

## Ethnomedicinal plants used by the tribals of Mizoram to cure cuts & wounds

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Results of ethnobotanical studies carried out in the state of Mizoram are presented. The usage of wild plants by the native people for the cure of cuts and wounds is described. The use of 17 species, belonging to 14 families together with their local names and other uses have been enumerated. The plants not only contain antiseptic value but also have regenerative and healing properties. Sticking property of paste of bark was also observed in *Laki* tree. In addition, blood-clotting properties of some plants has also been reported.

**Key words:** Cuts & Wounds, Mizoram, Ethnobotany, Ethnomedicine

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The tribals/aboriginal people live in remote areas, which remain cut off from main centers of civilization for many months at a stretch. They have to depend on the jungles for their needs especially for food and medicines. These people are very knowledgeable about the use of plants against various diseases. The tribals use the plants in a different, effective and novel manner. Scientific investigations of tribal practices especially their use of herbal medicines would open new area of knowledge.

Many tribals of different ethnic groups like Garo, Khasi, Jaintia, Naga, Kuki, Manipuri, Mizo, Mara, Pawis, Chakmas, Dafla and others inhabit North eastern region of India. There is no scientific and systematic documentation of plants used by them due to lack of communication, inner line permit, insurgency, remoteness of villages and non-acceptability of outsiders. However, in North eastern part of India, most of the work has been done in state of Assam<sup>1</sup>, Meghalaya<sup>2-3</sup>, Nagaland<sup>4</sup>, and Arunachal Pradesh<sup>5-6</sup> and some part of Mizoram<sup>7-10</sup>.

Therefore, the present investigation has been carried out in state of Mizoram with a view to find out ethnomedicinal plants, particularly used in cuts and wounds in addition to other uses by aboriginal tribes.

### Methodology

The present ethnobotanical survey was carried out for about three years in 54 villages of North East state

of Mizoram (Fig.1). Qualitatively, primary data was collected through interviews, discussions with the villagers and through personal observations. Quantitatively, the primary data was comprised of specimen collections and photograph of plants. Survey was difficult as the forest was inaccessible, the local hesitated to go during heavy rains and prevalence of cerebral malaria, and landslides taking place because of young mountains.

Published and unpublished information about plants were also collected which constituted secondary data. Specimens were got identified from State Forest College, DehraDun, Forest Department of Mizoram and Indian Agricultural Research Institute, Pusa, New Delhi.

### Results

The present investigations have revealed the following 17 species of plants belonging to 14 families, being used by the tribals of Mizoram to cure the cuts and wounds (Fig. 2-11). The plants species are arranged alphabetically followed by family and local names in Mizo. The voucher specimens are housed in the Herbarium of Department of Biosciences, M D University, Rohtak, Haryana.

#### 1. *Adhatoda zeylanica* Medic. (Acanthaceae)

Mizo -Kawl-dai; English – Vasaka; Locality: Lunglei

The leaf is applied to wound and cuts. Leaves are mashed and boiled. Boiled water is used for bathing. The boiled water is also given to patient suffering from malaria.

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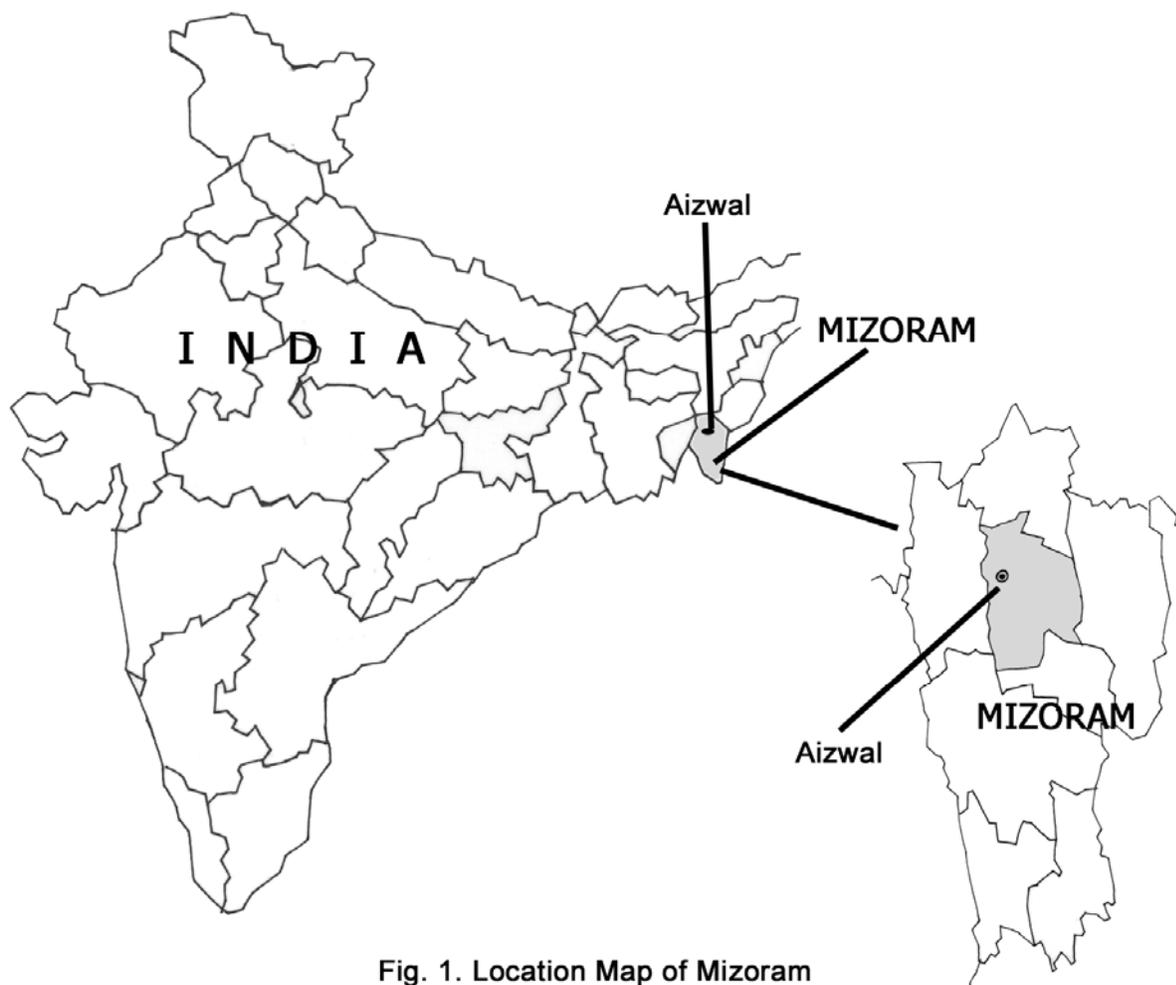


Fig. 1. Location Map of Mizoram

2. *Alstonia scholaris* R.Br. (Apocynaceae)

Mizo– Thum-riah; Locality: Saiha

The latex is applied to wounds and boils and also mixed with oil to cure earache.

3. *Callicarpa arborea* Roxb. (Verbenaceae)

Mizo – Hnah-kiah/ Laki; Locality : Saiha

Paste made from the bark and juice of the *Laki* tree is applied to heal the cuts. The bark of this tree is powdered and mixed to form a paste with its juice and this paste sticks onto the wound itself. During sore throat, charcoal of this wood soaked in water is given to the patient.

4. *Cirsium sinense* C.B. Clarke (Asteraceae)

Mizo –Len-hling; Locality: Saiha

The root is crushed and tied on the wounds.

5. *Combretum flagrocarpum* C.B. Clarke (Combretaceae)

Mizo - Leihru-sen; Locality: Lunglei

The leaf juice is applied to wounds and cuts to stop bleeding.

6. *Curcuma domestica* Valetton (Zingiberaceae)

Mizo –Aieng; Locality: Lunglei

The tuber is mashed, warmed and is applied on wounds. Chakmas usually roast the raw and tender tubers in fire and extract the juice. Little salt is added to this juice. Heated iron rod or wire is put into this in order to give shock to the germs, if any. It is then given to the children and old people to cure cough and cold. The rhizome is also taken against food poisoning, diarrhoea, dysentery and typhoid. Rhizome is crushed with the leaves of *Mikania micrantha* H Bk and taken against cancer.

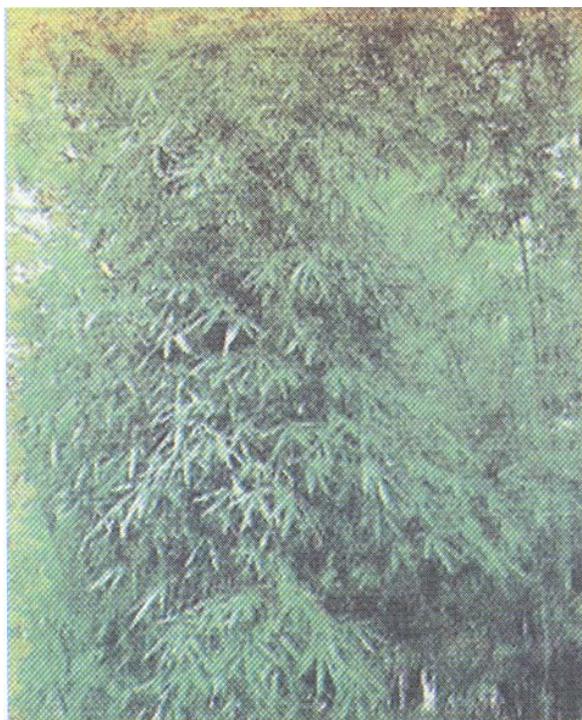


Fig. 2. *Melocanna baccifera* (Roxb.) Kurtz

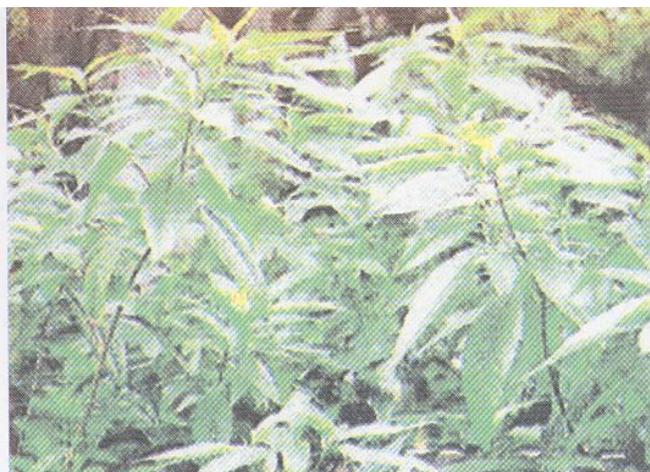


Fig. 3a. *Adhatoda zeylanica* Medic.



Fig. 3b. *Adhatoda zeylanica* Medic. leaves

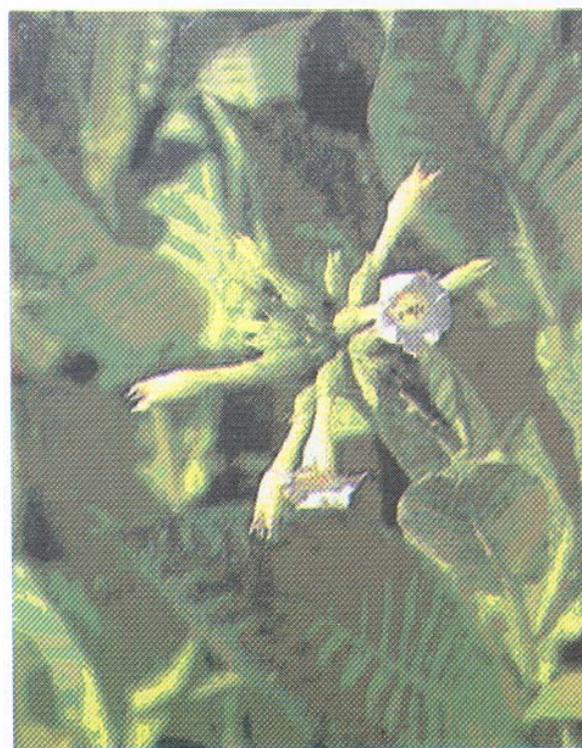


Fig. 4. *Nicotiana tabacum* Linn.



Fig. 5. *Gelsemium elegans* Benth.

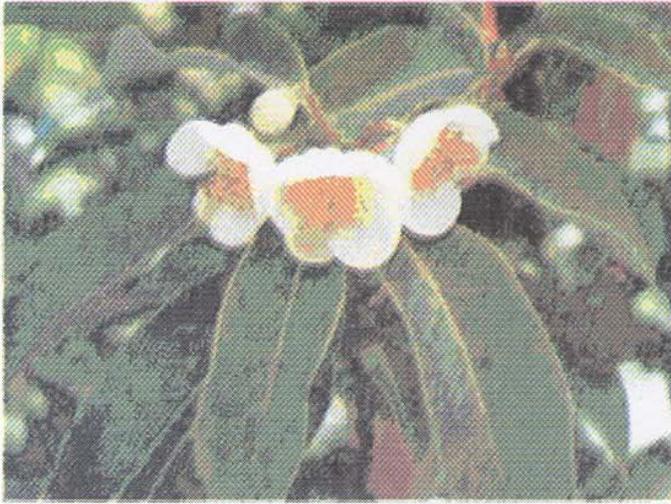


Fig. 6. *Schima wallichii* (DC.) Korth.

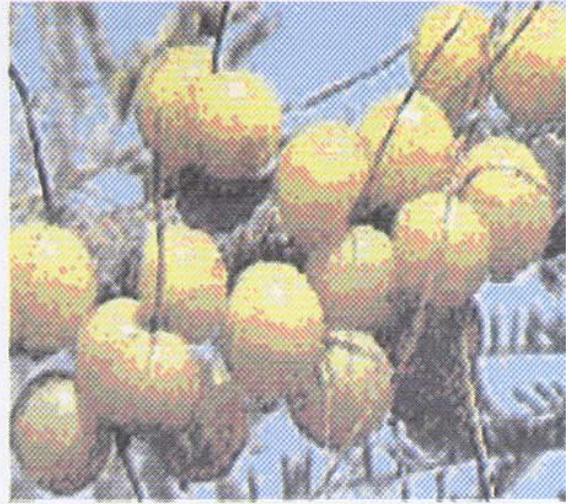


Fig. 7. *Emblica officinalis* Gaertn.



Fig. 8. *Mikania micrantha* H.B.K.

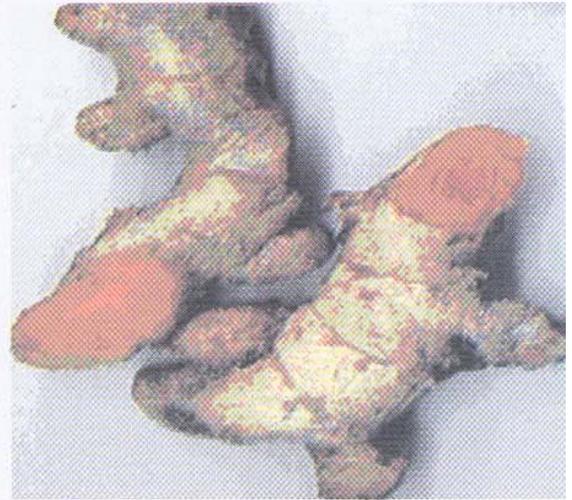


Fig. 9. *Curcuma domestica* Valetton



Fig. 10. *Viscum articulatum* Burn.f.



Fig. 11. *Cynodon dactylon* Pers.

7. *Cynodon dactylon* Pers (Poaceae)

Mizo –Phaitualhlo; Chakma –Doorba; Locality: Lunglei

Leaves are crushed and the juice extracted from the leaves is used to stop bleeding.

8. *Emblica officinalis* Gaertn. (Euphorbiaceae)

Mizo-Sun-hlu; Locality: Lawngtlai

The crushed bark is applied to wounds and cuts. The bark juice is taken against diarrhoea and dysentery. Fruits have a laxative effect. A liquid is derived from the fermentation of the fruits. It helps in improving digestion, anaemia, jaundice, liver disorder, urination and also for certain heart ailments. It helps to quench thirst when chewed.

9. *Eupatorium odoratum* Linn. (Asteraceae)

Mizo- Tlangsam; Locality: Lungsen

The leaves are crushed and applied to wounds and cuts. Crushed leaves are also applied around anus against pinworms. It is also effective for clotting of blood of cuts and wounds.

10. *Gelsemium elegans* Benth. (Loganiaceae)

Mizo - Hnam-tur; Locality: Hauluong

The leaves are applied to wounds and a small portion of the root is taken raw against stomach ulcer and ringworms.

11. *Melastoma malabathricum* Linn. (Melastomataceae)

Mizo -Builukham-pa; Locality: Lungsen

The bark and the roots are used for curing wounds and other skin diseases. The plant is astringent and used to cure diarrhoea and dysentery.

12. *Melocanna baccifera* (Roxb). Kurz. (Poaceae)

Mizo - Mautak; Locality: Lunglei

The glossy surface of stem or cortex is applied to cure wounds. The fruit is taken against low blood pressure. The sap inside the culms is taken against hiccup, fever, urethritis and paralysis.

13. *Mikania micrantha* H.B.K. (Asteraceae)

Mizo - Japan-hlo; Locality: Lunglei

The leaf juice is applied to cuts and wounds for clotting the blood as first aid. Leaves are boiled in water and the water is given to the patient suffering from dysentery.

14. *Nicotiana tabacum* Linn. (Solanaceae)

Mizo -Vaihlo; Chakma - Kasyapatta; English - Tobacco; Hindi - Tambaku; Locality: Thlabung

Juice of tobacco is used to cure pig's skin disease (similar to leucoderma). Leaf is crushed and the juice is applied to wounds and cuts. The young leaf is tied to boil, to avoid infection as well as to facilitate its early rupturing.

15. *Parkia roxburghii* G. Don (Mimosaceae)

Mizo - Zawng - tah; Locality: Saiha

The green portion of the fruit is mixed with little amount of water and applied to wounds and scabies. The fruit or young shoot is eaten for curing diarrhoea, dysentery and food poisoning.

16. *Schima wallichii* (D C.) Korth. (Theaceae)

Mizo - Khiang/Khainei/Pakhai-; Locality: Saiha

The juice of stem is used to stop bleeding from cuts and also as antiseptic. The bark is good antihelminthic and rubefacient. The crushed fruit is boiled and the water is applied against the bite of spider, scorpion, etc. This practice is common in the state.

17. *Viscum articulatum* Burm.f. (Loranthaceae)

Mizo - Leng-pat ; Locality: Thlabung

The plant is boiled and the extracted water is applied to wounds.

**Discussion**

Mizo tribals have to venture out in thick jungles for food and sustenance, and have been using sharp edged implements and weapons for hunting. Being warriors and due to intense inter-tribal fights, which go on amongst them, they get badly hurt. Very frequently, they also get hurt because of the attacks of the wild animals. As there is no immediate medical assistance available to them in the thick jungles or during inter-tribal fights, they have to depend on the natural resources, which are available in abundance. In the process, the tribals have perfected the technique of using plants to cure cut and wounds and identified 17 such species, used for this purpose have been identified. The description given above has evolved over a period of time by hit and trial method and all the medicines have evolved from plant resources through practice.

The Todas of Nilgiris are also using the leaf juice of *Eupatorium glandulosum* Kunth, non Michx. for cuts and wounds<sup>12</sup>. Leaves of *E. adenophorum*

Spreng. are used by Zeliang tribals of Nagaland for clotting of blood<sup>4</sup>. *E. odoratum* Linn. used by Mizos in the present study is also used by the Khasi tribals for cuts and wounds<sup>2</sup>. Adi tribe of Dibang valley district in Arunachal Pradesh also uses latex of stem for cuts and wounds<sup>13</sup>. This species is reported to be used in this area only. During visits to different villages of Mizoram for the present study, one tribal villager from Hualuang narrated his experience as to how he used the paste of all the above-mentioned species to heal the wounds received due to an attack by a wild bear. The cure was complete and there was no side effect or infection during the healing process. The healing process indicates that the paste of these plants not only contain very effective antiseptics but also possess regenerative and healing properties.

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