



Research Article

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Ethno-medicinal plants used by the Kom community of Thayong village, Manipur

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ABSTRACT

Kom tribe is one among the tribal minority communities living in the state, Manipur. In spite of many valuable works carried out recently time on ethno-medicinal plants of Manipur, little or few research work on ethno-medicinal plants used by kom tribe has been reported. This present study is an attempt to identify and document medicinal plants used by the Kom community living in the Thayong village of Manipur. The study recorded 58 plant species belonging to 36 families, which are used by the local practitioners as herbal medicine in meeting their basic health care needs. The plants, so used in the treatments are either used individually or in combination with other plants or sometimes mixed with honey or with mishri (rock sugar). Some plant or plant parts are also eaten raw as a vegetable. It is found that, use of these plants in disease treatment is quite effective and promising. This traditional knowledge and preparation methods of herbal medicine have been passed on from their forefathers. Therefore, it is important to document and conserve this relevant and valuable knowledge as they are a rich resource for the development of nutraceuticals and drug development.

Keywords: Ethno-medicinal, Kom, Nutraceuticals, Thayong village.

INTRODUCTION

Manipur, located in the north-eastern part of India is a small land-locked hilly state just north of the Tropic of Cancer, situated between 23°50' and 25°41' North latitude and 93°6' and 94°47' East longitude. Based on the census of 2011, the population of the state is 2,570,390 within an expanse of 22,327 sq. Km ^[1].

The state is rich in its flora and fauna as it lies within the Indo-Burmese biodiversity hotspot which ranks 8th amongst the 34 'Bio-diversity Hotspots' region of the world ^[2]. This region exhibits tropical to sub-tropical and temperate deciduous forests reflecting on the region's rich floral diversity as well as high degree of endemism which includes valuable medicinal plants. The state is inhabited by numerous aboriginal tribes with the Meiteis being the dominant community. All the ethnic groups used a large number of wild plants for the treatment of various ailments, as the state is predominantly inhabited by indigenous people ^[3-4]. Even today people, not only in the rural areas, but those living in the urban areas are also using these traditional medicines, and they give first preference to herbal treatments by consulting the medicine men.

S.C. Sinha was the pioneer of ethno-botanical study in Manipur. He submitted his PhD thesis entitled "Ethno-botanical study of Manipur", to the Manipur University in 1986. The first book of 'Medicinal plants of Manipur' was published by him in 1996, reporting 1200 medicinal plants ^[5]. Singh *et al* (2003) published about 359 medicinal plants in their book 'Herbal Medicine of Manipur – A colour Encyclopaedia' along with 77 photo plates of all the species. Singh (2009) compiled about 500 medicinal plants in his book 'A Manual on the Medicinal Plants of Manipur' ^[6]. Considerable amounts of information on medicinal plants are available in these ethnic communities. Other significant contributions on ethno-medicinal studies of Manipur were observed during recent time ^[7,8,9]. However, the study of ethno-medicinal plants used by some section of tribal minority communities is limited and not studied.

Kom tribe is one of the 38 recognized scheduled tribes of Manipur (according to the Indian Constitution (Scheduled tribes) order (Amendment) Act, 2011). They are found distributed in the foothills of 5 districts of the state, i.e. Churachandpur, Senapati, Kangpokpi, Chandel, Bisnupur and Imphal East. According to Census 2011, there are 33 Kom villages in Manipur, with a total population of 14,528 people ^[1]. This tribe belongs to the lowest stratum of the society and their socio-economic condition is very poor. Based on the myth of their origin, their forefathers are believed to have emerged out of a cave, 'Khurpui' (the big cave). One of the legends had it that while trying to come out of the cave, a tiger obstructed them and nobody could come out of the cave as the tiger lay in wait to kill them. A man called "Karungpa" came out wearing

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a striped cloth, befriended the tiger as the clothes resembled its skin, and then killed the tiger [10].

The existing traditional knowledge on the uses of the plants by the Kom community residing in the village of Thayong has been passed on from their forefathers. The Kom people have traditionally lived in the forest and as such, forest has been their lifeline since time immemorial. They are mostly dependent on the forest resources and they conserved their plant diversity by developing their own culture, customs, folktales, food, medicine and various other multifaceted uses of different plants.

Though a good number of valuable research works on traditional medicinal practices of Manipur have been published in various journals, it is found that Kom ethno-medicinal practices have not been reported extensively. Only two publications were made so far [11-12]. Hence, more documentation on ethno-medicinal plants used by this tribe is highly necessary for the scientific validation of their healing potentials. The present study was carried to highlight the plant based traditional medicine practices of the Kom tribe of Thayong village of Manipur, which is a very small community. It is an attempt to appraise the valuable knowledge of this particular minority community to the world of science.

METHODOLOGY

Study area

The study covered Thayong village (Fig. 1) of Manipur state (24°48'49" – 24°46'45" N latitude and 94°05'43"–94°03'49" E longitude) situated on the foothills of the Nongmaiching mountain on the Eastern side of the capital, Imphal, Manipur and is under Kangpokpi District (earlier included in Senapati District). The village is inhabited by Kom, indigenous minority tribes of Manipur with a total population of 680 people and 126 houses (According to the 2011 census). The village is 61 km away from the District Head Quarter, and 26 km away from the state capital Imphal, Manipur.

Data collection and analysis

Extensive surveys were conducted from time to time between June, 2017 and May 2018 at Thayong village (Fig. 2). A collection of information and data was carried out through personal meetings and interaction with the local medicine practitioners followed by completion of questionnaires which was prepared following method reported by Parabia & Reddy (2002) with minor modifications [13]. Prior Informed Consent (PIC) was obtained informally from every individual knowledge holders before carrying out the study.

In these interviews, information regarding the plant identification, distribution, medicinal uses, conservation status and other ethno-botanical details were collected from informants. The interviews and discussions were conducted in local language or lingua franca. Other information about the plants such as habit, habitat, and description were recorded. Plant specimens for herbarium were also collected following the standard method [14]. The voucher specimens were deposited in the Herbarium of Ethno-Medicinal Research Centre (EMRC), for future reference. Live specimens were also collected and cultivated in the herbal garden of the EMRC, Hengbung, Manipur. The

collected specimens were identified with reference to relevant literatures [15-18].

RESULTS

Based upon the information and data collected from the informants, 58 taxa belonging to 37 families having medicinal values were identified and documented (Fig. 3 & Table 1). Out of the 58 taxa recorded, three (3) families with 13 (thirteen) taxa belong to monocots and 34 (thirty four) families with forty five (45) taxa belong to dicots (Fig. 4). The number of taxa under each family are Rubiaceae with 3 taxa, Verbenaceae with 2 taxa, Malvaceae with 2 taxa, Compositae with 3 taxa, Fabaceae with 1 taxon, Clusiaceae with 1 taxon, Solanaceae 2 taxa, Apiaceae with 1 taxon, Cucurbitaceae with 2 taxa, zingiberaceae with 9 taxa, Poaceae with 3 taxa, Vitaceae with 1 taxon, Melastomataceae with 1 taxon, Sapindaceae with 1 taxon, Rutaceae with 2 taxon, Amaranthaceae with 1 taxon, Amaryllidaceae with 1 taxon, Caryophyllaceae with 1 taxon, Bignoniaceae with 1 taxon, Lamiaceae with 1 taxon, Rosaceae with 1 taxon, Leguminaceae with 1 taxon, Cornaceae 1 taxon, Moraceae with 3 taxon, Asteraceae with 1 taxon, Linderniaceae with 1 taxon, Acanthaceae with 1 taxon, Burseraceae with 1 taxon, Euphorbiaceae with 1 taxon, Campanulaceae with 1 taxon, Anacardiaceae with 1 taxon, Lamiaceae with 1 taxon, Meliaceae with 1 taxon, Oxaliaceae, Passifloraceae with 1 taxon, Brassicaceae with 1 taxon. Members of Zingiberaceae was found to be predominantly used with nine (9) taxa followed by compositae, poaceae and rubiaceae with 3 taxa each; other families with the least number of taxa which are being used in their traditional medicine were represented by one and two members only (Fig.5). As per the IUCN Red List Database 2 (two) taxa, *Eclipta prostrata* (L.) L. and *Arundo donax* L. are under the status 'Least Concern'.



Fig. 1: Study area (Thayong village, Kangpokpi district, Manipur)



Fig. 2: Field survey. (a & b) collection of plant samples, (c) interaction with traditional healer and (d) sorting of collected plant samples for documentation

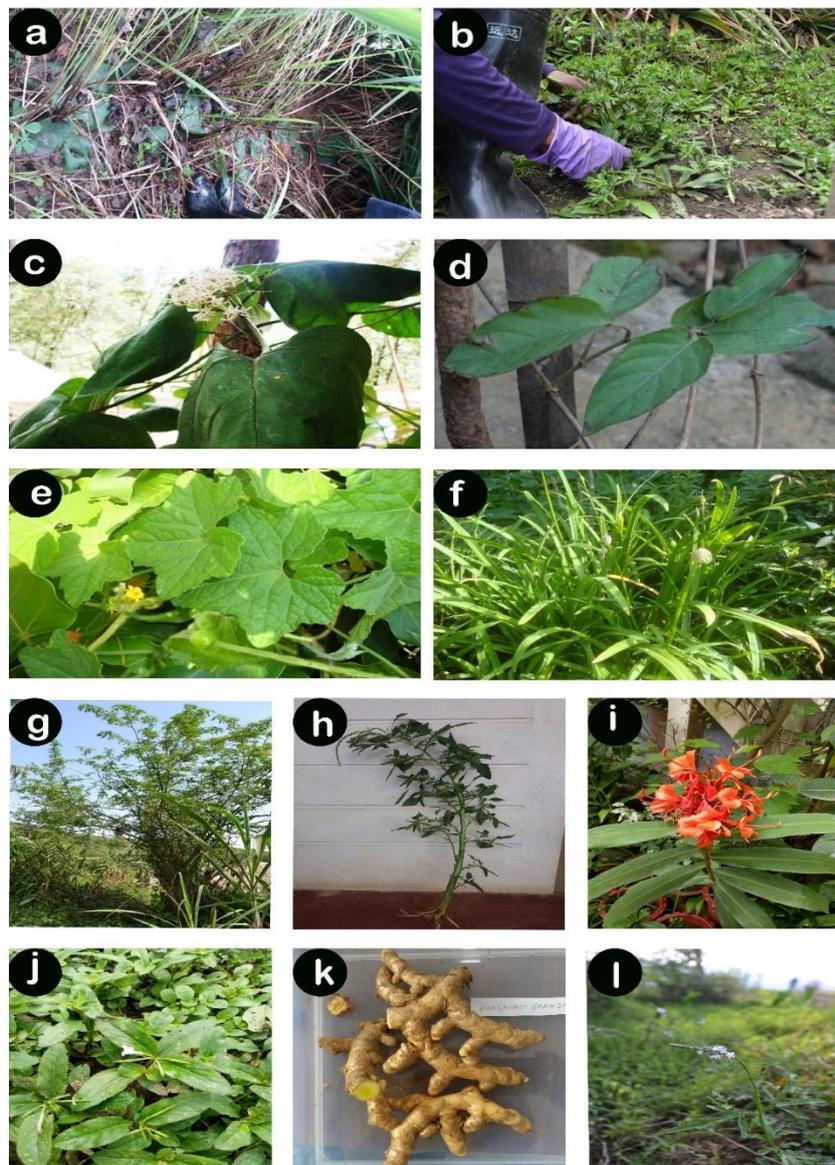


Fig. 3: Some of the important plant species. (a) *Kaempferia galanga* L. (b) *Eryngium foetidum* L. (c) *Clerodendrum glandulosum* Lindl. (d) *Clerodendrum glandulosum* Lindl. (e) *Melothria perpusilla* (Blume) Cogn. (f) *Allium hookeri* Thwaites (g) *Zanthoxylum acanthopodium* DC. (h) *Amaranthus viridis* L (i) *Hedychium rubrum* A.S Rao & D.M. Verma (j) *Lindernia ruellioides* (Colsm.) Pennell (k) *Curcuma amada* Roxb. (l) *Verbena officinalis* L.

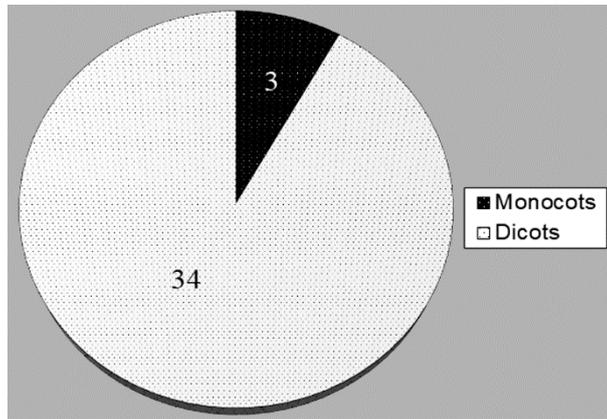


Fig. 4: Pie chart showing number of families in the subdivisions Monocots & Dicots used in traditional medicine by Kom tribe

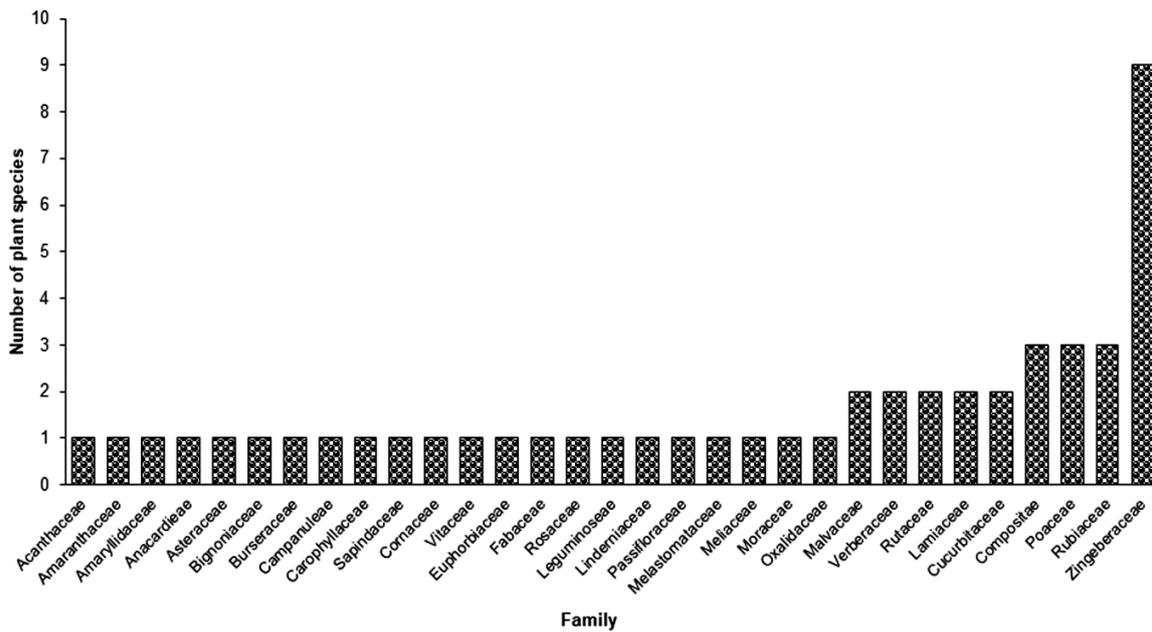


Fig. 5: Bar chart showing number of plant(s) from different families used in traditional medicine by Kom tribe

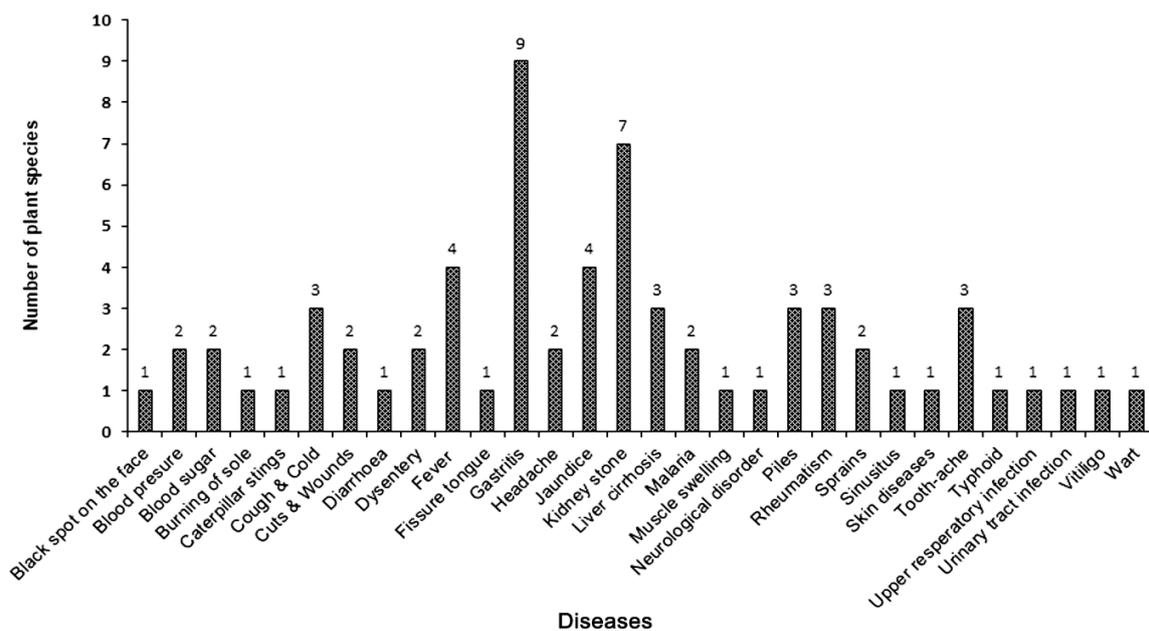


Fig. 6: Graphical representation of number of plant(s) used for various ailments by Kom tribe

Table 1: Enumeration of medicinal plants used by Kom Tribe

Table 1 — Enumeration of medicinal plants used by Kom Tribe					
Scientific name, family and voucher number	Vernacular name	Habit	Phenology	Preparation	Uses
<i>Aegle marmelos</i> (L.) Corrêa [Rutaceae] (Edwin Kom 00149)	<i>Hei-khagok</i> (M)	Tree	Fl & Fr: March – September	The leaf decoction is taken orally.	Dysentery
<i>Ageratum conyzoides</i> (L.) L. [compositeae] (Edwin Kom 00098)	<i>Khongjainapi</i> (M) <i>Khungsaikaher</i> (K)	Herb	Almost throughout the year	The crushed leaf is applied on the affected part.	Cuts & wounds as anti-coagulant
<i>Alangium chinense</i> (Lour.) Harms. [Alangiaceae] (Edwin Kom 00099)	<i>Kokan</i> (M)	Shrub to small tree	Fl: May – July Fr: July – November	The boiled extract of the leaves is mixed with honey and administered orally.	Malaria & typhoid
<i>Albizia lebbbeck</i> (L.) Benth. [Leguminosae] (Edwin Kom 00155)	<i>Khok</i> (M) <i>Mavang</i> (K)	Tree	Fl: May – June Fr: July – November	The bark decoction is used along while taking bath.	Skin diseases
<i>Allium hookeri</i> Thwaites [Amaryllidaceae] (Edwin Kom 00106)	<i>Maroi napakpi</i> (M)	Herb	Fl & Fr: September – December	Leaves are boiled with mishri (rock sugar) and taken orally before meal.	Urinary tract infection & kidney stone
<i>Alpinia galanga</i> (L.) Willd. [Zingiberaceae] (Edwin Kom 00121)	<i>Kanghoo</i> (M) <i>Ai ma-hre</i> (K)	Herb	Fl & Fr: July – November	The pounded tuber is applied on the affected part.	Vitiligo
<i>Alpinia nigra</i> (Gaertn.) Burttt [zingerberaceae] (Edwin Kom 00122)	<i>Pullei</i> (K)	Herb	Fl & Fr: July – August	The crushed tuber is boiled and the extract is taken orally.	Kidney stone
<i>Amaranthus viridis</i> L [Amaranthaceae] (Edwin Kom 00123)	<i>Chengkruk</i> (M) <i>En-radi</i> (K)	Herb	Fl: June – August Fr: August – September	Few granules of mishri (rock sugar) added to crushed root soaked in water for about 1 hour taken orally twice a day before food.	Jaundice & Liver cirrhosis
<i>Artocarpus lacucha</i> Buch.-Ham. [Moraceae] (Edwin Kom 00107)	<i>Hari kokthong</i> (M) <i>Ka-tat</i> (K)	Tree	Fl & Fr: July – August	Few granules of mishri (rock sugar) added to crushed root soaked in water for about 1 hour taken orally twice a day before food.	Jaundice & Liver cirrhosis
<i>Arundo donax</i> L. [Poaceae] (Edwin Kom 00132)	<i>Yengthou</i> (M) <i>Yong-to</i> (K)	Reed	Fl & Fr: July – March	The pounded new shoots applied to the affected area.	Skin diseases
<i>Averrhoa carambola</i> L. [Oxalidaceae] (Edwin Kom 00108)	<i>Heinoujom</i> (M) <i>Thei her</i> (K)	Tree	Fl & Fr: May – October	The leaf decoction mixed with mishri (rock sugar) taken orally.	Kidney stone
<i>Benincasa hispida</i> (Thunb.) Cogn. [Cucurbitaceae] (Edwin Kom 00124)	<i>Torbot</i> (M) <i>Mhai-bung</i> (K)	Climber	Fl: June – September Fr: July – November	The slices of the fruit are applied on the forehead.	Fever.
<i>Blumea hieracifolia</i> Hayata [Asteraceae] (Edwin Kom 00140)	<i>Ching-tera-paibi</i> (M) <i>Her-dong</i> (K)	Herb	Fl & Fr: September – March	The extract of the fresh leaves is orally administered.	Gastritis
<i>Brassica rapa</i> L. [Brassicaceae] (Edwin Kom 00145)	<i>Hanggam</i> (M) <i>En-trum</i> (K)	Herb	Fl: April – June Fr: March – July	The pounded leaf is applied to the forehead.	Headache
<i>Cajanus cajan</i> (L.) Millsp. [Fabaceae] (Edwin Kom 00146)	<i>Mairongbi</i> (M) <i>Yang-thing</i> (K)	Shrub	Fl & Fr: January – April	The leaf poultice is applied over sprain. The fresh leaf extract is applied to the aching tooth.	Sprain Tooth-ache
<i>Canarium bengalense</i> Roxb. [Burseraceae] (Edwin Kom 00147)	<i>Mekruk</i> (M) <i>Be-ro</i> (K)	Tree	Fl: February – March Fr: April – May	Latex is applied to the affected area.	Rheumatism

<i>Cissus javana</i> DC [Vitaceae] (Edwin Kom 00125)	<i>Kongaou-yen</i> (K, M)	Herb	Fl: June – October Fr: November – December	The decoction of the leaf is boiled and taken orally.	Kidney stone
<i>Clerodendrum glandulosum</i> Lindl. [Lamiaceae] (Edwin Kom 00126)	<i>Khupthap</i> (M) <i>Pusai</i> (K)	Shrub	Fl & Fr: July – December	The extract of fresh leaves is applied to the infected part.	Wart
<i>Clerodendrum indicum</i> (L.) Kuntze [Verberaceae] (Edwin Kom 00127)	<i>Charoi-utong</i> (M) <i>Kur-veng</i> (K)	Shrub	Fl & Fr: July – October	Leaves about 15-20 are boiled and the decoction is taken orally.	Upper respiratory tract infection
<i>Crassocephalum crepidioides</i> (Benth.) S.Moore [Compositae] (Edwin Kom 00133)	<i>Tera-paibi</i> (M) <i>Her dong</i> (K)	Herb	Throughout the year	The boiled decoction of leaves are taken orally. The fresh leaf extract is applied on the affected area.	Diarrhoea Cuts & wounds as anti-coagulant
<i>Curcuma amada</i> Roxb. [Zingiberaceae] (Edwin Kom 00109)	<i>Heinouyai</i> (M) <i>Ai-thai-hai</i> (K)	Herb	Fl & Fr: June – September	Crushed tuber is eaten raw with salt.	Gastritis
<i>Curcuma caesia</i> Roxb. [Zingiberaceae] (Edwin Kom 00150)	<i>Yaimu</i> (M) <i>Ai kadum</i> (K)	Herb	Fl & Fr: March – May	The pounded tuber is applied on the affected part.	Neurological disorder
<i>Cynodon dactylon</i> (L.) Pers. [Poaceae] (Edwin Kom 00134)	<i>Ting-thou</i> (M)	Shrub	Throughout the year	The decoction of the plants is taken orally.	Measles
<i>Docynia indica</i> (Wall.) Decne [Rosaceae] (Edwin Kom 00148)	<i>Hei-tup</i> (M) <i>Thei thup</i> (K)	Tree	Fl: March – April Fr: August – September	The crushed leaf is mixed with mud and applied.	Caterpillar stings
<i>Drymaria cordata</i> (L.) Willd. ex Schult. [Caryophyllaceae] (Edwin Kom 00128)	<i>Tandan mana</i> (K, M)	Herb	Throughout the year	The plant is boiled and the steam is inhaled through the nostril.	Sinusitis
<i>Eclipta prostrata</i> (L.) L. [Compositae] (Edwin Kom 00135)	<i>Uchi sumbal</i> (K, M)	Herb	Throughout the year	The extract of the whole plant is mixed with honey and taken orally.	Fever & cough
<i>Eryngium foetidum</i> L. [Apiaceae] (Edwin Kom 00110)	<i>Awa-phadigom</i> (M) <i>Shap-pa-maroi</i> (K)	Herb	Throughout the year	The pounded leaves are bandaged against the affected area. The boiled decoction of the leaves is taken orally.	Rheumatism Control high B.P
<i>Ficus benghalensis</i> L. [Moraceae] (Edwin Kom 00141)	<i>Khongnank Taru</i> (M) <i>En mhong</i> (K)	Tree	Fl & Fr: November – January	The decoction of the bark is taken orally.	Gastritis
<i>Ficus hispida</i> L.f. [Moraceae] (Edwin Kom 00136)	<i>Ashi heibong</i> (M) <i>Vok theichank</i> (K)	Tree	Throughout the year	The boiled extract of the leaves is taken orally.	Blood Sugar
<i>Garcinia pedunculata</i> Roxb. ex Buch.-Ham [Clusiaceae] (Edwin Kom 00142)	<i>Hei-bung</i> (M) <i>Ching-nai</i> (K)	Tree	Fl: August – December Fr: December–January	Paste of the crushed fruit is applied to the affected area.	Rheumatism
<i>Hedychium coccineum</i> Buch.-Ham. ex Sm. [Zingiberaceae] (Edwin Kom 00111)	<i>Eengel lei</i> (M) <i>Ai -dong rei</i> (K)	Herb	Fl & Fr: June – October	The shoots are eaten raw.	Gastritis
<i>Hedychium flavescens</i> Carey ex Rosc [Zingiberaceae] (Edwin Kom 00112)	<i>Takhel lei</i> (M) <i>Par pui</i> (K)	Herb	Fl & Fr: June – September	The boiled extract of the tuber is mixed with honey and administered orally.	Gastritis
<i>Hedychium rubrum</i> A.S Rao & D.M. Verma	<i>Takhel lei-angangba</i> (M) <i>Shok-tuiwar</i> (K)	Herb	Fl & Fr: June – September	The boiled extract of the tuber is mixed with honey and	Gastritis

[Zingiberaceae] (Edwin Kom 00113)					administered orally.	
<i>Hibiscus rosa-sinensis</i> L. [Malvaceae] (Edwin Kom 00137)	<i>Juba kasum</i> (K)	Shrub	Throughout the year	The crushed flower is applied to the forehead.	Headache.	
<i>Jatropha curcas</i> L. [Euphorbiaceae] (Edwin Kom 00139)	<i>Awa kege</i> (M) <i>Ke ke nhai</i> (K)	Shrub	Fl: September–October Fr: October – December	Latex is taken with cotton and applied to the aching area.	Tooth ache.	
<i>Kaempferia galanga</i> L. [Zingiberaceae] (Edwin Kom 00151)	<i>Yai thamna manbi</i> (M) <i>Ai-thum-pui</i> (K)	Herb	Fl & Fr: March – May	The pounded tuber is mixed with honey and applied. The leaf poultice is applied over the affected portion	Black spot on the face Muscle swelling	
<i>Lindernia ruellioides</i> (Colsm.) Pennell [Linderniaceae] (Edwin Kom 00114)	<i>Kihommaan</i> (M)	Herb	Fl & Fr: June – November	The decoction of leaves is mixed with mishri (rock sugar) and taken orally.	Kidney stone	
<i>Lobelia nummularia</i> Lam. [Campanulaceae] (Edwin Kom 00100)	<i>Nungai peruk</i> (M) <i>Re Re thei</i> (K)	Herb	Almost throughout the year	The boiled extract of the whole plant is mixed with mishri and taken orally.	Kidney stone	
<i>Mangifera indica</i> L. [Anacardiaceae] (Edwin Kom 00152)	<i>Heinou</i> (M) <i>Thei hai</i> (K)	Tree	Fl: March – April Fr: May – July	The extract of the inner part of the fresh bark is mixed with cow milk and taken orally.	Dysentery	
<i>Melastoma malabathricum</i> L. [Melastomataceae] (Edwin Kom 00115)	<i>Ya-chubi</i> (M) <i>Tong-tai</i> (K)	Shrub	Fl: February – August Fr: July – December	The leaf decoction is taken orally.	Blood sugar	
<i>Melia azedarach</i> L. [Meliaceae] (Edwin Kom 00153)	<i>Sheizrak</i> (M) <i>Sorti</i> (K)	Tree	Fl: March – May Fr: June – September	The bark is boiled and the decoction is used in a sitz bath.	Piles	
<i>Melothria perpusilla</i> (Blume) Cogn. [Cucurbitaceae] (Edwin Kom 00116)	<i>Lamthabi</i> (M) <i>Ram-song- mha</i> (K)	Creepers	Fl & Fr: June – September	The decoction of the whole plant mixed with mishri (rock sugar) is administered orally.	Jaundice	
<i>Mussaenda roxburghii</i> Hook.f. [Rubiaceae] (Edwin Kom 00101)	<i>Hanurei</i> (M) <i>Hum-pui-pa- pleng</i> (K)	Shrub	Fl & Fr: April – November	Steamed leaves are bandaged over the affected area.	Sprains	
<i>Oroxylum indicum</i> (L.) Kurz [Bignoniaceae] (Edwin Kom 00154)	<i>Sham-ba</i> (M) <i>Bak-long</i> (K)	Tree	Fl: March – May Fr: June – November	Fruit is cooked and eaten. Roots boiled with the leaves of <i>Zanthoxylum acanthopodium</i> , bark of <i>Cinnamomum verum</i> , mishri and the extract is taken orally.	Piles Gastritis	
<i>Paederia foetida</i> L. [Rubiaceae] (Edwin Kom 00117)	<i>Oi-nam</i> (M) <i>Vui-nham</i> (K)	Creepers	Fl: May – October Fr: July – December	Fresh raw leaves (15 – 20) are eaten or the decoction is taken orally.	Piles	
<i>Passiflora edulis</i> Sims [Passifloraceae] <i>Passiflora diaden</i> Vell. (Edwin Kom 00102)	<i>Sitaphon</i> (M)	Climber	Fl: May – June Fr: July – November	The decoction of the leaves is taken orally.	Control B.P.	
<i>Pavetta indica</i> L. [Rubiaceae] (Edwin Kom 00103)	<i>Nongmankha asinba</i> (M) <i>Chippa ka-thur</i> (K)	Shrub	Fl & Fr: May – September	To 300 ml of water 10-15 leaves are added and boiled with or without salt. The decoction (one teacup) is recommended both in the morning and evening before food for 6 months.	Jaundice & Liver cirrhosis	
<i>Sapindus trifoliatus</i> L. [Sapindaceae] (Edwin Kom 00129)	<i>Kekru</i> (M) <i>Ling-se</i> (K)	Tree	Throughout the year	Cotyledons of the seed are crushed along with onion and the paste is applied on the parietal region of the head.	Fever	

<i>Scutellaria discolor</i> Colebr. [Lamiaceae] (Edwin Kom 00118)	<i>Yena-khat</i> (K, M)	Herb	Fl: June – November Fr: July – December	The boiled extract of the plant is orally administered.	Malaria
<i>Sida rhombifolia</i> (L.) [Malvaceae]. (Edwin Kom 00130)	<i>U-hal</i> (M) <i>Thing-ke</i> (K)	Shrub	Fl & Fr: June – December	2-3 teacups of leaf decoction are orally administered.	Gastritis
<i>Solanum anguivi</i> Lam. [Solanaceae] (Edwin Kom 00104)	<i>Leipung-khanga</i> (M) <i>Sum-trok</i> (K)	Shrub	Fl & Fr: March – October	The crushed fruit is mixed with honey and applied to the tongue.	Fissured tongue
<i>Solanum viarum</i> Dunal [Solanaceae] (Edwin Kom 00105)	<i>Shingkhanga</i> (M) <i>Re-aum-kara</i> (K)	Shrub	Fl & Fr: April - August	Fruit is burnt and the smoke is captured with cotton and applied to the area. Fruit is cooked and eaten.	Tooth-ache Upper respiratory tract infection
<i>Strobilanthes auriculata</i> Nees [Acanthaceae] (Edwin Kom 00143)	<i>Kum taruk</i> (M) <i>Kum karuk</i> (K)	Undershrub	Fl & Fr: September – February	The leaf decoction is orally taken.	Gastritis
<i>Thysanolaena latifolia</i> (Roxb. ex Hornem.) Honda [Poaceae] (Edwin Kom 00144)	<i>Urong-sumchit</i> (M) <i>Tephat</i> (K)	Shrub	Fl & Fr: September – May	The pounded leaf is applied on the forehead.	Fever
<i>Verbena officinalis</i> L. [Verbenaceae] (Edwin Kom 00119)	<i>Tharoi-phijub</i> (M) <i>Ar ke-ke</i> (K)	Shrub	Fl & Fr: May – September	The leaf is crushed and directly applied on the foot surface. The pounded leaves are applied to the part.	Burning of sole Vitiligo
<i>Xylosma longifolia</i> Clos. [Salicaceae] (Edwin Kom 00138)	<i>Nonglei-shang</i> (M) <i>Thleire</i> (K)	Tree	Fl & Fr: August – October	The boiled extract of the leaves is taken orally.	Kidney stone
<i>Zanthoxylum acanthopodium</i> DC. [Rutaceae] (Edwin Kom 00131)	<i>Mukthruhi</i> (M) <i>Kasoning</i> (K)	Tree	Fl & Fr: July – September	Leaves are boiled with <i>Phlogacanthus thyrsoiflorus</i> leaves and the decoction is taken orally.	Cough
<i>Zingiber montanum</i> (J.Koenig) Link ex A.Dietr. [Zingiberaceae] (Edwin Kom 00120)	<i>Tekhao-yaikhoo</i> (M) <i>Phei-vei</i> (K)	Herb	Fl & Fr: June – August	The pounded tuber is mixed with honey and taken orally.	Cough

Through this study it was recorded that among the plants used by the Kom people, the maximum number of plants (9) are used for gastritis followed by 7 (seven) plants for Kidney stones; 4 plants each for control of fever and jaundice; 3 plants each for cold and cough, rheumatism, liver cirrhosis, piles and tooth-ache and 2 (two) plants each in controlling abnormal blood pressure, blood sugar, cuts and wounds, dysentery, headache, malaria and sprain. However, for diseases like neurological disorder, sinusitis, typhoid, etc. preparations from single species are used (Fig. 6).

DISCUSSION

Healthcare is one of the most important and basic needs of humankind, which have been associated since human civilization. From time immemorial human beings have been using plants as medicine in treating various ailments. Most of the plant parts used include leaf, fruit, whole plant, root, seed, bark etc.

Through the survey conducted, it has come to the light that Kom community living in Thayong village also depends on plants for various

primary health care needs. The reported 58 taxa were traditionally known to have medicinal properties. These medicinal properties may be attributes of the bioactive principles in the form of bio-active molecules present in the plants.

Traditional knowledge on medicinal plant uses has been considered as an area of high priority, sometimes leading to drug discovery thereby contributing to socio-economic development. Further, the indigenous knowledge is the life line of the humans and base line of drug discovery and nutritional beneficial food plants [19, 20]. Hence, validation of these folklore claims of medicinal plants through phytochemical, pharmacological and biological investigation is an urgent need to prove their curative properties. After scientific validation of these plants, one can prioritize the judicious use of the effective plants, and their protection through ex-situ & in-situ conservation.

Validation of the important medicinal plants may evolve new drug discovery and also development of various nutraceuticals. Once a certain leads are obtained in the line of plant-based medicinal and nutritional products, protected cultivation of the prioritized plants at

large scale could be revolutionised in these least recognised villages which would serve as a platform to improve the socio-economic status of these village-based communities.

CONCLUSION

The present study provided a clear information on the plants used in traditional medicine by the Kom tribal community in Thayong village of Manipur, India. Further, the findings throws insights on various avenues like conservation, protective cultivation and commercialization of these plants based on the scientific validation of these traditional medicinal practices. Such avenues can improve the socio-economic status of these village-based communities. Further, the leads from the knowledge of traditional medicine practiced by the Kom community may evolve new drug discovery and also development of essential nutraceuticals.

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Conflict of Interest

The authors declare that they do not have conflicting interests.

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