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PHYTOMEDICINE FOR COLD AND COUGH BY THE PRIMITIVE AND VULNERABLE TRIBAL GROUPS (PVTG) OF VISAKHAPATNAM DISTRICT, ANDHRA PRADESH

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ABSTRACT
The present study was undertaken during 2008-2012 and focus on the ethnomedicinal plants used to cure cold and cough by the primitive and vulnerable tribal groups of Visakhapatnam district. The study yielded 23 plant species as many gnera and families. Hemionitis arifolia and 16 practices were found to be new reports.
KEYWORDS: *Ethnomedicine, Cold, Cough, Primitive tribals, Visakhapatnam*

Ethnobotany has emerged as an important branch of study which focuses on the utility of different plant species and their properties as food, medicine and for other uses (Shende and Dalal, 2018). The study area includes 11 mandals of the Visakhapatnam district. It lies between 17º-34' 11" and 18º-32' 57" northern latitude and 18º-51' 49" and 83º-16' 9" eastern longitude. The entire agency track covers 6, 298 Km^2 i. e., 56.4% of the total geographical area of the district. The annual temperature ranges from 33.7º C (April-May) to 9.8º C (December-January) and the average elevation is about 1200 m above MSL. A detailed investigation on plants associated with Primitive Tribal Groups (PTGs) is taken up with the objectives of an extensive and intensive exploration studies in the areas of PTGs habitations. The PTG communities present in the study area are Gadaba, Khond, Porja and Savara. The present study was carried out in 11 mandals viz., Chintapalli, G.Madugula, G.K.Veedhi, Koyyuru, Hukumpeta, Pedabayalu, Dumbriguda, Munchingput, Araku valley and Ananthagiri. The total population of the study area is 38, 32, 336 (as per 2001 census). The total tribal population is 5, 57,572 (14.55%) and PTGs population is 1, 26, 778 (3.30%).

Some ethnomedicinal studies published in literature on ethnomedicine of cold and cough (Khan and Singh 2010, Anjaneyulu and Sudarsanam 2013, Naidu and Reddi 2018, Shende1 and Dalal 2018).

METHODOLOGY
An ethnomedcinal survey was conducted during 2008-2011 among the four primtive tribal group communities. Elder people, medicine man, tribal physician and village old mothers were consulted to record first hand information on ethnomeidinal uses, method of preparation and administration of the crude drugs. The information from the PTGs was campared with literature. The voucher speciemens weere deposited in the herbarium of the Department of Botany, Andhra University, Visakhapatnam.

Enumeration
The plants are arranged in an alphabetical order with botanical name followed by family, vernacular name, English name, collector, voucher specimen number, method, mode and duration of the treatment. Plants and practices marked with an asterisk (*) are considered to be new or less known.

Acacia rugata (Lam.) Ham**.** (Mimosaceae) VN: Sheekaya E: Soap pod tree JKR 9361
*Root paste mixed with half tea glass of water is administered twice a day for 3 days.
Adiantum philippense L. (Adiantaceae) Challi JKR 9079
*Root paste along with leaf paste of *Centella asiatica* mixed with water is administered twice a day for 3 days.
Biophytum sensitivum (L.) DC. (Oxalidaceae) Pulicenta, Sikerpud JKR 9485
*Whole plant paste mixed with 50 ml of water is administered once a day for 3 days.
Butea superba Roxb. (Fabaceae) Osso JKR 9004
Root paste mixed with half tea glass of water is administered twice a day till cure.
Cannabis sativa L. (Cannabinaceae) Ganjaichettu True hemp, Indian hemp.
JKR 9391
*Dried leaves along with dried leaves of *Aegle marmelos* are burnt and the patient is exposed to the smoke twice a day for 3 days for cold.
Clerodendrum philippinum Schr. In DC. (Verbenaceae) Phidithiki mokka, Fragrant glory tree JKR 9457
*Stem bark paste mixed with half tea glass of water is administered twice a day for 2 days.
Cryptolepis buchananii Roem. & Schult. **(**Periplocaceae) Palathiga, Milk vine JKR 9464

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*Root paste is administered with half tea glass of water twice a day for 4 days.

Gloriosa superba L. (Liliaceae) Vanka vajram, Superb lily JKR 9031

*Root paste mixed with half tea glass of water is administered twice a day for 2 days.

****Hemionitis arifolia*** (Burm. *f.*) Moor (Adiantaceae) Kenneris JKR 9308

Fifty g of leaf paste is administered daily twice.

Hygrophila auriculata (Schum.) Heine (Acanthaceae) Kokilaksamu, Long-leaved barleria JKR 9463

*Leaf or root paste mixed with half tea glass of water is administered thrice a day.

Jatropha curcas L. (Euphorbiaceae) Apal chettu, Barbados nut JKR 9061

*Bread made with *ragi* flour is kept in between two leaves, roasted and taken.

Justicia adhatoda L. (Acanthaceae) Addasaram, Malabar nut tree JKR 9146

*Country cigars are made from leaves and the smoke is inhaled once a day till cure for cough and cold.

Michelia champaca L. (Magnoliaceae) Champangi, Yellow champ 9427

*Bark decoction is administered in 1 tea spoonful per day.

Plumeria alba L. (Apocynaceae) Lakshmi poolu, Pagoda tree JKR 9083

*Root paste is administered with half tea glass of hot water twice a day for 3 days.

Piper trioicum Roxb. (Piperaceae) Marnoattonimada 9310

Two spoonfuls of fruit paste is administered twice a day for 3 days for cold and cough.

Psidium guajava L. (Myrtaceae) Jama, Guava tree JKR 9332

Bark decoction is administered with half tea glass of water twice a day till cure.

Punica granatum L. (Punicaceae) Ganuga,Indian beech tree JKR 9383

Root paste mixed with half tea glass of water is administered twice a day.

Rotala rotundifolia (Buch-Ham. ex Rox.) Koehne (Lythraceae) Daggu mandhu mokka JKR 9178

*Leaf paste mixed with a pinch of salt is given with half tea glass of water twice a day for 4 days.

Semecarpus anacardium L. *f.* (Anacardiaceae**)** Nalla jeedi, Marking nut JKR 9110

Seeds are roasted and floured and given with honey once a day.

Terminalia chebula Retz. (Combretaceae) Karakkai Black myrobalan JKR 9339

Soup of the nut mixed with honey is administered in one teaspoonful once a day till cure.

Viscum orientale Willd. (Viscaceae) Chandrabadanika, Mistle toe-dwarf-tufted plant JKR 9469

*Bark paste is administered with half tea glass of water daily thrice.

Zingiber officinale Rosc. (Zingiberaceae) Allam, Ginger JKR 9453

Tuber paste ground with root of *Piper longum* and leaf of *Ocimum tenuiflorum* is administered with half tea glass of water twice a day for 5 days.

Ziziphus rugosa Lam. (Rhamnaceae) Pindi parimi JKR 9210

*Bark paste mixed with bark paste of *Ardisia solanacea* is administered with half tea glass of water for thrice a day till cure.

RESULTS AND DISCUSSION

The present paper documented 23 ethnomedicinal plant species as many as genera and families used to cure cold and cough by the primitive and vulnerable tribal groups of Visakhapatnam district. Habi wise analysis shows that the trees are dominant with 10 species followed by shrubs (6 spp.), climbers and herbs (5 spp. each). Morphological analysis showed the maximum utilization of leaf in 10 practices followed by seed (6), root (3), whole plant and stem bark (2 each), and rhizome, root bark, flower, and oil in one practice each. *Hemionitis arifolia* and 16 practices were found to be new or less known (Jain 1991, Kirtikar & Basu 2003).

Table 1. Plants used for similar purpose in different parts of India

Sl. No.	Plant species	Tribes/Area/Region/Country	Reference(s)
1.	***Gloriosa superba*** L. Liliaceae	Tribal communities, Nahargarh Wild life sanctuary, Jaipur, India	Khan and Singh, 2010
2.	***Punica granatum*** L.	Tribal communities, Nahargarh Wild life sanctuary, Jaipur, India The Rural Area of Wardha District (M.S.)	Khan and Singh, 2010 Shende and Dalal, 2018
3.	***Zingiber officinale*** Rosc. Zingiberaceae	The Rural Area of Wardha District (M.S.) Rayalaseema region of Andhra Pradesh, India	Shende and Dalal, 2018 Anjaneyulu and Sudarsanam, 2013
4.	***Jatropha curcas*** L. (Euphorbiaceae	Rayalaseema region of Andhra Pradesh, India	Anjaneyulu and Sudarsanam, 2013
	Justicia adhatoda L. (Acanthaceae	Rayalaseema region of Andhra Pradesh, India	Anjaneyulu and Sudarsanam, 2013

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