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TRADITIONAL PRACTICES IN MIZORAM, NORTHEAST INDIA TO REMOVE IRRITANT OF AMORPHOPHALLUS NEPALENSIS (WALL.) BOGNER & MAYO: A HIGHLY IRRITATING AROID

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ABSTRACT

The present communication deals with documentation of traditional knowledge of collection, processing and treatment of corm of *Amorphophallus nepalensis* to remove irritating substances and preparation of traditional Mizo food item "Telhawng" based on information collected from forest fringe villages viz. Kelsih, Muallungthu, Chite, Sihphir, Lungdai of Aizawl, Mizoram. *A. nepalensis* is a least known aroid called 'Telhawng-pa' in Mizo belongs to the family Araceae. In present findings suggest further investigation on nutritional and pharmacological aspects to understand the impact of the species to community.

Key Words:

Aroid, Irritating substances, Telhawng,
Mizo food, Mizoram

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INTRODUCTION

Mizoram is one of the eight states of Northeast India lies between 21° 58' and 24° 35' N latitude and 92° 15' and 93° 29' E longitude, has highest tribal population (94.8 %). The major tribes inhabited in the state are Mizo, Ralte, Hmar, Pawi, Paite, Chakma, Pang and other groups (Liangkhaia, 1976; Lalramnghinglova, 2003). They have unique tradition and ethnicity compared with other states of India (Lalthanpuii et al., 2015). Among the people have strong traditional knowledge of use of plants which passed on orally from generation to generation. The tribes possess different traditional techniques of processing of food with minor differences among different parts within the state (Lalthanpuii et al., 2015). They have been consuming wild plants since very ancient times without knowing their nutritive and medicinal values (Lalfakzuala et al., 2007).

Amorphophallus nepalensis (Wall.) Bogner & Mayo is an herbaceous aroid belonging to the family Araceae and naturally grown in fertile soil along rivers or streams. It is called Telhawng-pa in Mizo. In parts (leave, stem and corm) of the plant contain irritating substances, so when it touches produce

high irritation to skin. Due to presence of irritating substances in corm it is not possible to eat fresh or by normal cooking (community information). The tribal process the corm of the plant to remove irritant substances and prepare a traditional food item called "telhawng" which is a typical food of the Mizos in Mizoram. The processed corm used as digestive, anthelmintic and forms an important ingredient of food staffs.

So, an effort was made for documentation of traditional practices of collection, processing and treatment of corms of *A. nepalensis* by the Mizos to remove irritating substances and use which is not reported so far.

MATERIALS AND METHODS

An attempt had been made to collect information on traditional food processing system among Mizos in general and detailed information of preparation of "Telhawng" in particular during 2016-17 from forest fringe villages (Kelsih, Muallungthu, Chite, Sihphir, Lungdai) of central and western part of Aizawl district, Mizoram. Several field visits had made to interact with knowledgeable informant of the selected villages and to collect information. The information was collected in Mizo language in field and translated to English. Recorded the associated plant

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species which grown along with *A. nepalensis* and effort made to understand the ecology of the species. Photographs of the plants in natural habitat, collection and storing corms, along with different steps of processing corms of *A. nepalensis* and selling of “Telhawng” in local markets (Bara Bazaar and Thak-thing) had taken up during field visits.

RESULTS AND DISCUSSION

The plant is naturally grown in fertile moist and shady places nearby seasonal streams in degraded and undisturbed forest areas (Photo-A). Community people identify the plant when inflorescence (spadix) is emerged first from the corm before leaves as soon as rain starts and collect the corms during April-May. The people carefully dig out and collect the corms which contain highly irritating compound as it touch to skin and any part of human body cause irritation (Community information).

The plant species viz. *Impatiens balsamina*, *Begonia roxburghii*, *Curculigo orchiodes*, *Angiopteris evecta*, *Hedychium spicatum*, *Homolonema aromatica* etc were recorded in association of *A. nepalensis*.

Processing to remove irritant of corms and preparation of “Telhawng”

After collection, the corms are stacked under shade for few days (15-20 days) to reduce the water content from the corm (Photo-B).

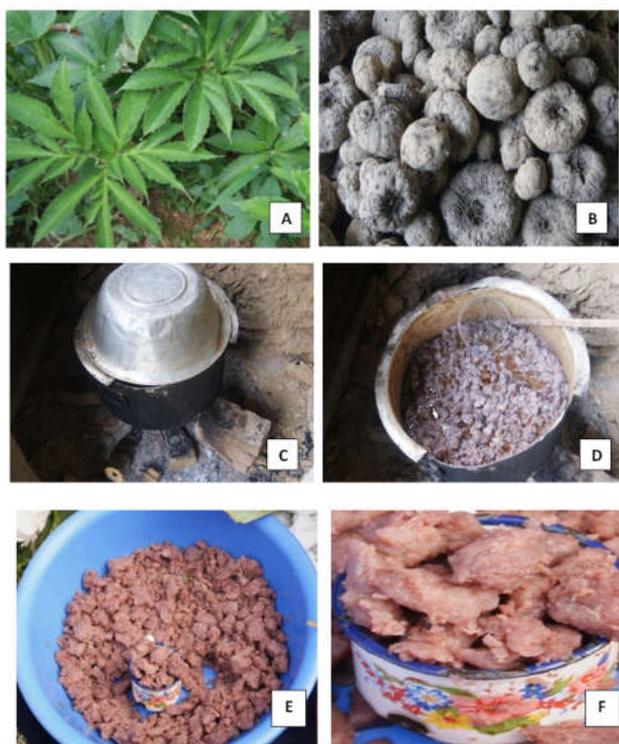


Fig 1 Photographs

- A. A plant of *Amorphophallus nepalensis*
- B. A stack of corms
- C. Chopped & boiled corms
- D. Treated chopped corms with chingal
- E. Telhawng
- F. Selling Telhawng in local market.

After 15-20 days of collection, neatly cleaned the corm with tap water and the outermost thin covering of the corm is peeled off with sharp knife and chop them into small pieces. The chopped corms are crushed carefully with typical wooden mortar and pestle protecting stick to skin and eyes. The crushed materials is boiled for 72 hours, intermittently change the water after 3-4 hours duration (Photo-C). After that, the boiled material is again boiled with traditionally made alkali solution (ash –filtrate) called “Chingal” for 3-4 hours. The ash-filtrate is made from bamboo (*Melocanna baccifera*) as well as wood (*Schima wallichii*) ash. After thoroughly treated with Chingal, alkali solution is discarded and again treated the plant materials with mixture of citrus juice (*Citrus medica*), ripened tamarind (*Tamarindus indica*) fruit pulp for 30-45 minute and repeated 4-5 times (Photo-D). After that the materials is become ready to use as food called “Telhawng” (Photo-E). It was recorded the selling price of “Telhawng” Rs. 50/- per 20-25 gm in Bara Bazaar and Thak-thing market, Aizawl (Photo-F). “Telhawng” is served mixing with preserved pork-fat (Sa-um: Mizo) and ash filtrate (Chingal: Mizo) (Sawmliana, 2013).

CONCLUSION

Traditional knowledge regarding processing and preparation of typical food is very rich among the Mizos in Mizoram, Northeast India. The usage of the aroid (*A. nepalensis*) is least known, hence documentation of indigenous knowledge on processing, treatment to remove irritating substances and use of *A. nepalensis*, will add new information to field of research. The present findings suggest more investigation on nutritional and pharmacological aspect of *A. nepalensis* which may bring new findings to plant research.

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