



**Ethnomedicinal Plants used by Yanadi Tribes in Seshachalam  
Biosphere Reserve Forest of Chittoor District,  
Andhra Pradesh India**

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**Abstract**

Present study represents unknown utilizations of traditional medicinal plants used by the yanadi tribes of Seshachalam hill region in Andhra Pradesh. Yanadi tribes of this area brought to light unrevealed therapeutic uses of 70 medicinal plants their parts like roots, tubers, stem barks, leaves, flowers, fruits and seeds. They have been using these medicinal plants in the form of paste, powder, juice, decoction, infusion and also in crude form, with other additives like ghee, sesame oil and goat milk to relieve from different ailments. Present study discloses ethnic practices (Yanadi) of 70 plant species belonging to 44 families to relieve different ailments like Skin diseases, Jaundice, Rheumatism, Antidotes, Burning micturition, Fevers, Intestinal worms, Menstrual problems, Cough, Diarrhea, Head-ache, Cold, Diabetes, Tooth-ache, Asthma, Eye diseases, Stomach-ache, Indigestion, Piles, Cuts, wounds, Abscesses, Sexual problems, for getting abortion, Nasal drops and to retain pregnancy.

Key-Words: Ethnobotanical studies, Traditional knowledge, Yanadi tribes and Seshachalam hill region.

**Introduction**

Now Ethno botany is becoming a well established science due to increasing realization of health hazards and toxicity caused by synthetic drugs. Almost 80% of people in developing countries depend on traditional medicines for primary health care, most of which are derived from the plants. The village folk, especially the tribal people are still using the natural resources available in their surroundings to treat many diseases and accidental hazards. With this back ground present work was taken related "*Ethnomedicinal uses of plant resources in Chittoor villages by Yanadi tribes of Seshachalam Biosphere Reserve Forest of Tirupati, Chittoor, Andhra Pradesh India*". The medicinal importance of the flora in this district was reported in the literature (Gamble, J.S. 1915-1936; Nagaraju, N. and K.N. Rao 1990; Rajendran, A., N. Ramarao & A.N. Henry 1997; Reddy, K.N., C.S., Reddy, E.N. Murthy, C. Pattanaik and V.S. Raju 2007; Reddy, R.V. 1995) the forest of this area is covered with vast flora like *Couroupita guianensis* Aubl., *Dichrostachys cinerea* (L.) Wight & Arn., *Gmelina asiatica* L. *Helicteres isora* L., *Shorea tumbuggaia* Roxb., *Canthium dicoccum* (Gaertn.) Merr., *Pterolobium hexapetalum* (Roth) Santapau & Wagh Bull, *Vitex negundo* L. etc.

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Present study area is Seshachalam region, a geographic region in the state of Andhra Pradesh in India. It includes the district of Chittoor. Chittoor district is the southernmost region of Andhra Pradesh, falls under the southern Eastern Ghats of Peninsular India. It lies between 12<sup>o</sup> 37' and 14<sup>o</sup> 8' of North latitude and between 78<sup>o</sup> 33' and 79<sup>o</sup> 5' east longitude. The district spreads over an area of 15,152 sq kms with the population of 3.22 million (Amulya Ratnanda, 1991) and the forest area comprise of 4513.40 sq kms. The district is divided into two divisions, viz, Chittoor East with seven sectors (Bakrapet, Tirupathi, Srikalahasti, Satyavedu, Puttur, Karvetinagaram and Chittoor) and Chittoor West division with five sectors (Madanapalli, Punganur, Bangarupalem, Kuppam and Palamaner). The Eastern Ghats are predominant in the west and they gradually bend towards Tirupati passing through Chandragiri and entering Nellore district. The forest area in the east division (Known as Seshachalam Hills) is mostly hilly and the plateau is at an average height of 500m intersected with wide and deep valleys, while the west division comprises undulating plateau with the elevation varying from 610m to 762m above mean sea level. The district is veered by the common rock (granitic gneiss) similar to the found in Mysore plateau. The climate is tropical and the temperature varies from 40.5<sup>o</sup>C to 16.5<sup>o</sup>C. The average rainfall is

about 320mm which is mostly from the North East monsoon. Phytogeographically, the region is enriched with a diverse flora with large degree of endemism and harbours many varieties of medicinal plants. Plants show gigantism in many forest areas of the region like Tirumala, Talakona, Rangampet, Bakrapet, Kambakkam, Sadasivakona, Kailasakona, Bheemavaram, kaigalla and Horsley hills, where soil fertility and higher water table perhaps influence the luxuriant growth of the vegetation. Also, the climatic factors favour the perpetuation of rich, deciduous, semi evergreen, hydrophytic and xerophytic type of vegetation in the forest. Seshachalam hill area is inhabited by a large number of tribals like Yanadi's, who possess good knowledge of home remedies. By enumeration studies it is known that this region is a rich source of medicinal plants. The villages and the tribal localities have 80 per cent of traditional healers who treat many human ailments. With all this valuable information present work was taken.

### Material and Methods

Before the commencement of plant exploration trips several interviews were conducted in Yanadi tribal gudems (villages of the representative hotspots in the study region). Mostly the elder people (about 60 years age or above), preferably gramapedda or peddamanishi (village leader), were involved in the interviews. The

### Enumeration

1.	<i>Abrus precatorius</i> L. (Fabaceae) Fresh leaves are chewed to reduce mouth ulcers.
2.	<i>Abelmoschus ficulneus</i> (L.) Wight & Arn. ex Wight (Malvaceae) Root extract (about one teaspoonful) is given twice a day for three days to cure abdominal pain.
3.	<i>Acalypha indica</i> L. (Euphorbiaceae) External application of leaf juice, about 10-15 ml once daily for one week, on affected area relieves from scabies and eczema.
4.	<i>Actinopteris radiata</i> (Sw.) Link. (Actinopteridaceae) paste prepared from whole plant is rubbed over arthritic joints to relieve swelling and pain.
5.	<i>Acorus calamus</i> L. (Araceae) Root powder, about 500 mg mixed with milk is administered orally once in a day for one week to the children as a memory booster and speech promoter. It also relieves phlegm by keeping the powder over tongue.
6.	<i>Alangium salvifolium</i> (Linn.f.) Wang. (Alangiaceae) About 20-30 g of coarsely grounded root bark is soaked in one glass of water (200-300 ml) for one day. The filtered infusion, about 15-20 ml is mixed with, about 10 g ghee and is administered orally as an antidote for snake bite. This is also indicated to kill intestinal worms.
7.	<i>Albizia lebbek</i> (L.) Benth. (Mimosaceae) 10-15 ml of leaf juice of <i>Albizia amara</i> is administered internally as antidote to scorpion sting.
8.	<i>Aloe vera</i> (L.) Burm.f. (Liliaceae) External application of leaf juice, about 10-20 ml once daily for one week, on affected area cures skin diseases.
9.	<i>Alternanthera sessilis</i> (L.) R. Br. (Amaranthaceae) Two to three drops of leaf juice dropped on eyes relieves watering of eye.
10.	<i>Amaranthus spinosus</i> Linn. (Amaranthaceae) External application of 10-15 g. whole plant paste, once a day, on affected area cures eczema, scabies and tenia infections.
11.	<i>Anacardium occidentale</i> L. (Anacardiaceae) External application of paste, about 10-15g once daily for one week, prepared by grinding the gum in little quantity of water cures eczema scabies, ring worm and other infections.

information regarding the dosage of crude drug, purpose of usage, mode of preparation and administration was carefully recorded in audiotapes as well as field notebooks. During this study 'the information on 70 medicinal plants used as different ailments was gathered by speaking and by accompanying with tribal people in fields. The voucher specimens for each species was collected in quadruplicates, which were carefully tagged with field numbers after making a critical observation on the habit, habitat, colour and odour of flowers, phyto-association, occurrence and other relevant ecological features, which cannot be discerned from dried herbarium specimens. The specimens were identified with the help of Gamble's "Flora of Presidency of Madras" (1915-35) and other local/regional floras, recent monographs using salient features, recorded in field notebooks. The identification was further confirmed by the comparison with that of authenticated specimens, housed at Sri Venkateswara University Herbarium (SVU, Tirupati) (Ellis J.L. 1987 ;Jain, S.K., and R.R. Rao.1977; Mhaskar, K.S. and J.F. Caius. 1931; Balaji Rao N. S., D. Rajasekhar and D. Chengal Raju 1995; Goud, P.S.P., K.S. Murthy, S.S. Rani and T. Pullaiah 1997).



12.	<i>Anisomeles malabarica</i> (L.) R.Br. (Lamiaceae) The smoke of the leaves relieves cold and nasal congestion.
13.	<i>Aristolochia bracteolata</i> Lam. (Aristolochiaceae) Oral administration of root paste, about 15 g once daily for 4 days, kills hook worms and round worms.
14.	<i>Asparagus racemosus</i> Willd. (Liliaceae) Daily eating of 4-5 tuberous roots increases breast milk in nursing women and also controls diabetes in diabetic patients.
15.	<i>Bauhinia purpurea</i> L. (Caesalpiniaceae) Drinking of a cup of cold infusion prepared from the bark, about 20 g by mixing with adequate quantity of sugar cools the body and relieves from the burning sensation.
16.	<i>Boerhavia diffusa</i> L.(Nyctaginaceae) Oral administration of paste, about 15-20 g once a day for one week, prepared from leaf and root relieves leucorrhoea.
17.	<i>Borreria hispida</i> (L.) K. (Rubiaceae) Seed powder, about 3-5 g is administered orally to heal piles.
18.	<i>Butea monosperma</i> (Lam.) Taub. (Fabaceae) Seed oil, about 5-10 ml twice daily for two days, is administered orally to kill intestinal worms.
19.	<i>Canthium dicoccum</i> (Gaertn.) Merr. (Rubiaceae) Stem Bark powder boiled with sesame oil is used externally for rheumatic pains. The bark is used in external application in fractures
20.	<i>Cassia fistula</i> L. (Caesalpiniaceae) Leaves paste, about 15-20 g is administered orally to kill round worms and external application cures ringworm infection.
21.	<i>Coleus aromaticus</i> Benth. (Lamiaceae) Eating of 1-3 leaves relieves flatulence, stomachache and increases appetite.
22.	<i>Cleome viscosa</i> L. (Cleomaceae) 3-5 drops of leaf juice are dropped into ear to melt the wax and to get relief from ear ache.
23.	<i>Corallocarpus epigaeus</i> (Rottl.&Willd.) Clarke (Cucurbitaceae) Dried tuberous root of this plant, root of <i>Aristolochia indica</i> and whole plant of <i>Andrographis paniculata</i> are pulverized. From this about 15-20 g of powder is administered orally, for every four hours after the snake bite up to 2 days, as an antidote of snake bite.
24.	<i>Couroupita guianensis</i> Aubl. (Lecythidaceae) Leaves of this plant and <i>Eclipta prostrata</i> plants are taken in equal quantities mixed with half quantity of sesame oil and boiled for one hour. This oil is used as hair vitalizer.
25.	<i>Dalbergia sissoo</i> Roxb. (Fabaceae) Dropping of, about 2-3 drops, leaf juice on eyes relieves watering of eyes and cataract.
26.	<i>Datura metel</i> L. (Solanaceae) Fresh leaves are soaked in boiled sesame oil kept externally on unripened abscess and bandaged with a cotton cloth to burst the abscess quickly.
27.	<i>Dichrostachys cinerea</i> (L.) Wight & Arn. (Mimosaceae) Oral administration of root paste, about 5-10 g once daily for one month, relieves burning sensation.
28.	<i>Eclipta prostrata</i> (L.) L. Mant. (Asteraceae) Two to three drops of leaf juice is dropped into nose for getting immediate relief from cold.
29.	<i>Emilia sonchifolia</i> (L.) DC. (Asteraceae) Oral administration of whole plant paste, about 10 g once daily at night time for 3 months, relieves Night blindness.
30.	<i>Evolvulus alsinoides</i> (L.) L. (Convolvulaceae) Oral administration of whole plant paste, about 5-10 g only for one day, kills intestinal worms.
31.	<i>Ficus benghalensis</i> L. (Moraceae) External application of latex relieves cracks of the foot.
32.	<i>Gloriosa superba</i> L. (Liliaceae) External application of leaf juice, about 10-15 ml on scalp during head bath kills lice.
33.	<i>Gmelina asiatica</i> L. (Verbenaceae) A paste is prepared by grinding the fruit pulp of this plant and fruit of <i>Sapindus emarginatus</i> . About 15-20 g of this paste is applied on scalp during head bath to relieve from dandruff.
34.	<i>Heliotropium indicum</i> L. (Boraginaceae) External application of whole plant paste, about 15-20g twice daily for 4 days, cures from all types of skin diseases like eczema and tenia infections.
35.	<i>Hiptage benghalensis</i> (Linn.) Kurz. (Malpighiaceae) Oral administration of decoction, prepared from powder of either bark or leaves, about 40 ml once daily for one month, relieves joint pains.
36.	<i>Hyptis suaveolens</i> (L.) Poit. (Lamiaceae) 4-7g of leaf powder is kept in beedi leaves and rolled.

	Smoking of these beedies relieves from cold, fever and nasal congestion.
37.	<i>Indoneesiella echioides</i> (L.) Sreemadh. (Acanthaceae) Inhaling 2-4 drops leaf juice relieves nasal congestion and head ache.
38.	<i>Ipomoea reptans</i> Poiret in Lam. (Convolvulaceae) Leaf paste, about 10 -15 g is applied externally on swellings to reduce them.
39.	<i>Lantana camara</i> L. (Verbenaceae) Fresh leaves paste, about 20-30 g once daily for one week, is applied externally on wounds, ulcers and cuts for quick healing.
40.	<i>Leucas aspera</i> (Willd.) Link (Lamiaceae) Flowers (10 g) with fruits of <i>Coriandrum sativum</i> L. (5 g) are boiled with a glass of water and the extract given orally to cure cough and sore throat. Pepper (10 seeds), fresh ginger (5 g) and a handful of flowers are boiled with a glass of cow milk, administered to patients for a fortnight to cure anaemia. Fumigation with whole plant powder is carried out in the house to keep off evil spirits. Leaf extract smeared all over the body as relief from scorpion sting and snake bite.
41.	<i>Mimusops elengi</i> L. (Sapotaceae) Stem bark along with seeds of <i>Phoenix dactylifera</i> are powdered and given orally to cure tuberculosis.
42.	<i>Pandanus odoratissimus</i> L. (Pandanaceae) Leaf paste, about 10-15 g is used as an external application in measles, small pox and chicken pox. This external application controls the inflammation, cools the body and heals the flusters and ulcers.
43.	<i>Pedaliium murex</i> L. (Pedaliaceae) Rubbing of the leaf juice on knees gives immediate relief from joint pains.
44.	<i>Pergularia daemia</i> (Forssk.) Chiov. (Asclepiadaceae) Leaf juice, about 10-15 ml once daily for 3 days, is administered orally to relieve diarrhea. External application of this leaf juice over knee joints relieves pains.
45.	<i>Phaseolus atropurpureus</i> DC-Urban. (Fabaceae) 10-15 g Fruit paste is administered orally to relieve from eye diseases.
46.	<i>Phyla nodiflora</i> (L.) Greene (Verbenaceae) Curry of whole plant is aphrodisiac and rejuvenator. It is also indicated in stomach ache and burning sensation in abdomen.
47.	<i>Phyllanthus amarus</i> Schum. & Thonn. (Euphorbiaceae) Oral administration of whole plant paste, about 10 g once daily for one week, cures jaundice.
48.	<i>Physalis minima</i> L. (Solanaceae) Fruits, about 2-3 daily once, for one week, are eaten to relieve from burning sensation and obstruction of urination.
49.	<i>Piper longum</i> L. (Piperaceae) External application of leaf juice about 10-15 ml prepared from <i>P. longum</i> and <i>Acalypha indica</i> cures severe eczema.
50.	<i>Plumbago zeylanica</i> L. (Plumbaginaceae) Whole plant decoction (15ml) is taken orally once in 2 days at bed time for a fortnight to get relief from piles and skin diseases.
51.	<i>Pterolobium hexapetalum</i> (Roth) Santapau & Wagh Bull (Caesalpiniaceae) Decoction of leaves prepared in water is taken orally by pregnant women during delivery to reduce delivery pain.
52.	<i>Portulaca oleracea</i> L. (Portulacaceae) Curry prepared from leaves and stems relieves from constipation and increases potency in males (Aphrodisiac).
53.	<i>Punica granatum</i> L. (Lythraceae) Fruit or stem is scratched or slightly cut and left for two days. This produces black exudation which is used as collyrum to relieve head ache and fever.
54.	<i>Rauvolfia tetraphylla</i> L. (Apocynaceae) To heal the head sores root paste, about 15-20g is applied externally on head sores for one hour before head bath.
55.	<i>Sansevieria roxburghiana</i> Schult. (Sansevieriaceae) 4-5 drops of latex derived by cutting the root are dropped into the ear to relieve ear ache.
56.	<i>Sesbania sesban</i> (L.) Merr. (Fabaceae) 2 -3 drops flower juice is used as eye drops to get relief from eye diseases.
57.	<i>Sida acuta</i> Burm. f. (Malvaceae) Whole plant paste, about 15 g is applied externally to heal wounds and ulcers.
58.	<i>Shorea tumbuggaia</i> Roxb. (Dipterocarpaceae) Drinking of a cup of decoction prepared from either leaf or bark powder relieves joint pains.
59.	<i>Smilax zeylanica</i> L. (Smilacaceae) Root paste, about 15 g applied on knees relieves from pain and swelling in arthritis.



60.	<i>Solanum surattense</i> Burm. f. (Solanaceae) Dry fruit powder, about 10 g once daily for one month, is administered orally to recover from urinary disorders and renal calculi.
61.	<i>Strychnos nux-vomica</i> L. (Loganiaceae) Stem, Bark, fruit, pericarp and pulp (except seeds) are dried and grind to powder. A 300-500 mg small pill prepared from this powder is administered orally, once daily, to control diabetes.
62.	<i>Syzygium cumini</i> (L.) Skeels. (Myrtaceae) A piece of bark of middle aged tree is ground by adding little quantity of water. Juice obtained from this by squeezing, about 10-15 ml is mixed with equal quantity of goat milk and is administered orally for every 4 hours upto 3 days to control severe diarrhea.
63.	<i>Tridax procumbens</i> L. (Asteraceae) External application of whole plant paste, about 15 g once daily for 2 weeks, heals sores and cuts.
64.	<i>Tinospora cordifolia</i> (Willd.) Miers ex Hook. f. & Thoms. (Menispermaceae) Dry fruits powder, about 5-10 g once daily for one month, with honey is administered orally to relieve from jaundice and burning micturition.
65.	<i>Tragia involucrata</i> L. (Euphorbiaceae) A cup of decoction prepared from 10-15 g whole plant powder is used in all types of fevers.
66.	<i>Tribulus terrestris</i> L. (Zygophyllaceae) Leaf paste, about 10-15 g once daily for a week, is administered orally to relieve from jaundice and renal calculi (kidney stones).
67.	<i>Triumfetta rhomboidea</i> Jacq. (Tiliaceae) Whole plant paste, about 15 g twice daily, is administered orally and externally to cure leprosy
68.	<i>Tylophora indica</i> (Burm. f.) Merr. (Asclepiadaceae) Eating leaves acts as emetic. This principle is used for the persons who are taken poison. By this the poison comes out through vomiting.
69.	<i>Withania somnifera</i> (L.) Dunal (Solanaceae) Root powder, about 20 g is an aphrodisiac. Root paste of 5 g is boiled in 20 ml of mustard oil and after straining, the oil is gently massaged on chest.
70.	<i>Ziziphus xylopyrus</i> (Retz.) Willd. (Rhamnaceae) Paste of <i>Z. xylopyrus</i> Leaves and flowers, about 20 g leaf juice of <i>Piper betel</i> , about 10-15 ml are mixed with fresh lime and made into small pills (500 mg-1g). To delay the menstrual cycle 2-3 pills per a day are administered orally with one cup of goat milk for 2-3 days before the commencement of the menstruation.

### Discussion and Conclusion

The present study denotes The Age Old Traditional Treatments for different ailments in Seshachalam region of Chittoor district. The main theme of this study is to protect the people from hazardous different diseases with in a reliable time. The Yanadi tribal inhabitants of Chittoor district area have authentic knowledge on d for different diseases based on their ancient culture and ethnic practices. The present study brought to light the immense hidden knowledge of Yanadi tribal people on various diseases consisting 70 species belonging to 44 families. They have been employing all these plants in the form of paste, powder, juice, decoction, infusion and also in crude form. These traditional medicinal plants to relieve different ailments like Skin diseases, Jaundice, Rheumatism, Antidotes, Burning micturition, Fevers, Intestinal worms, Menstrual problems, Cough, Diarrhea, Head-ache, Cold, Diabetes, Tooth-ache, Asthma, Eye diseases, Stomach-ache, Indigestion, Piles, Cuts, wounds, Abscesses, Sexual problems, for getting abortion, Nasal drops and to retain pregnancy. Some of these tribal pockets claim no deaths of various diseases

till date, by administering their ethnic medicines. The majority of plants taste bitter, suggesting the presence of alkaloids, glycosides and saponins. Based on the present study and field experiences it can be concluded the detailed scientific experiments are urgently needed to evaluate the efficacy of these traditional medicinal plants.

### Acknowledgement

The authors are thankful to herbarium keeper, department of botany Sri Venkateswara University, Tirupati for his help in identifying the plant sample. The authors also wish to acknowledge the help received from the local Yanadi tribal people of Chittoor district.

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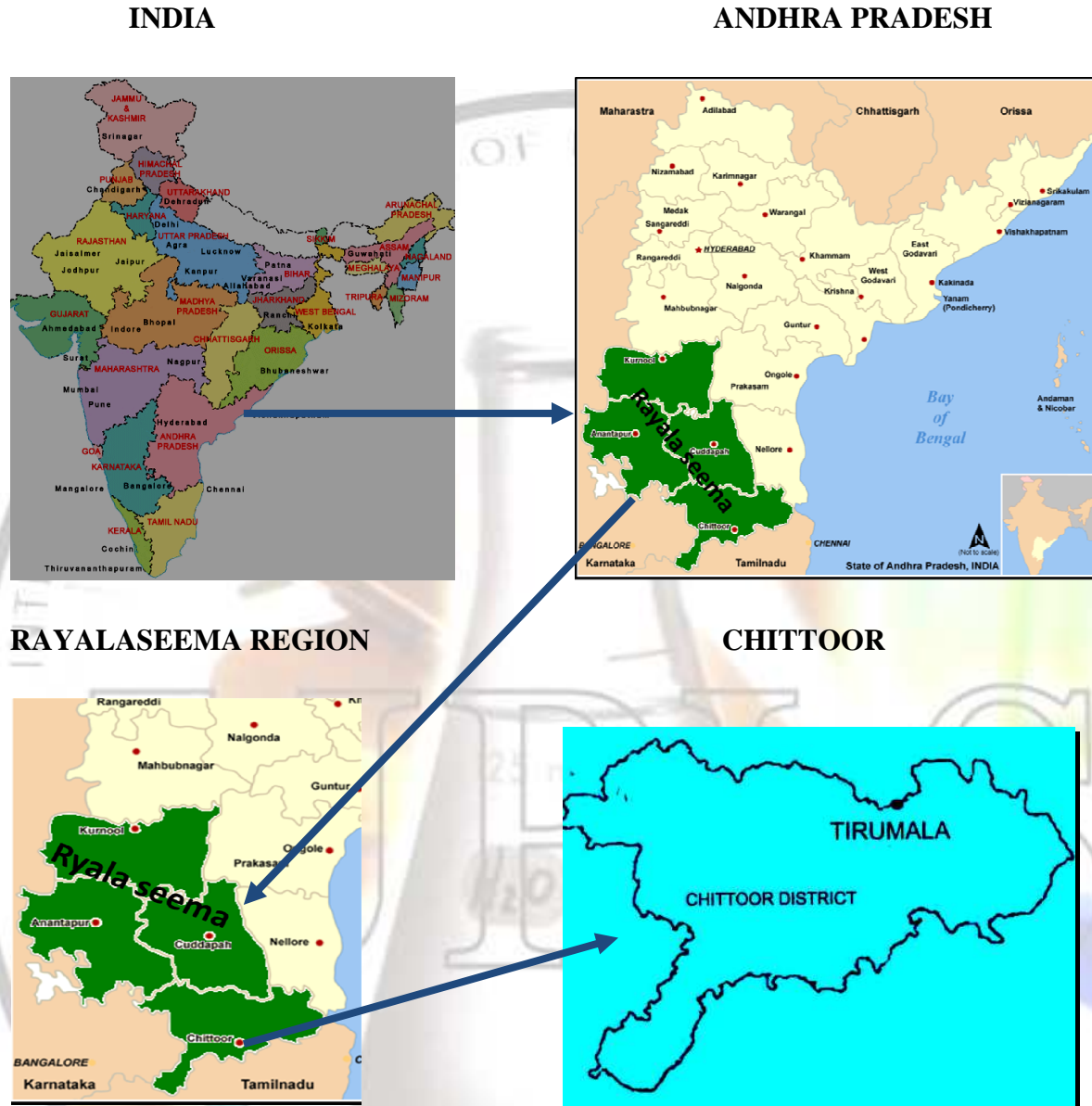


Fig. 1: Map showing Study site