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Traditional knowledge of medicinal plants used by Kigwema village of Kohima district, Nagaland (India)

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Abstract

Kigwema village belongs to one of the Southern Angami villages, under Kohima District with an abundance of plants possessing medicinal properties. This village holds vast traditional knowledge of medicinal plants used to treat and relieve certain diseases. Information gathered on these medicinal plants has been carried out during a field study conducted in Kigwema village.

Keywords: Folk medicine, traditional knowledge, medicinal plant, Kigwema, Nagaland, India

1. Introduction

In the North-eastern part of India, lies the state of Nagaland with an area of 16,579 km², and Kohima as its state capital (Figure.1). It is a mountainous region with agriculture as its main economic activity which includes rice, corn, potatoes, and sugarcane ^[1]. Nagaland has about 15 major tribes surrounded by hilltops and valleys with each tribe possessing traditional knowledge of medicinal plants. The applications of this traditional knowledge on medicinal plants are handed down to generations through folk tales and obtaining this valuable information is of utmost importance.

2. Study area and tribals

Nagaland located in the north East India ^[2] extends between latitude 25°6'-27°4'N and Longitude 93°20'-95°15' E and has a total area of 16579 km² with an average rainfall of 250 cm. ^[3]. The present study area, Kigwema Village situated south of Kohima have been conducted to document the abundance of plants which possessed medicinal properties. The people of this village belong to the Angami tribe and agriculture is one of its main economic incomes. The documentation of medicinal plants belonging to this area has been undertaken to assess the use of these plants through plant identification, retain traditional knowledge so as to benefit society, and work further to establish the authenticity and effectiveness of the plants mentioned.

3. Methodology

Data collection on traditional knowledge of medicinal plants was conducted from informants such as locals inhabiting the village, medicine men, village elders. The collected plants were identified using literature and herbarium deposited.

4. Results and Discussion

The plants collected are arranged in alphabetical order according to their scientific names, family followed by local names used by Kigwema villagers and the plant parts used for treatment have been mentioned below in table 1. Pictures of some plants are provided which were available at the time of the research (figure. 2).

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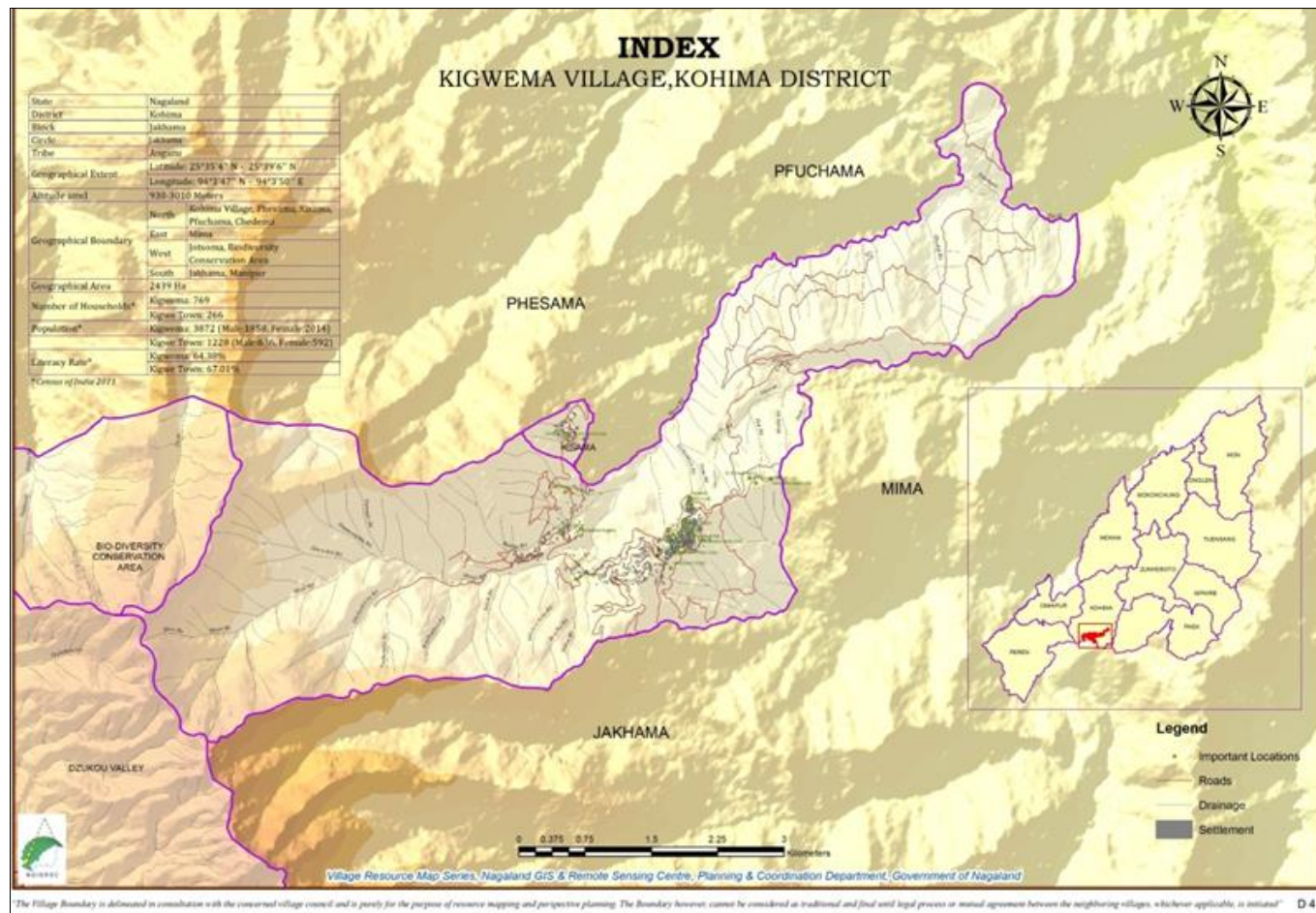
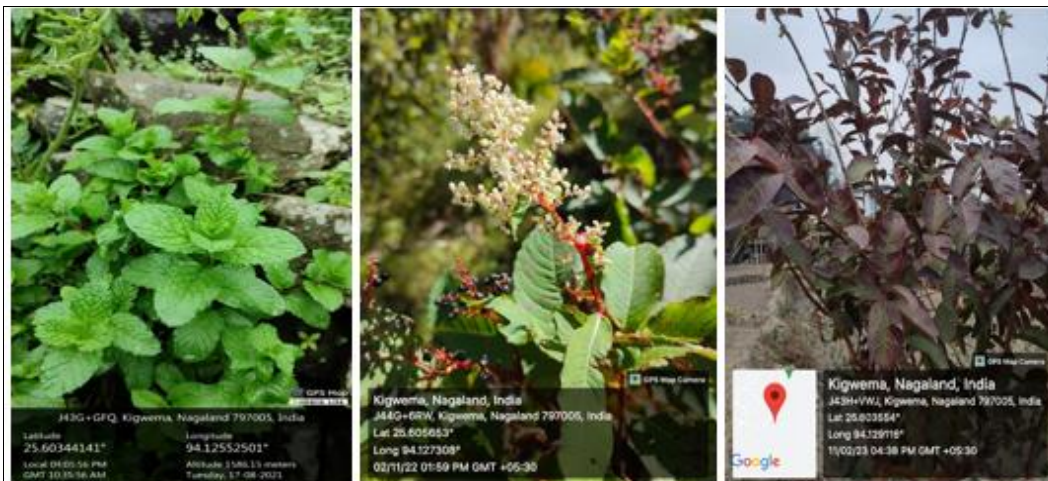


Fig 1: Location of Kigwema Village area

Table 1: List of Plants in alphabetical order

Sl. No.	Scientific names	Family	Local names	Plant Parts	Application
1	<i>Ageratum conyzoides</i> L.	Asteraceae	Nhanari	leaf	leaf juice applied topically to stop bleeding.
2	<i>Allium sativum</i> L.	Liliaceae	Chiimeyie	Bulb	Bulb is eaten raw to reduce blood pressure, giddiness, improve digestion and paste of bulb mixed with mustard oil and massaged on throat and chest to treat cough and cold.
3	<i>Allium ascalonicum</i> L.	Liliaceae	Themeya	Leaf and bulb	Leaf and bulb boiled for sore throat or cough.
4	<i>Aloe vera</i> L.	Liliaceae	Aloe vera	Fresh aloe gel	Fresh aloe gel is applied on wounds for cooling and healing from burnt injuries. Gel is also eaten for gastritis.
5	<i>Begonia Palmata</i> D.	Begoniaceae	Zuphiphi	Root	Relief from toothache, gastritis and improves blood circulation.
6	<i>Blumea</i> Spp.	Asteraceae	Piyi	Leaf	leaf is boiled with water for treatment of kidney
7	<i>Clerodendron Colebrookianum</i> Walp.	Verbanaceae	Ghateyiinyii	Leaf	Leaf chewed raw or boil to reduce hypertension blood pressure. And dysentery.
8	<i>Catharanthus roseus</i> L.	Apocynaceae	unknown	Leaf	Decoction of leaf taken orally to purify blood and diabetes.
9	<i>Choerospondias axillaris</i>	Anacardiaceae	Kulasi	Fruit	Quick relieve from headaches and dizziness.
10	<i>Citrus paradisi</i>	Rutaceae	Shohopidiri	Fruit	Leaves boiled and consume for fever. Fruit cover boil and drank for diabetes.
11	<i>Centella asiatica</i>	Apiaceae	Gara	Leaf	The leaf is boiled with water for treatment of gastric, heart pain, cleansing blood. The leaf paste is applied to injuries for blood clotting.
12	<i>Colcasia esculenta</i>	Araceae	Bithola	Root tuber	The root Tuber is cooked and consumed for treatment of gastric.
13	<i>Curculigo capitulata</i>	Hypoxidaceae	Phiagwe	Root	the roots are boiled and consumed for treatment of gastric
14	<i>Carica papaya</i>	Caricaceae	Kobita	Leaf, Fruit	leaf is boiled with water for treatment of fever and stomach ache, young fruit are boiled in water and the water inside the fruit after boiling is consumed for instant treatment of fever
15	<i>Dolichos lablab</i> L.	Fabaceae	Ciilha	Leaf, root and pod	Leaf, root and pod are boiled and orally taken in the treatment of tuberculosis and dysentery.
16	<i>Drymaria cordata</i> L.	Caryophyllaceae	Pfupfuri	Whole plant	The whole plant warmed over the ash to inhale the vapour from sinus problems or squeeze in hot water sniffing the vapour or filter

					and put the water in nose.
17	<i>Debregeasia longifolia</i>	Urticaceae	Gudu	Fruits and bark	The fruits and bark are boiled for oral consumption in the treatment of diabetics.
18	<i>Diplazium esculentum</i>	Athyriaceae	Tsakhagya	Leaf	Leaves are cooked and consume in the treatment of piles.
19	<i>Docynia indica</i>	Rosaceae	Nhakephosi	Fruit	The fruit is consumed raw for treatment of Diarrhea and Vomiting
20	<i>Equisetum arvense</i> L.	Equisetaceae	Shühi	Aerial parts	Decoction of aerial parts are taken orally in the treatment of liver problems. It is also Boil and drank for treatment of kidney and urinary problem
21	<i>Eupatorium adenophorum</i> Spreng.	Asteraceae	Keponha	Leaf	Leaf paste applied on wounds to stop bleeding. 1 or 2 leaves eaten raw for high bp.
22	<i>Eryngium foetidum</i>	Apiaceae	Dania	Leaf	the leaf is made into paste and applied to snake bite
23	<i>Euphoria ingens</i>	Euphorbiaceae	Sewu	Stem	The inner stem is consumed for food poisoning.
24	<i>Elatostema</i> sp	Urticaceae	Betho	Leaf	Treatment of gastric the leaves are cooked with rice and consumed.
25	<i>Fagopyrum esculentum</i> Moench.	Polygonaceae)	Gare	Whole plant	Decoction of whole plant taken orally to expel intestinal worms and blood pressure.
26	<i>Ficus carica</i>	Moraceae	Khabvii	Leaf	Used to treat constipation problems.
27	<i>Gynura bicolor</i> DC.	Asteraceae	Vüdigä	Leaf	Leaf paste is applied to wounds to stop bleeding and promote blood clot. Leaf is squeeze and mixed with water and drink for gastritis.
28	<i>Houttuynia cordata</i> Thunb.	Saururaceae	Gatha	Leaf, root	Decoction of leaf and root taken orally to relief from flatulence, Lower blood pressure and promote urine flow. It is also consumed for cough.
29	<i>Malus sylvestris</i>	Rosaceae	Kephosi	Fruit	Fruit consumed to treat diarrhea.
30	<i>Mentha spicata</i> L.	Lamiaceae	Pudina	Leaves	Leaves squeeze and drink for gastritis.
31	<i>Malvaviscus arboreus</i>	Malvaceae	Sewhe	Leaf	leaf decoction is used for treatment of gastric.
32	<i>Mirabilis jalapa</i> L.	Nyctaginaceae	Henini	Leaf	Leaf juice applied on inflamed body parts to relief from inflammation and bruises.
33	<i>Ocimum basilicum</i>	Lamiaceae	Nyopuo	Leaf and flowers	The leaves and flowers are consumed raw or boil for treatment of High bp and improve eyesight.
34	<i>Passiflora edulis</i> Sims.	Passifloraceae	Bel	Leaf	Decoction of leaf is orally taken to reduce blood pressure and also to treats diabetes.
35	<i>Phyllanthus emblica</i>	Euphorbiaceae	Lhesienosi	Matured seeds	Matured seeds or fruits eaten to clear throat as well as fruit extract applied to treat eye problems.
36	<i>Polygonum hydropiper</i> L.	Polygonaceae	Nhachii	leaf	Plants are crushed and applied topically for fungal infection, itching skin and aerial part chewed raw for toothache.
37	<i>Plantago major</i> L.	Plantaginaceae	Gapa;	Leaf's	Leaves are crushed for cuts and wounds as hemostatic. leaf boil and drank for diabetics and high bp
38	<i>Polygonum chinense</i> L.	Polygonaceae	Gawe	Leaf's	Leaf's boil and consume for high blood pressure and apply paste around wound from snake bite
39	<i>Punica granatum</i>	Punicaceae	Tuyari	Leaf and stem	Leaf and stem decoction for fever and blood pressure
40	<i>Psidium guayava</i> L.	Myrtaceae	Meduram	Fruits and leaves	Unripe fruit and fresh leaves are used in treatment of diarrhea. Young leaves are chewed to treat inflamed gums and nausea.
41	<i>Poinsettia pulcherrima</i>	Euphorbiaceae	Kristmas Thipu	Leaf	The leaf decoction is consumed for the treatment of Diarrhea and Vomiting
42	<i>Polygonum chinense</i> L. and <i>Sonchus</i> spp.	Polygonaceae	Gawe	leaf	Leaves are boiled and drank in treatment of food poisoning.
43	<i>Polygonum molle</i>	polygonacese	Gayie	leaf	The leaves are build and drank for Diabetic and High blood pressure.
44	<i>Rhus semialata</i>	Anacardiaceae	Tsemhe	Fruit	The fruit is consumed for treatment of Diarrhea and Vomiting
45	<i>Rhododendron campanulatum</i> Don.	Ericaceae	Methupu	Flowers	dried flowers are eaten to remove fish bone inside throat
46	<i>Rubus ellipticus</i>	Rosaceae	Gumsi	Root	Used in treatment of cough by root decoction for treatment of appendix, fever and stomach ache
47	<i>Sonchus</i> sp.	Asteraceae	Gadzü	Leaf	the leaves are consumed raw or is boiled for treatment of cough
48	<i>Solanum khasianum</i> Clarke	Solanaceae	Chiikhuhu	Fruit	Fruit juice is squeeze and applied to affected toothache.
49	<i>Solanum indicum</i> L.	Solanaceae	Kekhosi	Fruit	Fruit is taken raw or boiled to treat gastritis. Fruits eaten raw for cough treatment.
50	<i>Saccharum officinarum</i>	Poaceae	Nyükhica	Stem	Stem juice is consumed for treatment of jaundice and gastritis.
51	<i>Solanum nigrum</i> L.	Solanaceae	Tevemhachü	Fruit	Fruit juice applied in nostrils to cure fever. It also removes water leech.
52	<i>Thalictrum foliolosum</i>	Ranunculaceae	unknown	Root	Roots are boiled and consumed for the treatment of Malaria, viral fever, stomach pain and Diabetics
53	<i>Thysanolaena latifolia</i>	Poaceae	Phiakwe	Root	The root decoction is consumed for treatment of diabetics
54	<i>Zingiber officinale</i>	Zingiberaceae	Avü	Rhizome	The rhizome is consumed for treatment of cough



a. *Mentha spicata*

b. *Polygonum molle*

c. *Psidium guayava*



d. *Fagopyrum esculentum*

e. *Curculigo capitulata*

f. *Citrus paradisi*



g. *Blumea sp*

h. *Eryngium foetidum*

i. *Ageratum coyzooides*



j. *Dolichos lablab*

k. *Gymura bicolor*

l. *Solanum nigrum*



Fig 2(a-r): Pictures of plants taken during the research period.

5. Conclusion

Study and collection of data's on the traditional knowledge of the medicinal plants in Kigwema Village displays the normal usage of these plants by the local people inhabiting the village. The traditional knowledge contain within the community needs to be extensively documented as deforestation and urbanization leads to extinction of these valuable plants. From the present study it is examined that majority of the plant parts are represented by leaves followed by fruits and stem. Treatment of various ailments such as wounds, blood pressure, gastritis has been observed. The application of these medicinal plants is still used largely by the Naga tribes and preservation of these traditional knowledge is of outmost importance for its application. Extensive research needs to be conducted to test the effectiveness as well as finding more potent compounds to treat chronic sickness like cancer. Thus, study through documentation and conservation of these plants have to be prioritize.

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