Ethnobotanical and Ethnomedicinal Observations in Nirmal Division of Adilabad District, Andhrapradesh, India

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Abstract
In the present work an attempt is made to document the ethnobotanical remedies for various ailments of the ethnic tribes inhabiting the Nirmal division of Adilabad, Andhrapradesh, India. We reported more than 75 ethnomedicinal plants used by the tribal people in alleviating diseases. Our collections of ethnomedicinal plant specimens from this area were deposited in the Kakatiya University Herbarium (KUH) Warangal, India.

Key words: Ethno medicine, Nirmal division, Adilabad District, Andhrapradesh.

Introduction
Evolution of human life and culture has directly or indirectly been associated with and influence by the surrounding environments. Primitive man closely associated in the nature and directly depended on it for his survival i.e., for food, fuel medicine, and fodder, Heamcee, his life and diet system totally depended on plats, made him to acquire the knowledge of economic and medicinal properties of many plants by gradual growth of thinking, later he became enriched knowledge has been transferred from one generation to another without any written documents, now it is necessary that unwritten folk-lore uses of plants and plant product must be documented and preserved. It is important to document and understand the medical heritage of a changing culture before it is lost entirely to future generations. (Brumot & Naidu, 2007) Ethnomedicine is the study of the beliefs and practices concerning illness in different human populations. It observes and describes hygienic, account temporal and spatial references.

Among scheduled tribes of Andhra Pradesh, Gonds, Lambada, Kolams, Pradhans, Manne,
Naikpods, Thoties, Yerikalas, Koyas are the major communities in the Nirmal Division of Adilabad District, Andhra Pradesh, India of several natural forest ecosystems in the district, Swarna, Sadharmat and Kaddam are well known for their medicinal flora. Ravi Shanker and Henry (1992) publish a note on the medicinal plant wealth of Adilabad district. Later Pullaiah, Prasanna, and Vand Obulesu (1998) reported Ethnomedicinal plants, the scientific and vernacular names of the District. Mubeen, R. Sadia Fathima, Atiya Khanum, Irfan Ali Khan and S.Y. Anwar (2004-2005) studied the Medicinally important plants growing in the surrounding Adilabad, District of Andhra Pradesh, used in the treatment of different ailments. Swamy, NSNS (2008) reported 366 ethnomedicinal plants used by tribes in the Adilabad District, in UGC Minor research project under plan. In the present work, an attempt is made to present some interesting ethno medicinal observations recorded in Nirmal forest division, Adilabad district of Andhra Pradesh, India.

Study Area

The Nirmal division situated in between 77° 58' of the eastern longitudes and 18° 48’ and 19° 24’ of northern latitudes and is bounded on north by Adilabad, and utnoor divisions. On the south by Karimnagar and Nizamabad districts and on the west by Nanded district of Maharastra State. The most important river that drains the divisions is the river Godavari, which is the largest river in peninsular India. The Kadam Vagu is tributary of the Godavari. Besides these Swarna Vagu, and Sudda Vagu which drain the division. The average annual normal rain fall of the Nirmal division is 1114.6 mm and average number of rainy days in the year is 55 – 63 days, the forest of this district falls under tropical dry deciduous and tropical thorn forest type’s consisting of mixed teak and miscellaneous type of corporation.

As for the census – 2001 Nirmal division has a population of 6,22,322 in which tribal population is 60,166 Lambada, Gonds and Naikpods are major tribes of this region and traditional practices for curing ailments using plants and animal resources are practiced by all these communities. Data on ethnomedicinal plants, collected through frequent interviews tribes. The specimens of ethnomedicinal plants were collected and kept at Kakatiya University Herbarium, Warangal for further reference.

Results

Data pertaining to 79 Ethnomedicinal plants species belonging to 43 families are arranged in alphabetical order according to scientific names for convenience followed by family, local name in telugu and ethnomedicinal use. For each plant species given in the following enumeration, details on the scientific name, botanical family, local name and use are provided along with the parts harvested for treatment and the manner of processing mode of administration.
**Diuretic**

1. *Abutilon Indicum. L.*
   - Family: Malvaceae.
   - Local name: Thuthura Benda
   - Ethno medicinal use: Stem bark decoction given with boney in 2 spoonfuls twice a day for 20 days.

**Leprosy**

2. *Acacia Chundra (Roxb. ex Rott) wild.*
   - Family: Mimosaceae (Leguminosae)
   - Local name: Sundra Chettu
   - Ethno medicinal use: Bark ground with leaf base of neem and the paste apply on ulcers of leprosy.

**Anti emetic**

3. *Acalypha Indica. L.*
   - Family: Euphorbiaceae
   - Local name: Muripinda
   - Ethno medicinal use: Roots ground with black pepper and 2 – 3 spoonfuls are administered orally once or twice.

**Foot – mouth**

4. *Achyrathes aspera. L.*
   - Family: Amaranthaceae
   - Local name: Uttareni
   - Ethno medicinal use: Entire plant grounds with Jaggery and the paste administered twice a day for one week days.

**Asthma, cough**

5. *Adhatoda Zeylanica. L.*
   - Family: Acanthaceae
   - Local name: Addasaramu
   - Leaf extract administered orally in 2 Spoonfuls a day for 3 – 4 days.

**Diarrhoea**

6. *Aegle marmelos (L) Corr*
   - Family: Rutaceae
   - Local name: Maredu
Stem bark extract and fruit pulp is administered in 3 spoonfuls twice a day for about 3 days.

**Gallbladder Kidney and uretal stones**

   Family: Amaranthaceae
   Local name: Pindikura
   10 grms. of shade dried plant powder taken along with the barley water thrice a day for about 45 days to dissolve stones. Also plant decoction used for the same.

**Anthelmintic**

8. *Alangium salvifolium* (L.f.) Wang
   Family: Alngiaceae
   Local name: Ooduga, Udugu.
   Root bark decoction taken orally before going to bed for 3 – 4 days.

**Abortion**

   Family: Poaceae (Gramineae)
   Local name: Veduru
   Leaves ground with seeds of Sesamum and Trigonella and the paste mixed with honey is taken of pregnancy to abort three months twice for 3 days.

**Anaemia**

10. *Boerhavia diffusa* L.
    Family: Nyctaginaceae
    Local name: Atikamamidi
    Whole plant extract mixed with Cow milk and sugar candy and administered Orally in a spoonful twice a day for a month.

**Ringworm**

11. *Butea monosperma* (Lam) Taub
    Family: Fabaceace (Leguminosae)
    Local name: Modugu
    Seeds ground with lemon juice and applied on effected area.

**Arthritis, stomachache**

    Family: Asclepiadaceae
    Local name: Jilledu
    Leaf extract applied externally on painful parts, Roots ground with black pepper and made into small
pills and given in 2 pills twice a day for 7 days.

**Dysentery**


Family: Rubiaceae  
Local name: Balusu  
Root bark decoction is administered to infants in a spoonful twice a day for 3 days.

**Abortion**

14. *Carica papaya* L.

Family: Caricaceae  
Local name: Boppai, Coppadi  
The milky Juice [like] and rhizomes of Gloriosa are ground and the paste is taken in 2 spoonfuls once in morning for 5 days to abort pregnancy up to 3 months.

**Bone fracture**

15. *Cassia auriculata.* L.

Family: Caesalpiniaceae  
Local name: Tangedu  
Leaf paste with egg albumen plastered over the parts of human as well as cattle till cure.

**Cancer**

16. *Catharnthus roseus* (L.) Don  

Family: Apocynaceae  
Local name: Billa ganneru  
Leaf paste applied on tumourus and the decoction given orally in 30 ml twice a day for about 1 month.

**Labourpains**

17. *Cayratia pedata* (Lamk) Juss. Ex Gange P.

Family: Vitaceae  
Local name: Erukala sani  
Dried branches ground with dried ginger and 2 spoonfuls of powder with a glass of milk is given for easy and fast delivery.

**Whitlow**

18. *Citrus aurantifolia* (Christm) Swingle.

Family: Rutaceae  
Local name: Nimma  
Fruit is filed with turmeric powder and common salt and a hole is made to insert finger tip of affected area kept it for 5 – 7 days or till cure.
Ear ache

19. Cleome gynandra L.
Family: Capparidaceae.
Local name: Vaminta
Leaf Juice poured in 2 – 3 drops thrice a day till cure.

Filaria

20. Clitoria ternatea L.
Family: Fabaceae (Leguminosae)
Local name: Shanku pushpalu
Root paste applied externally on effected parts.

Alopecia

21. Cocos nucifera
Family: Areceace
Local name: Kobbari Chettu
Oil is extracted from dried endosperm and applied effected area, till cure.

Fever

22. Cyperus rotundus. L.
Family: Cyperaceae
Local name: Tunga gaddi
Tuber extract given in 2 spoonfuls twice a day about 3 days.

Muscular pains

23. Datura metal L.
Family: Solanaceae
Local name: Errimmetta
Leaves and fruits ground in to popltice and massaged gently on painful parts.

Anaemia

24. Diospyros melanoxylon Roxb
Family: Ebenaceae
Local name: Tuniki
Stem bark extract given to pregnant women in 2 spoonfuls with a glass of rice cooked water once in morning for about 2 months from 6th or 7th month of pregnancy.

Fever, jaundice

Family: Asteraceae (Compositae)
Local name: Gunta galagara
Whole plant ground with black pepper and made in to small pills 2 pills twice a day for about 3 days will be administered to infants. Leaf juice with curd and sugar given orally early in the morning for 3 days.

Burns, lip cracks

26. Euphorbia hirta L.
Family: Euphorbiaceae
Local name: Reddivari nanubalu, chukka bottu
Latex applied externally till cure of burns and lip cracks.

Mental disorders

27. Evolvulus alsinoides (L) L.f.
Family: Convolvulaceae
Local name: Vishnu krantha
Dried plant powder administered in 2 spoonfuls twice for a day about 2 months.

Piles

28. Ficus benghalensis L.
Family: Moraceae
Local name: Marri Chettu
Tender prop root decoction given in 2 spoonfuls twice a day for 3 months.

Smallpox

29. Ficus racemosa. L.
Family: Moraceae
Local name: Medi
The small blister like galls which are present on the leaves are soaked in milk and honey and eaten as refrigerant.

Appendicitis

30. Ficus tinctoria Fforst. F.
Family: Moraceae
Local name: Tellabaranki
The root bark decoction administered in 2 spoonfuls twice a day for about a week to relieve the pain.

Purgative

31. Givotia rottleriformis Griff
Family: Euphorbiaceae
Local name: Puniki, Tella – puniki
Ripe fruits eaten as remedy.

**Abortion, Mumps**

32. *Gloriosa superba* L.
Family: Liliaceae
Local name: Konda nabi
Tuber extract taken orally in one spoonful twice a day for 5 days to about pregnancy up to 3 months. Leaf paste applied externally on effected areas till cure.

**Dyspepsia**

33. *Grewia tilefolia* Vahl.
Family: Tiliaceae
Local name: Tada chettu
Ripe fruits eaten and said to improve digestion.

**Diabetes**

34. *Gymnema sylvestre* (Retz.) R. Br. ex Schult
Family: Asclepiadaceae
Local name: Podapatri
Leaf decoction administered in 2 spoonfuls twice a day for about 2 months.

**Blood purification**

35. *Hemidesmus indicus* (L.) R. Br.
Family: Asclepiadaceae
Local name: Sugandh pala
Root extract mixed with honey and administered in 2 spoonfuls thrice a day for 2 – 3 weeks.

**Alpecia**

36. *Hibiscus rosa-sinensis* L.
Family: Malvaceae
Local name: Mandara
Leaves and flowers ground in equal proportion and the popultice applied on effected areas till growth of hair.

**Rheumatic pains**

37. *Holoptelea integrifolia* (Roxb.) planch.
Family: Ulmaceae
Local name: Thamsi chettu, Nemlinara Chettu.
Stem bark decoction administered in 20 ml twice a day for about 7 days.

**Malaria**
38. **Lantana camara L.**
Family: Verbenaceae  
Local name: Gajukampa  
Leaf decoction given in 2 – 3 spoonfuls twice a day for 4 days.  
*Psoriasis, skin eruptions*

39. **Leucas aspera (Willd.) Link.**
Family: Lamiaceae (Labiate)  
Local name: Thummikura  
Leaf juice mixed with turmeric powder and applied on effected areas for 2 – 3 months or till cure.  
*Rheumatic pains*

40. **Madhuca indica Gmel.**
Family: Sapotaceae  
Local name: Ippa  
Oil extracted from seeds massaged on painful parts  
*Cold and cough*

41. **Mangifera indica L.**
Family: Anacardiaceae  
Local name: Mamidichettu  
Fumes from the burning leaves are inhaled for relief.  
*Piles*

42. **Manilkara zapota (L.) Royen**  
Family: Sapotaceae  
Local name: Sapota  
Stem bark ground with black pepper and make in to powder, it is mixed with sugar candy and cow milk and administered in 2 spoonfuls twice a day for about 3 – 4 months.  
*Chestpain*

43. **Mimusops elengi L.**
Family: Sapotaceae  
Local name: Pogadachettu  
Bark juice given in 2 spoonfuls twice a day for 10 days, also the fruit paste applied on chest.  
*Dandruff*

44. **Momordica dioica Roxb. ex Willd.**
Family: Cucurbitaceae  
Local name: Boda kakara
Tender paste applied on head 1 hour before bath.

**Blood pressure**

45. *Moringa oleifera* Lam  
Family: Moringaceae  
Local name: Munaga chettu  
Leaf Juice administered in one spoonful twice a day for about one month.

**Lice killing, dandruff**

46. *Murraya koenigii* (L.) Spreng  
Family: Rutaceae  
Local name: Karevepaku  
Dried leaf powder mixed with hair oil and applied to head.

**Fertility**

47. *Musa Paradisiaca* L.  
Family: Musaceae  
Local name: Aratichettu  
Rhizome boiled with sugar candy and the extract administered men in 2 spoonfuls twice a day for one month.

**Asthma**

48. *Nerium oleander* L.  
Family: Apocynaceae  
Local name: Ganneru  
Flowers ground with Jiggery and the extract administered in 2 Spoonfuls twice a day for about 2 months.

**Goiter**

49. *Nymphaea pubescens* Willd  
Family: Nymphaeaceae  
Local name: Kaluvapuvvu  
Rhizome ground with seeds of piper nigrum and the paste applied externally on swelling part of the neck.

**Rat bite, skin allergy**

50. *Ocimum tenuiflorum*  
Family: Lamianceae (Labiatae)  
Local name: Tulasi  
Leaf paste applied on bitten area for Rat bite, leaf juice applied on effected areas till cure of skin
allergy.

Jaundice

51. *Oldenlandia corymbosa* L
Family: Rubiaceae
Local name: Chiru veru
Whole plant decoction given with a glass of butter milk in 3 spoonfuls twice a day for about 5 days.

Scabies

52. *Oxystelma esculentum* (L. f.) R. Br. ex Schult.
Family: Asclepiadaceae
Local name: Tella doodipala
Leaves boiled in Brassica Oil and the paste applied on effected areas.

Hydrocele

53. *Pedalium Murex* L.
Family: Pedallaceae
Local name: Pedd palleru, Yenugu palleru
Leaves and fruits ground together in to paste and applied on testicles for a week.

Tooth ache

Family: Arecaceae
Local name: Eetha Chettu
Main rachis of leaf and roots are used as tooth stick.

Jaundice

55. *Phyllanthus amarus* Schum. et Thonn.
Family: Euphorbiaceae
Local name: Nela Usiri
Whole plant extract mixed with curd given in 2 spoonfuls twice a day for a week.

Purgative

56. *Physalis minima* L.
Family: Solanaceae
Local name: Budda busara, Kupanti
One spoonful of fruit Juice mixed in a glass of milk is taken at bed time for 3 – 4 days.

Dog bite

57. *Pithecellobium dulce* (Roxb) Benth
Family: Mimosaceae (Leguminosae)
Local name: Seemachintha
Tender leaves crushed with Cuminum cyminum and mixed with Sesamum Oil and administered in 2 spoonfuls early in the morning for about 5 days.

**Abortion**

58. *Plumbago zeylanica* L
Family: Plumbaginaceae
Local name: Chtra moolam
Root paste made in to pills and 2 pills taken twice a day for 5 days before to abort pregnancy up to 3 months.

**Piles**

59. *Pongamia pinnata* (L) Pierre
Family: Fabaceae (Leguminosae)
Local name: Kanuga
Stem bark ground with bark of Syzygium cumini and Termination arjuna and the extract with sugar candy administered in 2 spoonfuls twice a day for 20 – 30 days.

**Leucorrhoea**

60. *Prosopis Cineraria* (L) Druce
Family: Mimosaceae (Leguminosae)
Local name: Jammi Chettu
Root bark decoction taken in 2 spoonfuls twice a day for about 10 days.

**Fertility**

Family: Fabaceae (Leguminosae)
Local name: Pedda eggi, Pedda Eggashi Chettu,
Stem bark ground with bark of Mitragyna parvi flora and the paste made in to pills and administered to women in 4 pills twice a day for 5 days after menses for 3 consecutive menstrual cycles.

**Blood Pressure**

Family: Apocynaceae
Local name: Sarpa Gandhi, Patala Garidi.
Roots dried in shade and made in to powder and administered in 1 spoonful twice a day for about 20 days.

**Purgative, Jaundice**

63. *Ricinus Communis* L.
64. *Sapindus emarginatus* Vahl

Family: Sapinaceae  
Local name: Kunkudu Chettu  

Fruit Juice applied on head and washed once or twice in a week till cure.

**Bone fracture**

65. *Sida acuta* Burm. F.

Family: Malvaceae  
Local name: Parasu Kampa, Mirpa Alum  

Leaf paste mixed with egg albumen and plastered on effected parts till cure.

**Fertility**

66. *Sphaeranthus indicus* L.

Family: Asteraceae (Compositae)  
Local name: Badasaramu  

Inflorescence and roots ground with goat’s milk and one of extract taken spoonful at night for sexual potency about one month.

**Rheumatic pains**


Family: Sterculiaceae  
Local name: Tapsy Chettu  

Stem bark ground with turmeric Powder and the warmed poultice administered in 2 spoonfuls twice a day for about 7 days.

**Tooth powder**

68. *Streblus asper* Lour

Family: Moraceae  
Local name: Baranki  

Leaves dried in shade and made in to powder is used as tooth powder. Branches used as tooth – stick.

**Eye infection**

69. *Tabernaemontana divaricata* (L) R. Br.

Family: Apocynaceae
Local name:    Nandi Vardhanam
The milky juice from tender branches is poured in to eyes till cure.

Dyspepsia

70. *Tectona grandis. L.f.*
Family:            Verbenaceae
Local name:     Teku Chettu
Wood powder mixed with honey and taken once in the morning in 1 spoonful for 5 days.

Obesity

71. *Terminalia arjuna (Roxb.exDe.) Wt. et Arn.*
Family:            Combretaceae
Local name:     Tella maddi, Arjuna Chekka
Bark powder taken in 1 spoonful once in the morning for about 3 weeks.

Leucoderma

Family:            Menispermaceae
Local name:     Tippa teega
Tuberous and aerial root paste applied on patches and exposed to morning sunlight for 30 – 45 minutes.

Asthma

73. *Tragia involucrate L.*
Family:            Euphorbiaceae
Local name:     Durada gondi
Root powder cigared with leaves of Diospyros melanoxylon and smoked to reduce suffering.

Heamorrhage

74. *Trida procumbens L*
Family:            Astaraceae (Compositae)
Local name:     Gaddi Chamanti, Moddlam
Leaf juice applied externally for cuts, sores, ulcers and wounds to arrest the bleeding, leaf juice applied on cuts and wounds till cure.

Scorpion sting

75. *Vigna trilobata (L) Verdc.*
Family:            Fabaceae ( Leguminosae)
Local name:     Pilli pesara
Leaf paste applied over the stringed area.
Arthritis

76. *Vitex negundo* L.
Family: Verbenaceae
Local name: Vavili chettu
Leaves boiled in water and leaves used for bathing and said to be effective.

Goiter

77. *Xanthium strumarium* L.
Family: Aasteraceae (Compositae)
Local name: Marula matangi
50 ml of root juice administered in the morning about a week.

Asthma

78. *Zaleya decandra* (L.) Burm.f.
Family: Aizoaceae
Local name: Tella garijelu
Root Juice administered in 2 spoonfuls twice a day about 20 days.

Stomach ache

79. *Zingiber Officinale* Rose C.
Family: Zingiberaceae
Local name: Allam
Rhizome ground with lemon juice and administered in 2 – 3 spoonfuls for immediate relief.

Conclusion

The present study revealed an important and alarming situation with regard to utilization of morphological plants in ethnobotanical practices of 79 plant species from Nirmal area of Adilabad district in Andhra Pradesh to treat 57 different ailments and diseases. Among these plant species only few species are used to treat more than one disease. Medicinal pastes are prepared from stem, root, leaves to treat diseases by the tribal people.

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