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Ethnobotanical Studies on Medicinal Plant Utilization by the Yanadhi Tribe of Ananthasagaram Mandal, Nellore District, Andhra Pradesh, India

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Abstract: From the early days of the evolution, the journey of man was tied with Nature. Therefore, our ancestors have lived in harmony with nature and their demands were very limited. Primitive human societies like tribes and aboriginals depend on Nature for their livelihood and they are searching for drugs in Nature to treat the chronic diseases. In present days also, many tribes directly depend on plants for their medical requirements and health care. An ethnobotanical survey was carried out by Yanadhi Tribe of Nellore district, Andhra Pradesh, India during September 2015 to June 2016. The present study mainly focused on to collect information from the Yandhi tribe of Ananthasagaram mandal of Nellore District. Only a few people are being practiced herbal therapy with the traditional knowledge which was transmitted from their elders. The plants used for medicinal purposes by the Yandhi tribes were collected through direct interviews during the field survey. The present study revealed that the Yanadhi tribe used nearly 41 plant species belonging to 28 families to treat various diseases like jaundice, leucoderma, bronchitis, scorpion bite, skin diseases, cough, pains, stomachache and head-ache etc. The plant parts like Leaves, Seeds, Stem, Bark and other parts are used in the medical treatment. The present paper mainly focused on the document the plants and herbs used in medical therapy by Yanadhi tribes of Ananthasagaram Mandal, Nellore district.

Keywords: Traditional Knowledge, Yanadhi tibe, Ethnomedicine, Nellore.

1. INTRODUCTION

Ethnobotany is the study of relationships between the man and plants. In a broadways, Ethnobotany is a study of the association, Interaction and interrelationships of the human societies, mainly primitive human societies like tribal or aboriginal communities with the surrounding flora. Tribes or aboriginal people are pioneer practitioners of the herbal medicine. They have an enormous knowledge about the plants and their medicinal values. In 1874, Stephen powers used the term 'Aborginal Botany' for the study of the plants used by aboriginals for food, medicine etc. According to Jones (1941) ethnobotany is a study of the interrelationships of Primitive man and plants.

From the ancient times, the native people will be searching for drugs in nature to treat their diseases. No doubt plants are important sources for many drugs. Thousands of plant species have therapeutic values and used to treat various diseases. Nearly, 80% of the people in developing countries depend on the plant resources for their health care. About 12 % of the total 4.22000 plant species documented worldwide is reported to have medicinal values. In 1996 World Health Organization (WHO) issue a basic guideline for the assessment and advocate the importance of documentation and application knowledge of plant or herbal medicine and also WHO estimated about 80% of the people mainly in the rural areas depends on plants and herbs for their medical and healthcare requirements. The Indian subcontinent is inhabited by over 53 million people belonging to over 550 tribal communities of 227 ethnic groups.

The ethnic or native groups of India who they are residing in different geographical areas depend on plants to meet their basic health requirements. Every ethnic group has their own pool of secret ethno botanical and ethno medicinal knowledge about the plants available in their residential area. In India over 9500 wild plant species are used by tribes for their medical requirements. These ethnic groups have an enormous knowledge about the medicinal plants and this knowledge is mostly not documented, which is transmitted orally from one generation to another generation. Documentation of this traditional and indigenous knowledge is a very important task for future generations and for future studies also.

The local native or indigenous people and traditional healers have a rich knowledge of their long experience through the practice of many years. Although various botanists and anthropologists have made an attempt to document the traditional knowledge in various parts of the world.

The present study made an attempt on exploring and documenting the ethnomedicinal uses of plant species and uses of plant parts by Yanadhi tribe for their health care and medicinal purposes., present in the Ananthasagaram Mandal of Nellore District, Andhra Pradesh. From the best of our knowledge, no ethnobotanical research has been carried out in this region. This is the first attempt to investigate and document the ethnobotanical practices by the Yanadhi tribe of this region.

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2. METHODOLOGY

2.1: Study Area:

Ananthasagaram is a major mandal in Nellore district situated with 79.41.670 E Latitude and 14.58.330 N s longitude. The climate of the area is tropical, the maximum temperature was recorded in mid-summer i.e., 36 to 420 c and minimum temperature recorded in winter i.e., 23 – 250 c. Ananthasagaram receives 904.0 mm of rainfall in a rainy season that starting in June ends with August last week. The total geographical area of Ananthasagaram mandal is 30, 377 hectares, from this up to 30% of land occupied by forest, mainly tropical deciduous forest.

The total population of this mandal is 42, 950 out of which the total tribal population is 3002 i.e., only 7%. Among Scheduled Tribes (STs) Yanadhi community is the dominant community, it mainly depends on hunting for their livelihood. They wait until the harvesting the paddy locates different rat burrows, catch the rodents and also dig up the paddy stored by the rodents in these burrows. In this way, they manage to collect rice grains for their livelihood. They have lived in the forest still they use plants and herbs as remedies for snake bite, headache and other diseases. Therefore, the present study mainly focuses on the document the plants and herbs used in different diseases by Yanadhi tribes of Ananthasagaram Mandal, Nellore District.

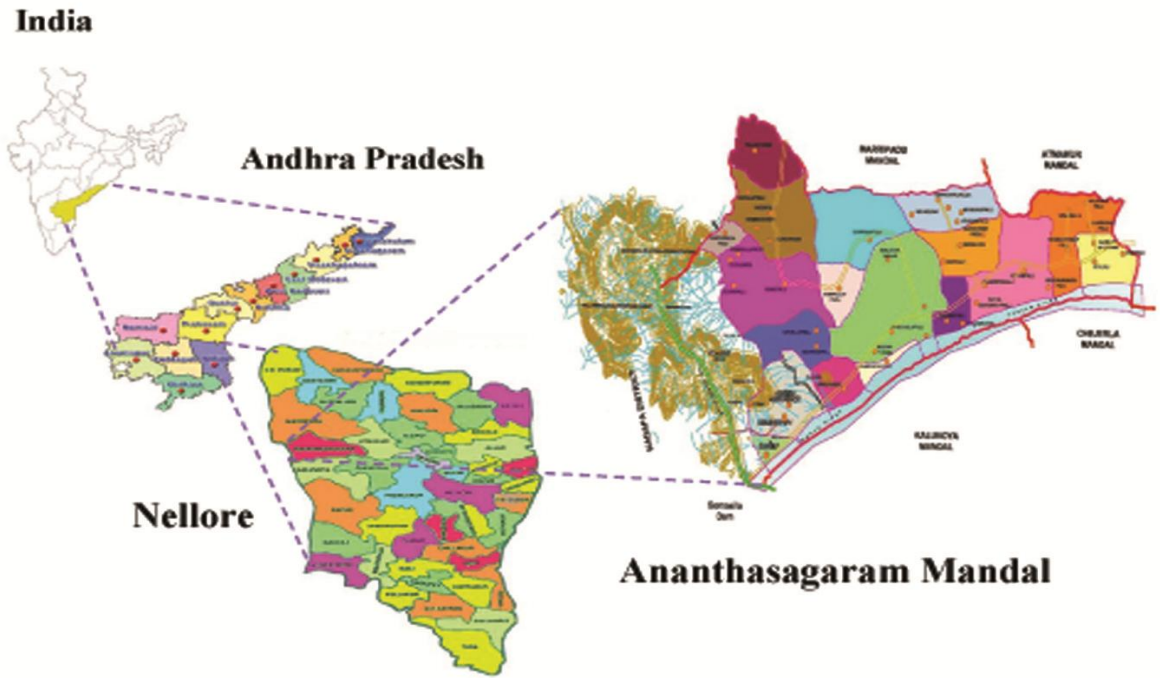

Fig. No. 1: Map showing the location of Ananthasagaram Mandal and study area.

2.2: Materials and Methods

During the present study, several field surveys were conducted from September 2015 to June 2016. Ethnomedicinal data were collected through conversation with traditional healers and herbal practitioners as well as elderly man and women of the different villages of the Ananthasagaram mandal. The collected information was recorded in the ethnobotanical field notebook along with important medicinal uses. Subsequent field surveys also conducted in the same villages for confirming the data earlier collected and also gathering further information about ethnomedicine. The medicinal plant species were collected from the study area and identified using the Gamble Volumes (1915-1936). Herbarium sheets were prepared and preserved in the Department of Environmental Sciences, Acharya Nagarjuna University. The information collected regarding the medicinal uses of plants and herbs were analyzed and documented. (Table – 1).

3. RESULTS AND DISCUSSION

The Present study reveals the medicinal use of 41 plant species belonging to 28 families. (Table-1). These plants and plant materials are used as ethnomedicine for various severe diseases like Jaundice, Leucoderma, Bronchitis, Malaria fever, Snake bite etc, by employing the in the form of extracts, Pasters, Juices and powders. Other common diseases like Blood motions, intestinal wounds, scorpion bite, Tonsils, cough with mucus, pains, skin diseases are cured by using various plants and plant materials found in tribal healers of Ananthasagaram Mandal.

The most commonly used plant parts for the medical treatment in this region is leaveas (48.78%) followed by seeds (17.07%), Roots (14.63%), Whole Plant (12.19%), Stem (09.75%), Bark (07.31%), Flowers (4.8%). (Fig – 1).

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Table-1. Medicinal Plants used by Yanadhi tribe of Ananthasagaram mandal in Nellore district of Andhra Pradesh.

S. No	Scienctific Name of the Plant.	Local Name	Family	Habitat	Used Plant parts	Medicinal Use
1	**Abrus precatorius L.**	Gurivinda	Papilionaceae	Climber	Leaves and seeds	Leucoderma, Headache
2	**Acalypha indica L.**	Murkonda, Kumpati	Ephorbiaceae	Herb	Leaves	Jaundice, Scabies
3	**Achyranthus aspera L.**	Uttareni	Amaranthaceae	Herb	Whole plant	Bronchitis and Long term indigestion.
4	**Aerva lanata (L.) Juss.**	Telagapindikura (or) Kondapindiaku	Amaranthaceae	Herb	Roots, whole plant	Leucorrhoea, Renal stones and over motions
5	**Aloe vera (L.) Burm.f.**	Kalabanda	Liliaceae	Shrub	Stem	Body coolant
6	**Andrographis paniculata (Brum.f.) Nees.**	Neelavemu	Acanthaceae	Herb	Whole plant	Malaria and Worm infection
7	**Argyeia nervosa (Brum.L.) Boj.**	Samudra pala	Convolvulaceae	Climber	Roots and seedling	Gum motions, Diarrhea and Semen Development and male fertility
8	**Aristalochia indica L.**	Nalla eswari	Aristalochiaaceae	Climber	Roots	Snake bite or scorpion bite and leucoderma
9	**Azardiractika indica A.Juss**	Vepa	Meliaceae	Tree	Leaves	Malaria fever
10	**Butea monosperma (L)**		Fabaceae	Tree	Flowers	Pain
11	**Butea superba Roxb.**	Teega moduga	Fabaceae	Climbing tree	Bark and seeds	Intestinal worms, Scorpion sting and Menorrhagia
12	**Caesalpinia bonduc (L.) Roxb.**	Gacha kaya	Casalpiniaceae	Shrub	Seed	Inguinal lymph nodesand Hydrocele
13	**Calotropis gigantean (L.) R.Br.**	Jilledu	Asclepidaceae	Shrub	Leaves and flowers	Tonsils
14	**Cassia italic**	Nela thangedu	Fabaceae	Tree	Flowers and fruits	Laxative
15	**Cassia auriculata L.**	Thangedu	Casalpiniaceae	Shrub	Flowers	Polyuria, Blood and gum motions
16	**Cassia tora L.**	Kasintha	Casalpiniaceae	Herb	Leaves	Wound healer and conjunctivitis
17	**Centella asiatica (L.)**	Saraswathi aku	Apiaceae	Herb	Leaves	Motion and fever, Jaundice and Gonorrhoea
18	**Cissus quadrantularies L.**	Nalleru	Vitaceae	Climbing shrub	Stem	Hiccups, Bronchitis, Cough and Removes paralytic pains.
19	**Datura metal L.**	Ummetta	Solanaceae	Herb/ under shrub	Leaves and roots	Filariasis, Mental recovery **(use only in the presence of herbal doctor**)

20	**Eclipta alba (L.) Hassk.**	Guntagala-garaku	Asteracea	Herb	Whole plant	Blood motions and Xeropthalmia
21	**Picus religiosa L.**	Ravi chettu	Moraceae	Tree	Leaves	Healing of wounds
22	**Gymnema sylvestre (Retz.)R.Br.ex.Schultes.**	Podapatri	Asclipidaceae	Climber	Leaves	Diabetes and anima eye diseases
23	**Hemidesmus indicus (L.) R.Br.**	Pala sugandi or avu sugandi	Asclipidaceae	Climber	Root	Rat poisoning and Herpetic
24	**Hybanthus enneaspermus (L.)j.**	Nela kobarri, ratna purusha	Violaceae	Herb	Leaves	Filariasis
25	**Mimosa pudica L.**	Attipatti	Mimmosaceae	Shrub	Leaves	Filariasis
26	**Ocimum sanctum L.**	Tulasi	Lamiaceae	Shrub	Leaves	Cough with mucous
27	**Phylanthus emblica L.**	Usari kaya	Euphorbiaceae	Tree	Fruits	Jaundice and motions and blood motions
28	**Phylanthus amarus Schum. & thonn.**	Nela usari	Euphorbiaceae	Herb	Whole plants and leaves	Indigestion and urinary tract irritation and pain
29	**Rauvolfia serpintina (L.)**	Sarpagandi	Apocyanaceae	Shrub	Root bark	**Reduce blood pressure**
30	**Ricinus communis L.**	Amudamu	Euphorbiaceae	Shrub	Leaves and seeds	Jaundice
31	**Strychnos nuxvomica L.**	Mushni, visha mushti	Strychnaceae	Tree	Seeds fruit pulp	Leucorrhoea, Cosmetics and foot cracks
32	**Syzygium cumini (L.)**	Neredu	Myrtaceae	Tree	Leaves and seeds	Diabetes, Leucorrhoea, Heavy motions and vomiting
33	**Terminalia arjuna**	Tella maddi or yeti maddi	Combretaceae	Tree	Bark and leaves	Bone fracture, blood motions and heart diseases. Arthritis pains
34	**Terminalia bellirica**	Tani , tandemanu	Combretaceae	Tree	Pods and seeds	Diarroehoea, Dissolve stones in kidney, Cough and bronchitis.
35	**Tinosphora cardifolia**	Teepa teega or kodipudi teega	Minispermaceae	Climber	Stem and leaves	Fever and Jaundice
36	**Triribulus terestris L.**	Palleru	zygophyllaceae	Herb	Whole plant and leaves	Dissolve renal stones and Arthritis
37	**Vitex negundo L.**	Vavili	Verbanaceae	Tree	Leaves	Tuberculosis, Ear nerve wound discharge
38	**Withania sominifera**	Aswagandi	Solanaceae		Stem bark	Fertility improvement of male
39	**Psidium guava**	Jama	Myrataceae	Tree	Fruit	Mouth ulcer
40	**Justice adhatoda**	Addasaram (ippateega)	Acanthaceae		Stem Leaves	Fever and cough
41	**Ephorbia antiquarum**	Brahmajamudu	Euphorbiaceae		Leaves	Cancer And diabetes

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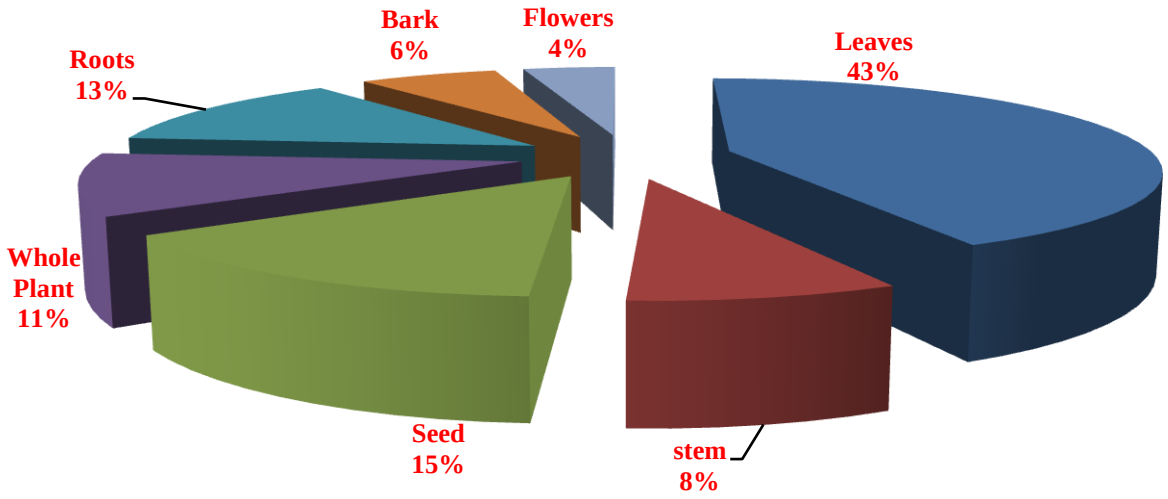
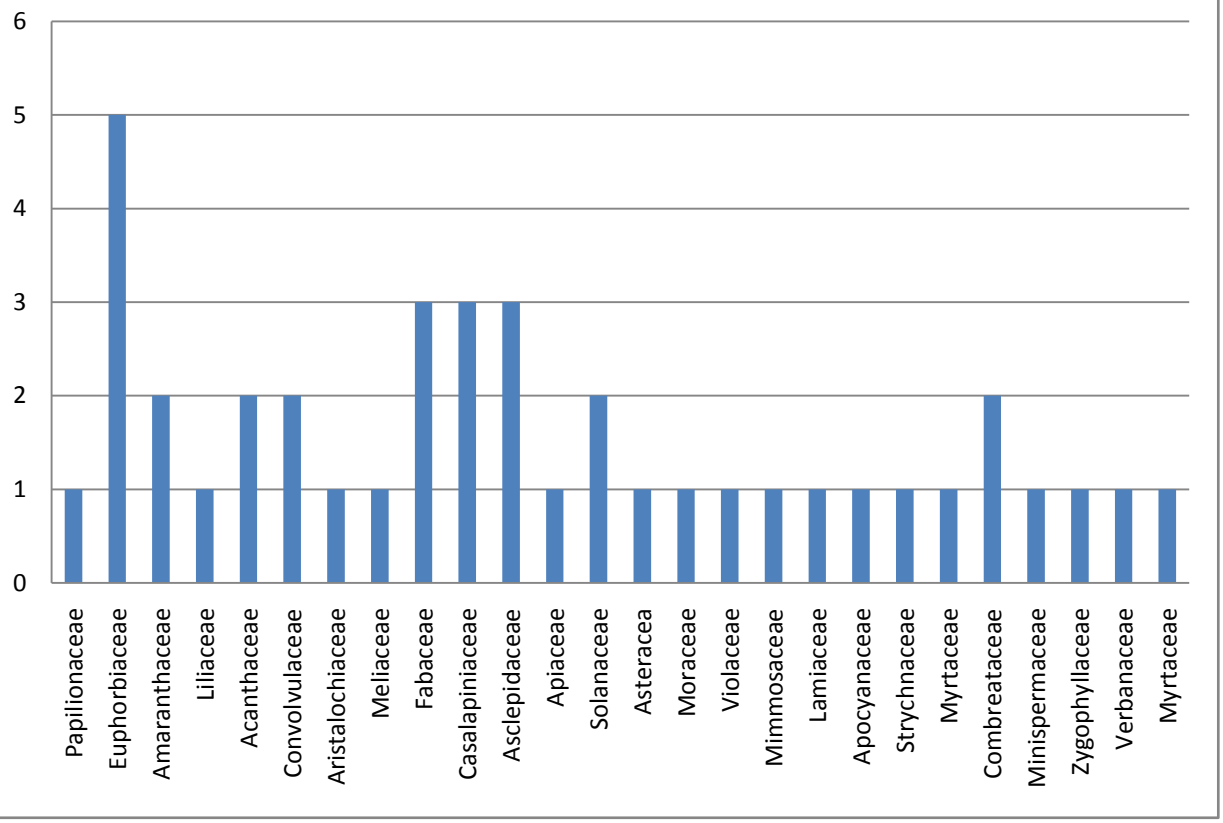
Fig. No-1. Showing Percentage of Plant parts are used for medicinal purposes of total Medicinal plant species



The most dominant families of ethnobotanical importance are Euphorbiaceae with 5 Species followed by Fabaceae, Asclepidacea Cesalpininacea with 3 species followed by Amaranthaceae, Acanthaceae, Solanaceae, Combretaceae and Myrtaceae with 2 species. The other families like Papilionaceae, Convolvulaceae, Aristolochiaceae, Meliaceae, Apiaceae, Vitaceae, Asteraceae, Moraceae, Violaceae, Mimmuosaceae, Lamiaceae, Apocyanaceae, Strychonaceae, Myrtaceae, Menispermaceae, Zygophyllaceae contains single species. (Fig – 2).

Fig. No. 2. Showing dominant families of the Study Area



4. CONCLUSION

Ethnobotanical studies thus not only provide insights into the past man and plant relations and also give abundant data for advancement on numerous fronts such a food, medicine and culture. Even at this development stage, the tribes used plants as medicines for their health care. The present study reveals this truth. Globalization impacts have brought many changes in the life of humankind. Tribes and aboriginals are also changing their lifestyles according to the globalization. The old generations of the tribes have an enormous knowledge about the medicinal plants and this knowledge is transmitted orally from one generation to another generation. Unfortunately, the younger generation is not interested to know this traditional from their ancestors. Hence, there is an urgent need for documenting their folklore and traditional knowledge becomes unattainable and extinct. The present generation of research scholars should mainly focus on this task and collect the information from these groups and preserve for future generations and future study. No doubt the present study made an attempt to gather information about medicinal plants from the local tribes. This information analyzed and documented for further studies.

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REFERENCES

1. Balaji Rao N. S., D. Rajasekhar and D. Chengal Raju 1995. Folk medicine of a Rayalaseema region, Andhra Pradesh: II blood purifiers. Bull Pure Appl Sci, 14A (2), 69-72.
2. Baskar Rao U.V.U, 2006- Collection and Documentation of Ethnomedicinal and Nontimber forest products information from Rayalaseema region of Andhra Pradesh , India – Phd. Thesis submitted to S.V. University, Tirupathi.
3. Dubey N.K., Kumar R & Tripati P. Global promotion of herbal medicine: India's opportunity. Current Science.2004; 86: 37–41.
4. Gamble J.S., 1915-1936. Flora of the Presidency of Madras, Vol.1-3.Authority of the Secretary of State for India in council, Dehra Dun, India, pp.5-1597. [7].
5. Jain, S.K. and C.R. Tarafder. 1963. Native plant remedies for snake bite among Adibasis of central India. Indian Med. Jour., 57: 307-309.
6. Jain, S.K., and R.R. Rao. 1977. Field and Herbarium Methods. Today and Tomorrow Publishers, New Delhi. 4. Ellis J.L. 1987. Flora of Nallamalais. Vol. I –Botanical survey of India, Calcutta.
7. Madhavachetty K, Lakshmipathy chetty M, Sudhaka A & Ramesh C. 1998 – Ethno-medico botany of some aquatic Angiospermae in Chittoor district of Andhra Pradesh, India. Department of Botany, S.V. University, Tirupathi. Fitoterapia Vol. LXIX-N, 5.
8. Nagaraju, N. and K.N. Rao 1990b A survey of plant crude drugs of Rayalaseema, Andhra Pradesh, India. J. Ethnopharmacology 29: 137- 158.
9. Rajkumar N &Shivanna M.B. Ethnomedicinal application of plants in the eastern region of Shimoga district, Karnataka, India, Journal of Ethnopharmacology.2009; 126: 64-73.
10. Ramesh C, 2009 – Ethnopharmacognostical studies of some indigenous medicinal plants of the Rayalaseema region of AP, India – Thesis submitted to S.V. University, Tirupathi.
11. Reddy, K.N., C.S., Reddy, E.N. Murthy, C. Pattanaik and V.S. Raju 2007. Ethnobotanical studies on medicinal plants of Seshachalam hills in Kadapa District, Andhra Pradesh, India (Abstract published in National seminar on Conservation of Eastern Ghats.
12. Singh SP, Tripathi S and Shukla RS (2003). Ethnomedicinal heritage for Bio-prospecting and Drug development in North-Eastern States of India. Journal of Economic and Taxonomic Botany 26: 384-395.
13. Satyavathi GV, Gupta AK and Tandom N, Medicinal Plants of India, Indian council of Medical Research, New Delhi, India, 1987.
14. Savithramma N, Linga Rao M, Yugandhar P & HariBabu R Ethnobotanical study of Penchalakona forest area of Nellore District, Andhra Pradesh, India. International J of Phytomedicine.2012; 4: 333-339.
15. Savithramma N, Sulochana Ch, Rao K.N: Ethnobotanical survey of plants used to treat asthma in Andhra Pradesh ,India. Journal of Ethnopharmacology 113(2007)54- 61.
16. Savithramma N, Linga Rao M, Suhrulatha D. 2011. Screening of Medicinal plants for secondary metabolites. Middle-East J. Sci. Res:8, 579-584.
17. Sudhakar A, 2001 – Pharmacognosy of some indigenous medicinal plants of Chittoor district, Andhra Pradesh, India – Thesis submitted S.V. University, Tirupati.
18. Sudarsanm G, 1987 – Ethnobotanical Survey of phyto-pharmaco-chemical screening of selected medicinal plants of Chittoor district, Andhra Pradesh – Thesis submitted to S.V.University, Tirupathi.
19. Sudarsanam, G. and Siva prasad, G. 1995. Medical Ethnobotany of plants used as Antidotes by Yanadi Tribes in South India Journal of Herbs, Spices, And Medicinal Plants. 3 (1): 57-66.
20. Vedavathy S, Mrudula V, Sudhakar A & Siddamma T. 1998-Tribal medicine of Andhdra Pradesh. Ancient Science of Life. Vol. N. 18 (1), P. 58-63.
21. Venkata subbaiah K.P and Savithrmma N: Bio-prospecting and documentation of traditional plants used to treat itching,psoriasis and wounds by ethnic groups of Kurnool district, Andhra pradesh,India. Asian journal of pharmaceutical and clinical research vol -5,issue 2,2012.
22. Yogamaya Dhal, Rajani K Sahu and Bandita Deo: Ethnomedicinal survey of Koraput District, Odisha: An Update. Journal of Pharmacy Research 2011, 4 (11), 4142-4145.