

# REPORT OF THE REFRESHER COURSE ON THE IDENTIFICATION OF LOW ALTITUDE MEDICINAL PLANTS

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## **Introduction**

The Institute of Traditional Medicine Services (ITMS) considers the sustainability of medicinal resources as an important factor in the delivery of quality traditional medicine services in the country. In this line the Institute conducts alternate collection surveys and also provides training on identification and sustainable harvesting techniques to the farmers and the healthcare providers. Since the Drungtshos and sMenpas are actively engaged in the identification and collection of the medicinal raw materials their knowledge in this area is of utmost importance to ensure the correct identification of medicinal raw materials. Additionally, they help to spread knowledge and create awareness on the medicinal resources in the community where they work. Therefore, refresher courses are organized by the ITMS for the Drungtshos and sMenpas regularly.

This article is a report of one such training provided to the sMenpas and provides an inventory of low altitude medicinal plants identified during the training.

## **Materials and Methods**

The course was carried out at Trongsa and Gaylegphug between 31<sup>st</sup> October 2006 and 10<sup>th</sup> November 2006 for duration of 12 days. The participants of the training were sMenpas from various Traditional Medicine Units in the country. The training was facilitated by two Lecturers from NITM.

The information and method used for training was based on the *gSo-ba Rig-pa* texts and practices. The participants were first provided a brief theory on the *gSo-ba Rig-pa* methods of identification of medicinal plants. They were then taken to natural habitat of the medicinal plants and practical demonstrations were made on the identification of the medicinal plants. The samples of medicinal plants were collected and shown the participants to familiarize the physical characteristics of the plants.

In order to assess the knowledge and skills of the participants before the training a pretest was conducted before the departure for the field training. A post test was conducted after the completion of the field training to determine the knowledge of the individual trainees.

## **Results and discussions**

In the pretest the average score of all the participants was 52% and after training, the average score of the participants in the post test increased to about 87%. There was significant improvement in the knowledge of the participants after the training.

During the field visits, about 66 low altitude medicinal plants were identified and taught to the trainees (Table 1).

Table 1: List of low altitude medicinal plants that were studied during the refresher course

<b>gso-rig Name</b>	<b>Botanical Name</b>	<b>Local Name</b>	<b>Places</b>
a-bras	<i>Mangifera sp.</i>	cha-ka-trin-mye	Langthel
a-gar-go-snod	<i>Cinnamomum grandiferumn</i>	phrae-sa	Dungdung Zampa
ar-ga-ru	<i>Aquillaria agallocha</i>	agaru	Gaylegphug
a-ru	<i>Terminalia chebula</i>	aru	Baleng
ba-le-ka	<i>Aristolochia griffithii</i>	glang-thang-due-phue	Kurbung
ba-ru	<i>Terminalia bellirica</i>	baru	Yoelichoeling
Btsod	<i>Rubia cordifolia</i>	tshud	Langthel
bul-ba	<i>not identified</i>	bell	Gaylegphug
byi-bzung		brum-bzang	Langthel
byi-tang-ga	<i>Symplocos ramosissima</i>	trop-seng-zewa	Dumgayling
chu-sren-sder-mo	<i>Salaginella pulvinata</i>	none	Langthel
dan-rog	<i>Ricinus cummunis</i>	rgyaling	Langthel
da-trig	<i>Rhus semilata</i>	bram-seng	Boezam sham
den-da-kra-bo		ae-ma-la	Langthel
dong-ga		rad-be-she	Gaylegphug
dug-mo-nyung	<i>Beaumonia grandiflora</i>	gang-la	Tongtongphel
dum-bu-re-ral	<i>Lepisorus sp.</i>	pe-seng-sha	Kurbung
duru-ka pho		ra-ne-pa-tra	Gaylegphug Tshachu
du-ru-ka-mo	not identified	ram-gu-wa	Gaylegphug Tshachu
ga-bra		tsherma-relp	Cosmopolitan
gla-gor-zho-sha	not identified	me-yang-kali	Koshala
go-ji		tse	Tagma-la Nye
gser-gi-phue-bu		juce	Cultivated
gu-yu	<i>Areca catechu</i>	doma	Gaylegphug
gyar-ma		gnam-chah'	Kur-bung
ka-bed	<i>Luffa aegytiaca</i>	chang	Langthel
ka-ko-la	<i>Ammomum subulatum</i>	alan-che	Kumaiphe
kan-dra-kari			Most of the places
khrog-ba-sha-ka	<i>Adhatoda vasica</i>	kashali	Langthel
ku-sha		rtsa-ku-sha	Hot places
ma-ru-rtse	<i>Butea buteiformis</i>	rong-kola	Kurbung
mchin-pa sho-sha		ptar-yang-ka-li	kurbung
mkhal-ma-zho-sha	<i>Erythrina arborensens</i>	mkhal-ma shog-shog	Trongsa
mon-cha-ra	<i>Quercus sp.</i>	pe-seng-zewa	Trongsa
na-phye		pa-ne-che-bal-	Gaylegphug

<b>gso-rig Name</b>	<b>Botanical Name</b>	<b>Local Name</b>	<b>Places</b>
		dring	
nyi-shing	<i>Asparagus racemosus</i>	nala-khagchu	Langthel
pad-ma-ge-sar	<i>Bombax ceiba</i>	pad-ma-ge-sar	Tongtongphel
pi-pi-ling	<i>Piper nepalense</i>	pipla	Gaylegphug Tshachu
po-so-cha	not identified	naka-pani	Beleng
pu-shel-rtse	<i>Pholidota recurva</i>	tse-seng-gucha	Kurbung
rdo-dreg			Yurmo-zam-pa
rgya-skeg		tshoe	Gaylegphug
sam-pa-ka		sam-pa-ling	Both areas
se-'bru	<i>Punica granatum</i>	tha-lem-pa	Gangphel
seng-ldeng	<i>Morus sp.</i>	seng-leng	Dungyeling
se-yab		kho-mang-chur-po	Kurbung
sga-skya	<i>Roscoe capitata</i>	me-phrame	Kurbung
Sgroen-shing		tshag-shing	Brag-'phel
shing-tsa	<i>Cinnamom tamala</i>	tshum-tsha-la	Kumaiphe
shi-ri-khan-dra	<i>Rhus royleana</i>	lu-shing	Langthel
shu-dag	<i>Acorus calamus</i>	shu-dag	Beleng
skyu-ru	<i>Phyllanthus emblica</i>	kut	Koshala
sle-tres	<i>Tinosphora cordifolia</i>	bon-grong truk-tophe	Bephel
Smyug-sngon		pag-shing	Gang-'phel
sning-zho-sha	<i>Cedrella toona</i>	kurmaling	Koshala
so-ma-ra-za	<i>Abelmos moschatus</i>	she-bin-bee	Gaylegphug
spos-dkar	<i>Shora robusta</i>	poskar	Boezamsham
sra-'bre		na-ma-relp	Gang-'phel
sro-ma-nag-po		rnam-phe	Cosmopolitan
stabs-seng	not identified	tab-seng	Koshala
su-me-dmar-po			Yur-mung-zam
Thal-ka-rdo-rje	<i>Cassia tora</i>	dab-ma-tse	Chusergang
tse-tra-ka		je-re-'khor-tsha	Gaylegphug
ying-ba	<i>Curcuma longa</i>	yong-ket	Langthel
za-'brum	<i>Urtica tibetica</i>	kui	Langthel
Zhu-mkhan	<i>Symplococus lurida</i>	dom-zing	Drakphel

### **Description of selected difficult-to-identify medicinal plants**

Although, most of the medicinal plants that were used as materials during the training had already been identified before, there were certain medicinal plants that were not easily identified

and remembered. In order to help in identification in the near future, a brief description of the physical characteristics of few selected medicinal plants are given below:

(a) *Symplocus ramosissima* (byi-tang-ga)

The plant is tall and slender, leaf is small and rough with medium thickness, fruit is of the size of *khyauung-ba ril-bu*, and the stem is black (size of arrow) when its bark is peeled off.

(b) *Morus species* (seng-ldeng)

The plant is big and bushy; leaf is thin, rough, hairy and round in shape; the bark of the stem is milky in colour and when cut open it is reddish inside. This plant is found in the thick jungle.

(c) *Cinnamom tamala* (shing-tsa)

This plant is a big woody tree with smooth and thick small leaf. When the stem is cut open it exudates resin. It is found in thick forest.

(d) *Symplocococcus lurida* (zhu-mkhan)

This plant is shrub with smooth thick and shiny yellowish leaf.

(e) *Duru-ka*

There are two kinds of *Duru-ka* and both of them are trees. One type is male with big slender leaf and when its stem is cut open it exudates bloody resin. The other type is female with similar leaf but little smaller than that of male and when its stem is cut open it exudates bloody resin in larger quantities compared to the male type.

(f) *stabs-seng*

It is a big tree with small leaf. When its stem is chewed it produces blue spit over.

(g) *Aquillaria agallocha* (ar-ga-ru)

This plant is very tall and big with smooth and thick small leaf. When its leaf is stretched it produces milky resin.

(h) *dong-ga*

This plant is a tall and big tree with thick and medium size blackish leaf. Its fruit is long and resembles that of a monkey tail. When its fruit is cut open, one can easily see the seed similar to pea pod.

(i) *Bul-ba-mo*

It is a medium size tree with small leaf. Its branches are characterized by a climber like feature. Its fruit is rounded and is green in colour.

## Conclusion

The experience from the results of the pre and post test clearly indicated that the refresher course had a great impact on the knowledge of the participants on medicinal plants and their identification. Therefore, it is recommended that such courses be carried out regularly for different categories of traditional medicine healthcare providers such as Drungtshos, sMenpas and Pharmacy and Researchers Technicians of ITMS. Such training will not only help to ensure the quality of the raw materials but also help to conserve the natural sources in the country.

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