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## RESEARCH ARTICLE

### TRADITIONAL METHODS OF FAMILY PLANNING PRACTICES AMONG MEITEI COMMUNITY OF MANIPUR AND THEIR ASSOCIATED PLANTS

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#### ABSTRACT

Pomegranate Present study was carried out to document plant-based preparations used as abortifacients in the valley districts of Manipur, North eastern India, where Meitei's are the highest in population among the other communities. Data were collected by interviewing local traditional healers, elderly women, mayoknabee etc., at different places in all the seasons. A total of 22 angiospermic plants belonging to 18 families and 22 genera have been documented. Information on local names, plant parts and different modes of preparations were documented in this present paper.

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## INTRODUCTION

An abortifacient is a Latin word "abortus – miscarriage" and "faciens – making" is a substance that induces abortion. The term "abortion" actually refers to any premature expulsion of a human fetus, whether naturally spontaneous, as in a miscarriage or artificially induced, as in a surgical or chemical abortion (<http://en.Wikipedia.org/wiki/Abortifacient>). Since ancient times numerous non pharmaceutical abortifacients exist and these include herbal, spiritual or ritualistic preparations. Thus, plant and plant-based medicaments are the basis of many modern pharmaceuticals which we use in day today life for various ailments (Mali *et al.*, 2006). Many research papers on the uses of plants as abortifacients have been published by various workers. Reports on 30 plants and plant parts used as antifertility drugs and 40 plants against stomach trouble by the tribals of Hajaribargh have been done by Chaudhury *et al.* (1982). The folk medicinal uses of 26 plants as abortifacients in five districts of Uttar Pradesh have been reported by Khan and Khan (2002) of which eight plants are hitherto unreported. Mali *et al.* (2006) documented 20 plants used as abortifacient in three districts of North Maharashtra.

A list of 22 Angiospermic plant species belonging to 21 genera under 18 families used as abortifacients among the tribal communities of West Bengal have been reported by Mitra and Mukherjee, (2009). Shah *et al.* (2009) presents first hand information gathered on 36 medicinal plants belonging to 23 families traditionally used by the tribal and rural women of northern areas of North West Frontier Province (NWFP), Pakistan for birth control. Naser, (2011) reported 15 plants on the traditional uses as abortifacients in Aurangabad district, Maharashtra. A list of 18 angiospermic plants belonging to 15 families and 17 genera used for reproductive health care practices and fertility control among the Bhumji Tribe of Baleswar, Orissa have been reported by Goswami *et al.* (2011). Kumar *et al.* (2012) provides information on 20 plant species under 16 families belonging to 20 genera used as birth control. Shende *et al.* (2014) documented 19 plant species as abortifacient whereas 13 plant species as antidiabetic by rural people in Hinganghat tahsil of Wardha district, Maharashtra. A total of 55 ethnomedicinal plants belonging to 42 families and 49 genera have been documented possessing antifertility property used in the rural areas of Tripura of which 10 plants are hitherto reported for the first time by Das *et al.* (2014). Numerous literature on ethnomedicine, ethnobotany, ethnobiology etc., of various communities and societies of

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Manipur have been published or put forth but research work focussing on women's health care problems that prevalent among women community through generations has often been neglected. Therefore, keeping in view of the above, the present investigation was carried out to document the medicinal plants used as abortifacients for family planning among the *meitei* women of Manipur, India.

## STUDY AREA

Manipur, a small picturesque state in the north-eastern India is known for its ecological distinctness and rich biodiversity, having many endemic flora and fauna and rich cultural heritage. It lies between 23°83'N and 25°68'N latitude and 93°03'E and 94°03'E longitude. It comprises 1820 km<sup>2</sup> of flat plateau of alluvial valley and 20,507km<sup>2</sup> of hill territory and forms a part of the Himalayan mountain system. There are nine districts in Manipur of which Imphal East District, Imphal West District, Bishnupur District and Thoubal District are the valley districts which lies between 23°45'N to 25°00'N and 93°43'E to 94°15'E (excluding Jiribam sub-division, Imphal East) covering an area of 1843 km<sup>2</sup>.

major community with highest in population. Regular visits were made in different areas in different seasons during July 2012 to August 2013. During the field study, consultation and enquiries were made with the old women, men, traditional healers, *mayoknabee* (women acquainted with childbirth) of that area and information about the uses of different plants, plant parts as abortifacients have noted down. The voucher specimens including medicinal uses, procedure, composition, dose etc are collected following standard field and ethnobotanical methods - Jain (1985, 1987, 1991) and Sinha, (1996). Further, detailed information whenever contradiction comes was rectified through distinguished traditional healers. Voucher specimens were collected and preserved according to the conventional herbarium techniques as suggested by Jain and Rao (1977).

The authentic identification of the plants were done with the help of the available floristic literature such as Flora of British India vol.1-7 Hooker, (1872-1897); Flora of Assam, vol. 1-4 Kanjilal *et al.* (1934-1940), Flora of India, vol. 12-13 Hajra *et al.* (1995), Floristic diversity of Assam Bora *et al.* (2003).

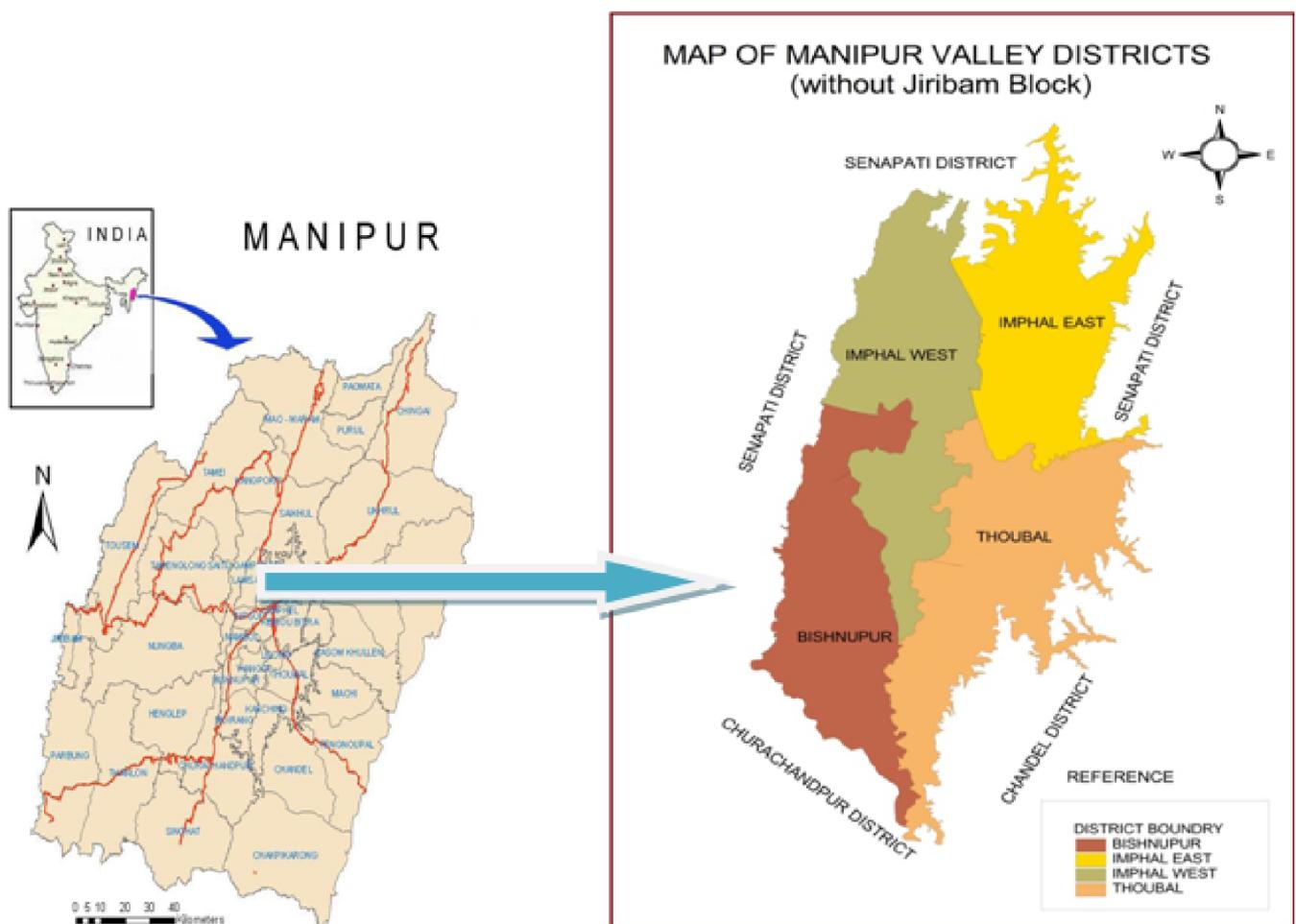


Fig. 1. Maps showing the study area

## MATERIALS AND METHODS

An ethnobotanical survey was conducted in the valley districts of Manipur without Jiribam sub-division where *meitei*'s are the

Besides these floras, in order to match the specimens for further confirmation and to identify the plants up to species level, the herbarium sheets were taken to the Botanical Survey of India, Eastern Circle, Shillong for consultation and

conformation of the identification. The voucher specimen will be deposited in the Department of Ecology and Environmental Science, in due course of time.

## RESULTS AND DISCUSSION

The present study has documented 22 angiospermic plants belonging to 22 genera and 18 families used as abortifacient by the *meitei* women of Manipur (Table 1). All taxa belongs to dicotyledons with the exception of *Alpinia galanga*. Although many plants have been reported as abortifacients, some species such as *A. galanga*, *Andrographis paniculata*, *Justicia adhatoda*, *Phlogacanthus thrysisiformis*, *Scutellaria discolor* etc. as abortifacients seems to be hitherto unreported. All the reported species used only a single part of the plant for the given purpose with the exception of *Centella asiatica* (which uses whole plant) and *Azadirachta indica* (which uses both leaves and seeds). It shows that the bioactive compounds in *C. asiatica* is distributed throughout the plant body.

In other species the bioactive compounds might have accumulated in the specific portion of the plant which possesses abortifacient properties.

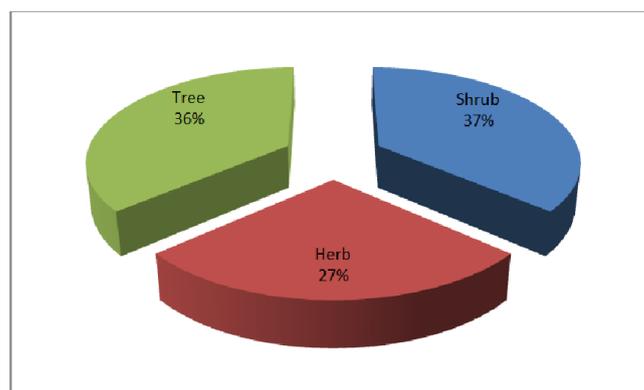


Fig.1. Pie-diagram showing the percentage of habit of the plants documented

Table 1. List of Medicinal Plants Used as Abortifacients by Meitei Community of Manipur

Botanical name (Family)	Local name	Habit	Parts used	Mode of uses
<i>Abrus precatorius</i> L. (Papilionaceae)	<i>Chaning</i>	A twin-ning shrub	Seed	Seed powder is used as an abortifacient.
<i>Achyranthes aspera</i> L. (Amaranthaceae)	<i>Khujum pere</i>	Herb	Root	Root paste is applied on the abdomen to induce abortion.
<i>Alpinia galanga</i> (L.) Willd. (Zingiberaceae)	<i>Kanghu</i>	Tall robust herb	Rhizome	The juice of the rhizome is used as an abortifacient.
<i>Ananas comosus</i> (L.) Merr. (Bromeliaceae)	<i>Keehom</i>	Tufted stem-less herb	Fruit	Fruit is used as an abortifacient.
<i>Andrographis paniculata</i> (Burm.f.) Nees (Acanthaceae)	<i>Vubati</i>	Herb	Leaves	Boiled decoction of the leaves is used as an abortifacient.
<i>Averrhoa carambola</i> L. (Averrhoaceae)	<i>Heinoujom</i>	Tree	Fruit	Ripe fruit when consumed in large doses causes abortion.
<i>Azadirachta indica</i> A. Juss. (Meliaceae)	<i>Neem</i>	Tree	Leaves & seeds	Boiled decoction of the leaves is used as an abortifacient and the seed oil also possesses antifertility property.
<i>Butea monosperma</i> (Lam.) Taub. (Papilionaceae)	<i>Pangong</i>	Tree	Root	Root juice causes temporary sterility in women and acts as an abortifacient.
<i>Caesalpinia pulcherrima</i> (L.) Sw. (Caesalpinaceae)	<i>Krishnachura</i>	Tree	Stem bark	Decoction of stem bark is used as an abortifacient.
<i>Calotropis procera</i> (Aiton) Dryand (Asclepiaceae)	<i>Angkot</i>	Shrub	Roots	Small amount of root paste is given orally for 3 to 6 days after completion of menstrual cycle and acts as an abortifacient.
<i>Carica papaya</i> L. (Caricaceae)	<i>Awathabee</i>	Herba-ceous tree	Seed	Unwashed seeds of the mature fruit used as an abortifacient.
<i>Centella asiatica</i> (L.) Urb. (Apiaceae)	<i>Peruk</i>	Herb	Whole plant	Boiled decoction of the whole plant is used as an abortifacient.
<i>Datura metel</i> L. (Solanaceae)	<i>Sagoi hidak angouba</i>	Under shrub	Root	Decoction of the root is used as an abortifacient.
<i>Gossypium hirsutum</i> L. (Malvaceae)	<i>Lashing pambi</i>	Large shrub	Seeds	Seed powder is used as an abortifacient.
<i>Jatropha curcas</i> L. (Euphorbiaceae)	<i>Awa-kege</i>	Shrub	Seeds	Oil from seeds is used both internally and externally as abortifacients.
<i>Justicia adhatoda</i> L. (Acanthaceae)	<i>Nongmangkha angouba</i>	Bushy shrub	Leaves	Boiled decoction of the leaves is used as an abortifacient.
<i>Michelia champaca</i> L. (Magnoliaceae)	<i>Leihao</i>	Middie sized tree	Stem bark	The decoction of the bark is used as an abortifacient for 2-3 months old pregnancy.
<i>Nerium indicum</i> Mill. (Apocynaceae)	<i>Kaberei</i>	Perenni-al shrub	Root	Decoction of the root is used as an abortifacient and very much effective practice.
<i>Nyctanthes arbor-tristis</i> L. (Oleaceae)	<i>Shinggarei</i>	Small sized tree	Leaves	Decoction of the leaves is used as an abortifacient.
<i>Phlogacanthus thrysisiformis</i> (Roxb. ex Hardw.) Mabb. (Acanthaceae)	<i>Nongmangkha</i>	Ever-green shrub	Leaves	Boiled decoction of the leaves is used as an abortifacient.
<i>Plumeria acuminata</i> W. T. Aiton (Apocynaceae)	<i>Khagi-leihao</i>	Small tree	Root	Root juice is used as an abortifacient.
<i>Scutellaria discolor</i> Colebr. (Caryophyllaceae)	<i>Yenakhat</i>	Herb	Leaves	Boiled decoction of the leaves is used as an abortifacient.

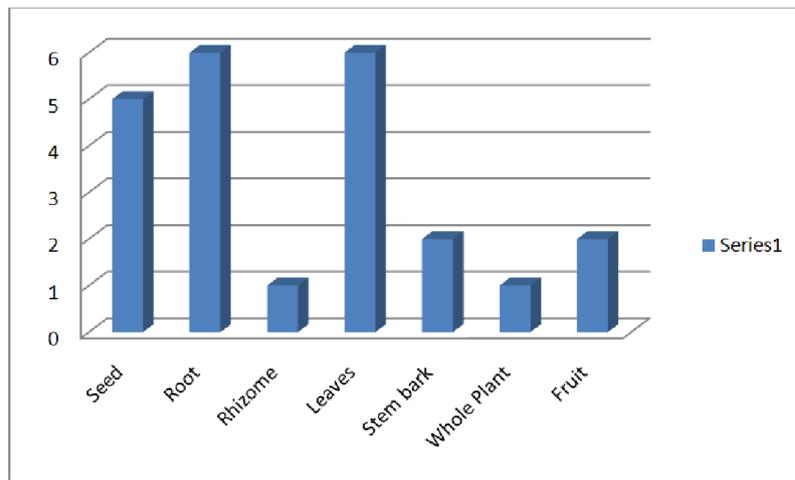


Fig. 2. Bar diagram showing the plant parts used

### PHOTO GALLERY



*Alpinia galanga* (L.) Willd.



*Andrographis paniculata* (Burm.f.) Nees



*Datura metel* L.



*Justicia adhatoda* L.



*Nerium indicum* Mill.



*Nyctanthes arbor-tristis* L.



*Nerium indicum* Mill.



*Nyctanthes arbor-tristis* L.



*Scutellaria discolor* Colebr.

## Conclusion

*Meiteis* have a rich ethnobotanical and ethnotherapeutic knowledge which were practiced by the *Maibas* and *Maibeas* for curing various types of ailments by administering the wild medicinal herbs. *Maibee*, midwives (*mayoknabee*) and elderly women are the main practitioners for womenfolk's ailments. They talked freely about disorders, in the matter of fertility, leucorrhoea, gonorrhoea etc. The importance of traditional medicines has been realized worldwide as many of them proved to be very effective. This work also gives scope for appropriate scientific studies on the phytochemical and pharmacological activities of the recorded plants for drug design.

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