *Jain & Banerjee*, C.B.L. 7203.

(iii) Adibasis crush the leaves and drink with water in case of heart burn.

Loc. Ranajillada, \pm 1200 m, Araku (A.P.), *Banerjee*, C.B.L. 7357.

9. **Clematis gouriana** Roxb. (Ranunculaceae). Climber.

Local name: "Punpulenglen" (Sao.).

If there is an injury to eye due to some hitting, the sap in the stem is blown by mouth into the eyes.

Loc. Taradsing, Ganjam (Orissa), *Jain & Pal*, C.B.L. 8255.

10. **Clerodendron serratum** Spr. (Verbenaceae). Shrub.

Local name: "Gantubharangi" (Tel.).

The root is used in cough. Aqueous extract of root is taken orally twice daily to cure whooping cough. (*Source*: Andhra Pradesh Co-operative Medical Store)

Loc. Narsipatnam, Visakhapatnam (A.P.).

11. **Cryptolepis buchananii** Roem. & Schult. (Asclepiadaceae). Climber.

Local name: "Lavar" (Sao.); "Mirpa-teeva", "Morsimada" (Tel.); "Nabraha" (Or.); 'Audatiya' (Kui).

*(i) The latex is mixed in hot water and applied on knees to cure rheumatism.

Loc. Ladrimi, Ganjam (Orissa), *Jain & Pal*, C.B.L. 8234.

*(ii) Extract of the root is prescribed internally to cure fits.

Loc. Anantagiri, \pm 1000 m, Visakhapatnam (A.P.), *Jain & Banerjee*, 7204.

12. **Curculigo orchoides** Gaertn. (Amaryllidaceae). Herb.

Local name: "Sukkadumpa", "Pillitega" (Tel.).

* (i) The juice of the tuber of this plant is mixed with the juice of garlic (*Allium sativum* Linn.) and one other (?) ingredient, and used as eye drop to cure blindness and white spots on the eye ball.

Loc. Chompi village, \pm 1200 m, Araku (A.P.), *Banerjee*, C.B.L. 7336.

(ii) The juice of the plant is applied to cuts and wounds (like Iodine).

Loc. Gudem, \pm 750 m, Chintapalli (A.P.), *Banerjee*, C.B.L. 7432.

(iii) When cattle suffer from eye diseases (watering), the juice of the tuber is used as eye drop.

Loc. Tadiputtu, \pm 900 m, Paderu (A.P.), *Banerjee*, C.B.L. 7404.

13. **Desmodium laxiflorum** DC. (Papilionaceae). Shrub.

Local name: "Kadakatru" (Tel.).

*Roots are pounded and given orally to cure unconsciousness.

Loc. Anantagiri, \pm 1050 m, Visakhapatnam (A.P.), *Banerjee*, C.B.L. 7210.

14. **Elephantopus scaber** Linn. (Compositae). Herb.

Local name: "Phudna" (Mun.); "Manjurchendi" (Tel.).

The root of this plant and root of *Zanthoxylum armatum* DC. are crushed and applied to kill worms in teeth.

Loc. Anantagiri, \pm 1050 m, Visakhapatnam (A.P.), *Jain & Banerjee*, C.B.L. 7212.

15. **Eupatorium odoratum** Linn. (Compositae). Shrub.

Local name: "Kusuri" (Sao.), "Rukusi" (Or.), "Zaman" (Kui.).

The leaves are crushed and the juice is applied on cuts.

Loc. Mohana; Sinkulipadar, 700 m,

Ganjam (Orissa), *Jain & Pal*, C.B.L. 8223 & 8273.

16. **Euphorbia hirta** Linn. (Euphorbiaceae). Herb.

Local name: "Dudijilledu", "Gajul" (Or.); Palsilledu (Tel.).

* (i) The juice of the leaves is applied on burns.

Loc. Chompi village, \pm 1200 m, Araku (A.P.), *Banerjee*, C.B.L. 7326.

(ii) The leaves are crushed and applied as paste on pain in joints of hands and legs.

Loc. Ranajillada, \pm 1200 m, Araku (A.P.), *Banerjee*, C.B.L. 7356.

17. **Ficus racemosa** Linn. Syn. *F. glomerata* Roxb. (Moraceae). Tree.

Local name: "Merchettu" (Tel.).

Latex is spread on a piece of cloth or paper and placed outside on the neck to cure pain in the throat. Small quantity of latex is also applied on stomach of children in pain.

Loc. Chinnaboinapally, \pm 450 m, Warangal (A.P.), *Jain & Banerjee*, C.B.L. 7240.

18. **Gloriosa superba** Linn. (Liliaceae). Climber.

Local name: "Chengarollagadda" (Tel.).

The root is dried and powdered; and then applied on septic ulcers.

Loc. Chinnaboinapally, \pm 450 m, Warangal (A.P.), *Jain & Banerjee*, C.B.L. 7238.

Note: The root is highly poisonous; and its application might be in small quantities; details could not be available.

19. **Glycosmis pentaphylla** (Retz.) Correa (Rutaceae). Shrub.

Local name: "Tarang" (Sao.); "Gulungosa" (Tel.); "Rachmuni" (Kui.); "Dubuduba" (Or.).

(i) The paste of the root is given with water 2-3 times daily in post-delivery pains.

Loc. Ladrini, 700 m, Ganjam (Orissa), *Jain & Pal*, C.B.L. 8219.

(ii) Roots are pounded and made into pills; these are given to kill worms in stomach.

Loc. Anantagiri, ± 1050 m, Visakhapatnam (A.P.), Jain & Banerjee, C.B.L. 7223.

20. **Helicteres isora** Linn. (Sterculiaceae). Shrub.

Local name: "Kurkurai" (Sao.); "Keheli" (Kui.).

The decoction of root is applied on cuts and wounds.

Loc. Randiba, Ramgiri (Orissa), Jain & Pal, C.B.L. 8264.

21. **Hemidesmus indicus** Schult. (Asclepiadaceae). Climber.

Local name: "Sugandhi" (Or.); "Alasugandhi" (Tel.); "Palasugandh" (Tel.).

(i) About 120 gm of a mixture of the root, milk and sugar is given in the morning for 40 days to cure nervous disorders, laziness, weakness and body pain.

Loc. Lammasingi, ± 750 m, Chintapalli (A.P.), Banerjee, C.B.L. 7449, 7450.

(ii) A sweet drink is prepared from the root. It is believed to be cooling and is recommended for reducing excess heat in body.

Loc. Chompi village, ± 1200 m, Araku (A.P.), Banerjee, C.B.L. 7324.

22. **Limonia crenulata** Roxb. (Rutaceae). Tree.

Local name: "Kumballi" (Sao.); "Biyut" (Kui.).

The root is pounded and made into pills; these are taken orally to reduce body pain.

Loc. Ladrimi, Ganjam (Orissa), Jain & Pal, C.B.L. 8232.

23. **Malvastrum coromandelianum** Garcke (Malvaceae). Herb.

Local name: "Borantphulgosa" (Tel.).

Leaves are rubbed in castor oil and applied externally on sprains or rheumatism.

Loc. Anantagiri, ± 1050 m, Visakhapatnam (A.P.), Jain & Banerjee, C.B.L. 7206.

24. **Oroxylum indicum** Vent. (Bignoniaceae). Tree.

Local name: "Barberi" (Sao.),

*The bark of the plant is mashed and applied on scabies.

Loc. Phulbani, ± 800 m, (Orissa), Jain & Pal, C.B.L. 8307.

25. **Phyllanthus asperulatus** Hutch. Syn. *P. niruri* auct. non Linn. (Euphorbiaceae). Herb.

Local name: "Bhui amla" (Or.); "Nelaoshireku" (Tel.).

* (i) The leaves mixed with grains of a grass (*Panicum* sp.) believed to promote sexual desire to men.

Loc. Sunkarimetta, ± 1200 m, Araku (A.P.), Banerjee, C.B.L. 7353.

(ii) The leaves are crushed in water, and given as first drink early in morning in treatment of dysentery.

Loc. Ranajillada, ± 1200 m, Araku (A.P.), Banerjee, C.B.L. 7359.

26. **Plumbago zeylanica** Linn. (Plumbaginaceae). Shrub.

Local name: "Chitapari" (Sao., Or.); "Sitapari" (Kui.).

(i) The decoction of the root promotes appetite.

(ii) The root is used as abortifacient.

Loc. Panigunda, Ganjam, ± 700 m, (Orissa), Jain & Pal, C.B.L. 8285.

27. **Sida cordifolia** Linn. (Malvaceae). Undershrub.

Local name: "Pangasirea" (Sao.).

*The leaves and roots are mashed and applied locally on boils to ripen and open them.

Loc. Phulbani (Orissa), Jain & Pal, C.B.L. 8301.

28. **Solanum torvum** Swartz (Solanaceae). Shrub.

Local name: "Pagoka" (Sao.); "Nullu dioti" (Or.); "Bongeredu" (Tel.), "Chitrayachettu" (Tel.).

* (i) Root is mashed in tamarind (*Tamarindus indica* Linn.) water and given as antidote to poisoning.

Loc. Simulbari, Phulbani (Orissa), Jain & Pal, C.B.L. 8302.

* (ii) Outer portion of the roots of this plant and outer portion of the roots of *Achyranthes aspera* Linn., "Akudisti (Tel.) and bark of "Devasondo" (Or.) (*Santalum album* Linn.) are mixed with water, pounded and made into pills. Pills are taken thrice daily with hot water for the treatment of malarial fever.

Loc. Tajangi, \pm 750 m, Chintapalli (A.P.), *Banerjee*, C.B.L. 7454.

(iii) Roots are pounded and made into pills, these are used in stomach pain.

Loc. Sunkarimetta, \pm 1200 m, Araku (A.P.), *Banerjee*, C.B.L. 7346.

29. *Tephrosia purpurea* (Linn.) Pers. (Papilionaceae). Undershrub.

Local name: "Aurdaida" (Sao.); Teelavampalli (Tel.); "Kulanthiya" (Or.), "Chikin", "Pangha Pairi" (Kui).

(i) The paste of the roots is applied on belly to cure dyspepsia.

(ii) Roots are chewed to cure colic pain.

Loc. Ladrими, Ganjam (Orissa), *Jain & Pal*, C.B.L. 8220 & 8271.

(iii) The juice of the roots is mixed with molasses and taken orally to cure stomach pain.

Loc. Gaddemputtu, \pm 900 m, Paderu (A.P.), *Banerjee*, C.B.L. 7381.

30. *Uraria picta* Desv. (Papilionaceae). Shrub.

Local name: "Pingerragadde" (Tel.).

The root is crushed on stone and applied to snake-bite.

Loc. Chinnaboinapally, \pm 450 m, Warangal (A.P.), *Jain & Banerjee*, C.B.L. 7243.

31. *Zanthoxylum armatum* DC. (Rutaceae). Tree.

Local name: "Ranabeligosa" "Sarubeli" (Tel.).

"The root is powdered and taken orally and also applied externally in snake-bite. It is sometimes used in mixture with *Elephantopus scaber* Linn.

Loc. Anantagiri about 1050 m, Visakhapatnam (A.P.), *Jain & Banerjee*, C.B.L. 7213.

32. *Z. budrunga* Wall. (Rutaceae). Climbing shrub.

Local name: "Kuil" (Or.).

Decoction of twigs and leaves is given in fever. A piece of bark placed on tongue promotes salivation.

Loc. Ramgiri, Taradsingi, 700 m, (Orissa), *Jain & Pal*, 8257.

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