



TRADITIONAL THERAPEUTIC KNOWLEDGE OF THE

Bunong People in North-eastern Cambodia

Healers, their practices and Medicinal Plants



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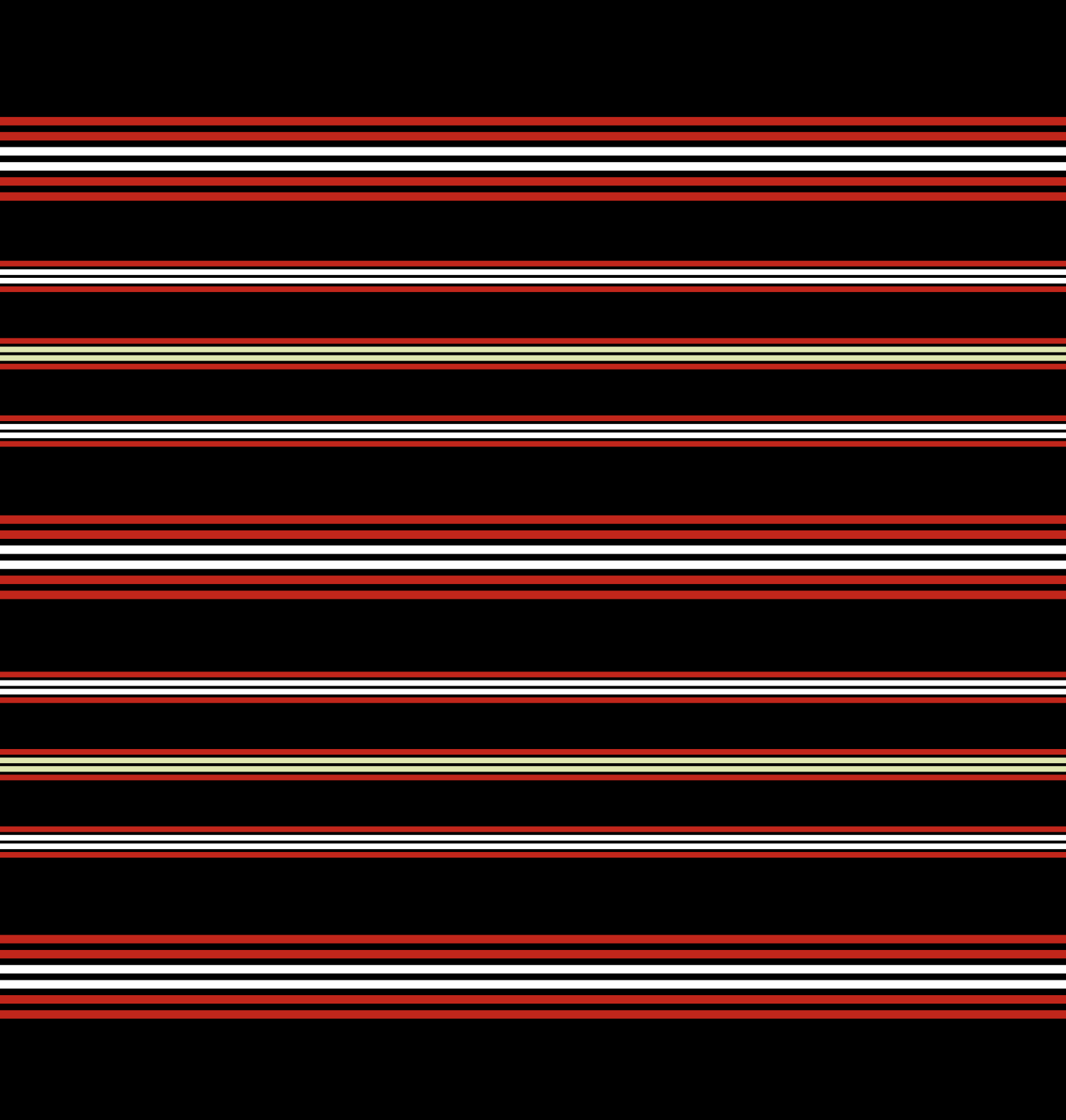


Bunong People in North-eastern Cambodia

Healers, their practices and medicinal plants

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NOMAD RSI 2011





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This book tries, with modesty, to show some aspects of the traditional medical knowledge of Bunong people of Mondulkiri by presenting some traditional healers and the plants that they use.

Nomad RSI wants to thank all traditional healers, who are the custodians of this knowledge. We hope that this book will help to support them and to pass their knowledge on to young generations.

Nomad RSI hereby abides by Articles 24 and 31 of the 2007 UN Declaration on the Rights of Indigenous Peoples:

“

Indigenous peoples have the right to their traditional medicines and to maintain their health practices, including the conservation of their vital medicinal plants, animals, and minerals.

”

“

“Indigenous peoples have the right to maintain, control, protect and develop their cultural heritage, traditional knowledge and traditional cultural expressions, as well as the manifestations of their sciences, technologies and cultures, including human and genetic resources, seeds, medicines, knowledge of the properties of fauna and flora, oral traditions, literatures, designs, sports, and traditional games and visual and performing arts. They also have the right to maintain, control, protect and develop their intellectual property over such cultural heritage, traditional knowledge, and traditional cultural expressions.

”

INTRODUCTORY REMARKS ON TRADITIONAL MEDICINE

CALUM BLAIKIE AND LAURENT PORDIÉ

In much contemporary literature, both academic and popular, all sorts of healing practices can be found grouped together under the common heading 'traditional medicine'. Aside from the fact that these practices are not based on the medical paradigm which emerged in Europe during the 19th century and subsequently grew into what is today referred to as 'biomedicine', such a classification does not actually signify much with any degree of specificity. In theory, in practice and in their social realities, medical traditions are inherently complex, plural and dynamic. They resist conceptual unity and do not lend themselves well to schematic descriptions or systemic analysis.

Medical traditions overlap with many other fields of social life. Training modalities, causal structures, etiologies and therapeutic methods are all expressions of norms, values and power which are constitutive of socio-cultural formations. For these reasons, healing practices – in terms of knowledge and its application – refer to the religious and the medical, the political and the economic, in recognizable patterns of explaining, preventing, relieving or curing all that springs from bad luck and misfortune: disease.

Healing traditions connect disparate points and cross lines in the social matrix. Beyond the therapeutic dimension, traditional medicines engage local cosmologies and logics of representation, often drawing upon supernatural and symbolic realms. The fact that traditional medicines are so evidently entangled in social, religious and cultural realms has led certain analysts to draw sharp distinctions between healing as cultural practice and western biomedicine. Such approaches point to the former as emerging always in relation to specific socio-cultural conditions while stressing the universal characteristics of the latter (since biology is seen as a truth applicable to all). However, such dichotomous thought does little to enrich our understanding but rather serves to limit it, given that boundaries are not fixed and distinctions are far from clearly demarcated. There are a great many 'traditional' health practices which essentially deal with the physiological and biological, just as there is much in the vast body of knowledge-practice that constitutes contemporary biomedicine which reflects particular cultural orientations, epistemological frameworks, socio-economic and political systems.

Schematic categorisation

In spite of the heterogeneity which inspires these opening remarks, it is possible to group medical traditions into three distinct categories - scholarly traditions, non-codified traditions and folk streams – while recognising that these may be embedded within, or emerge from, one another, and that health-related knowledge and practices are eternally colliding and merging, creating myriad hybrid therapeutic currents. In order to do justice to this tripartite classification therefore, we must retain the idea of the permeability of these boundaries and the emergent, dynamic properties of groupings within them.

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Scholarly medical traditions are distinguished by their basis in an established and shared textual corpus, and by the fact that training and practice are largely institutionalised. Practitioners recognise themselves as disciples of an unbroken tradition of ancient origin; inheritors of a body of theory and practice founded in the textual corpus central to that tradition. These are primarily to be found in Asia (Chinese medicine, Ayurveda, Siddha, Unani-tibb and Tibetan medicine), and in the Arabic medicine of the Middle East.

Non-codified traditions form a vast and highly heterogeneous group - the majority of traditional practitioners worldwide - including those who practice forms of shamanism with healing intent. These traditions are characterised by the absence of a standard literary corpus (though not necessarily of medical texts altogether), and by the social recognition of practitioners by their communities rather than their legitimisation through formal systems. The common feature uniting these healers lies not in any single shared body of empirical knowledge and practical technique but, somewhat paradoxically, in the very fact that they do not always form part of a unified medical universe, i.e. an autonomous domain formed from a defined body of rules, knowledge, practices and specialists. There are numerous examples of therapeutic streams that have formed through synthesis and syncretism (of scholarly and folk medicine in particular). Khmer Medicine, for example, is based upon humoral concepts inherited from the scholarly medicine of India, which were transposed to Cambodia and adapted over the centuries to form a new syncretic tradition.

Folk medicines are characterized by the absence of institutionalization, limited geographical ranges, low levels of specialization, and high degrees of variability between different practitioners in terms of etiology and therapeutics. They depend upon closely upon shared cognitive structures and cultural codes between therapists and their communities. The folk realm is deeply embedded in social structures and roles, orients itself more towards cure than prevention, and tends to be widely accessible to all sectors of society rather than being something exclusive to elite groups. Training is generally through apprenticeship to a guide or master (although this is found in the other streams also, despite the prevalence of institutional instruction), and practitioners self-designate themselves as such rather than being assigned the role by others or through formal means.

Such an introductory sketch inevitably requires a certain amount of simplification, and the reiteration of some preconceived ideas which have the potential to distort comprehension of the specific character of different bodies of medical knowledge and practice through reference to grand narratives. It is not intended as a model within which each individual form of healing can be placed and unproblematically explained, but rather as a general framework through which the singular characteristics of each tradition are more clearly discernible.

Local health traditions and global medicines

During the 1950s and 1960s many analysts predicted the declining importance and eventual disappearance of traditional medicines in the face of biomedicine's proven efficacy, expanding global reach and increasingly hegemonic position. However, what has actually come to pass in the intervening years has been quite different. Medical traditions in each of the main forms outlined above have remained popular amongst patients in their areas of origin across much of the globe, retaining or even enlarging their place in increasingly plural medical landscapes. Traditional medicines have also grown significantly in popularity in the global North, particularly in Europe and the USA, where alternatives to biomedicine had previously been extremely limited. This combination of continuity and expansion has transformed medical traditions in numerous ways, which vary greatly from place to place. However, while remaining aware of the specificity and the fluidity of each individual case, certain general trends can be tentatively located.

Scholarly Asian traditions have been through phases of professionalisation, marked by increased emphasis upon standardised training, knowledge and practice, official certification and regulation,; often alongside their integration into national healthcare bureaucracies and delivery systems. They have become increasingly specialised medical professions, experiencing greater or lesser degrees of articulation with, and transformation in relation to, biomedical epistemologies, logics and structures. Growing demands for such medicines have inspired the industrialisation of drug production and the recalibration of measures of quality, efficacy and value, often leading to the mass production of altered, simplified or newly-developed medicines as pharmaceutical commodities, which are positioned as brands in competitive capitalist markets at national and global scales.

Due in part to their high degree of diversity and the general absence of representative institutions, non-codified and folk streams have had even more widely varied experiences over recent decades. Some have gained a level of support from national governments or international agencies, others have been tolerated or simply ignored, while yet others have found themselves increasingly disparaged and attacked. In many parts of Asia, Africa and South America however, practitioners of such traditions remain vital providers of services to a broad cross-section of society, most notably the poor. These traditions have flourished in the many gaps that exist between what biomedical and scholarly traditional medical services purportedly offer, and what large swathes of the population are actually able to afford and access, or feel is appropriate to their needs, such as understandings of disease that are not limited to biological processes, observable causes or mind-body dualisms.

It appears that in medicine as in wider society, the only constant is change. Currents of medical tradition are everywhere interacting with one another, with biomedicine and with social forces and processes that extend well beyond the medical realm, leading to the reconfiguration of old forms and the emergence of new hybrids. Contrary to the predictions of decline made in the middle of the last century, traditional medicine today is characterised by its ubiquity, vibrancy and multiplicity.

INTRODUCTORY REMARKS ON TRADITIONAL MEDICINE

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It must be noted, however, that many non-codified and localised folk traditions nonetheless face huge challenges to their continuation as a result of their marginality and the absence of organised support. There is a continuing need to recognise the validity of these traditions in their own right and to find effective ways of supporting them, as living repositories of knowledge, as socially important practices of ongoing relevance to the lives and wellbeing of millions (most likely billions) of people, and as unique languages that together speak to the breadth of the human condition, rather than to view them through the prism of biomedical hegemony as irrational abhorrences, inferior subordinates, or as faceless sources of new molecules to be mined through profit-driven bioprospection. There is also a need to build on growing recognition of the ‘inextricable link’ between biological and cultural diversity, to support resilient and plural forms of human-ecological interaction in place of increasingly tenuous and destructive industrial, agricultural and medical monocultures.

It is towards these aims that the current volume is oriented. The knowledge of medicinal plants that exists in Mondulkiri province has, to date, remained almost entirely in the heads, daily practices and oral traditions of the healers themselves, who continue to provide valued services to their communities in a period of great socio-economic and ecological change. Medicinal plants are powerful physical and symbolic healing entities here, but the knowledge of their use, and the populations of some species in the wild, are coming under very real threat. This book documents a small part of this knowledge, without claiming it as representative of any fixed body of medical lore or stable cultural formation. It offers rather a snapshot of a particular shifting mosaic of plants and people, knowledge and action, the biological and the socio-cultural, recording a moment in their ongoing interaction and recognising it as valuable, valid and worthy of further interest and support.







Mondul Kiri Province

Mondul Kiri province is a hilly, forested region of 14 680 km² covering a wide range of landscapes. Its wide variety of habitats makes it a place of importance in terms of biodiversity with a high potential yield of forest products.

For a long time it was considered as 'the forgotten province' in terms of economic and social development. Nowadays new roads in the province as well as between its capital Sen Monorom and Phnom Penh are changing the face of the province.

Mondul Kiri is still mostly populated by the Bunong ethnic minority (52% of the population). However this proportion is rapidly changing with the arrival of lowland migrants in the recent years. Indeed, the population growth rate is very high (64% rise over 10 years)¹ and increasing rapidly towards 60,000 inhabitants. An important demographic change is happening in the province as the Bunong become a minority to be replaced by the Khmer dominant culture. The province is attracting new business people, migrant workers, and foreign companies for agro-industrial, mineral extraction and other development purposes. These increase the pressure on natural resources.

¹ All the figures are quoted from the "2008 Cambodia demographic survey"

Overview of traditional medicine in Mondulkiri


Medicinal plants have been and still are important medical resources for local communities. Recent research in two villages of the province shows that 95% of the inhabitants still regularly use medicinal plants. Nowadays, biomedicine and traditional medicine are used in complementary ways. There is however almost no cooperation between biomedical and traditional health structures at village level. Access to public health services remains difficult and sometimes impossible during the rainy season. In addition the lack of information on biomedicine, the poor quality of drugs available in uncontrolled shops and self-medication all lead to inappropriate use. This does not build trust in the efficiency of biomedicine.

Traditional medicine in Mondulkiri is very diverse, dynamic, unstructured and often secretive. Efficacy, quality and standardisation of traditional medicine obviously cannot be met in the same way as for biomedical medicine where such criteria are essential. Moreover, traditional healers and their practices are neither recognised nor integrated into the national public health system of Cambodia yet. However, a first official policy in Cambodia on traditional medicine is in process and should lead to formal

recognition and control of practices and practitioners. Therefore supporting traditional medicine in Mondulkiri is absolutely essential in this context.

Medicinal plants are an important part of “Non-Timber Forest Products” (NTFPs) once found throughout the large areas of forest and lands of Mondulkiri province. Modern development is threatening these important natural resources that are considered to be underexploited by investors and private business people. Consequently increasing pressure on land and forest resources is reducing the availability of NTFPs, through rapid deforestation; land grabbing; logging; concessions for commercial agriculture and other forms of exploitation. They are jeopardising the local resource of medicinal plants.

Knowledge of medicinal plants is passed on and shared when people go to collect NTFPs, for example when collecting resin from dipterocarp trees. Young people learn to recognize the plants in situ. As the availability of the natural resource reduces, so does the opportunity to share knowledge. Indeed it is entirely lost in some locations. When people can no longer find a plant, they are unable to pass their knowledge of it on to the next generation.



All inhabitants of Mondulkiri moved to Vietnam or Koh Niek district in the 1970s and their villages destroyed. They started returning in the 1980s and 1990s to rebuild their villages. While they were away, they learned to use the medicinal plants of their new environment. Many people forgot how to use and identify medicinal plants from their ancient villages. Most of them today think that the area of Koh Niek contains the highest diversity of medicinal plants. Whereas it is found in the evergreen forests of other parts of the province.

HOW DOES NOMAD HELP TO PRESERVE TRADITIONAL MEDICINE?



Nomad staff preparing a herbarium in the house of a traditional healer (Klot Den)



Community meeting during the implementation of a medicinal plant garden in Pu Char village.

1 | Ethnobotanical Research

Nomad RSI, in order to preserve and understand traditional medicine, initiated research with Ethno-botanical studies in 1997. Laurent Pordié, who had just founded Nomad RSI, focused his research on malaria. In 2004, Antoine Schmitt took over Pordié's study and extended the research to general health and digestive problems.

Their interaction with the local healers (called "Kruu Boran") did not just advance ethno-botanical work, but it fostered a bond of mutual trust and an enduring relationship to this day. Traditional medical knowledge of Kruu Boran has been gathered through interaction and interviews in the field and in workshops in the Nomad RSI office. Plants are collected with traditional healers leading to the development of a herbarium. All that work is intended to preserve the knowledge and protect the Intellectual Property Rights of the healers by developing a private registry.

2 | A Private Registry of Traditional Knowledge

A Traditional Knowledge Private Registry has been created and subject to agreement by all Kruu Boran partners, who have signed up to it, in order to sustain this relationship and protect their knowledge.

This registry helps to prevent loss of knowledge by compiling and collecting documents that describe traditional knowledge. The principles that govern the registry are (1) Nomad RSI is in charge of the maintenance of the registry (in the form of a database), but (2) all information collected by the Nomad RSI team during interviews and workshops remains the property of Kruu Boran. Nomad RSI designates them as Kruu Boran partners.

3 | Raising awareness about Traditional Medicine

Various actions are implemented in order to show the importance of local knowledge. They include student exchanges, awareness campaigns in the villages, theatre shows and role-plays on medicinal plants preservation, workshops with authorities, etc. It is



Ethnobotanical database developed by Nomad RSI.

especially through the development of Community Medicinal Plants Committees that the project raises the importance of traditional medicine and preservation of medicinal plants. These Committees, composed of key actors of the village for medicinal plants preservation i.e. Kruu Boran, village elder, village chief, medicinal plant collector, etc., are the main contact-point of Nomad RSI in the villages. They are intended to relay the messages about sustainable collection and conservation of the plants while they provide information on local availability of medicinal plant resources.

In addition, and depending on the village, they are responsible for managing their conservation sites, which may be in situ, close or some distance away. Some experimental medicinal plants

gardens are set up in villages to conserve the most endangered plant species. Those gardens can be linked with eco-tourism activities to give some income to support the committee. The keen interest shown in the traditional knowledge of medicinal plants from many people, including those from different cultures and around the world, is raising the self-esteem; confidence and self-value of the Bunong culture. This is important among people whose life-styles and even survival have been threatened through prejudice. Khmer citizens may still refer to them by the word “savage”. The Bunong people have been called “Phnong”⁴ by Khmer which means “savage”, but nowadays most people use “Tchuntchiet” which means ethnicity⁵.

⁴ The people refer to themselves as the Bu Nong. ‘Bu’ means ‘people’. In Cambodia, Bu Nong is transliterated as ‘Pnong’ or ‘Phnong’ following Khmer conventions whereas closely related groups in Vietnam are referred to in the anthropological literature as ‘Mnong’. However, using the ‘Phnong’ to refer to this indigenous group is debatable as ‘phnong’ means ‘savage’ in Khmer. Therefore, we prefer to use the ‘Bunong’ nomenclature which is the closest phonetically to the way the people call themselves. Linguistically, the Bunong belong to the Mon-Khmer language family.

⁵ Guérin et al., 2003

WHO ARE THE TRADITIONAL HEALERS?

Traditional therapeutic practices in Monduliri province are complex and dynamic. Bunong spiritual beliefs are mixed with local and external traditional medicinal knowledge, the exact influence varying with each Kruu Boran. Recent history of Cambodia has greatly affected the practices and knowledge of Kruu Boran. The Khmer Rouge (1974-79) despised and prohibited Western or modern health facilities and scientific medicine, ordering instead “home-made remedies from plants and other natural compounds”. In addition, the conflict that only really ended in 1998, with its wholesale displacements of the population, has certainly increased external influences, especially from Khmer culture. This can be seen in the abandoning of the Bunong word to describe traditional healers with the adapted Khmer expression, “Kruu Boran”.

Indeed, to speak about traditional healers in a general way, most people would say “Kruu Boran” which is the term that we use in this book. Nevertheless in some villages, where the influence of Khmer culture is not so strong, people would still use the Bunong term of “Bu Blao”.

In Bunong language the traditional healers are called “Bu Blao” (literally translated as a “person who knows”) followed by their particular knowledge. For example the “Bu Blao Nam Tchi” is the “person who knows about medicinal plants”. However, nowadays the influence of Khmer language and culture makes Bunong people use the Khmer word “Kruu⁶” instead of “Bu Blao” and then the “Bu Blao Nam Tchi” would usually be called “Kruu Nam Tchi”.

Bunong traditional healers classify themselves in 6 categories as described in the box on the next page. They can find their equivalent in Khmer traditional medicine and then for the same reason as explained above, people would sometimes call them by the Khmer expression. The main difference between Khmer and Bunong traditional therapeutic practices are due to the domination of Bunong “animistic” beliefs, as distinct from Buddhism of the Khmer. Bunong believe in spiritual forces which are present in the environment (forest, sky, earth, stones, water and rice). According to them, these spirits have the power to influence their health, well-being

⁶ Kruu is derived from the Sanskrit “guru” meaning master. In Cambodia and, by extension, it also means scholar or teacher.

and prosperity. Therefore, the Bunong customarily carry out a vast variety of ceremonies to appease these spirits. When a person is sick, the Kruu Boran will have a ceremony which involves the family of the sick person offering the sacrifice of an animal, jar of wine, incense and rice. If the treatment is effective another similar ceremony may be held and the family can give a cow or a buffalo as thanks to the Kruu Boran.

The Kruu Boran Bunong therefore have strong links with spirits. They call and talk to them during ceremonies and they are also in direct contact with them through their dreams. The spirits can tell them how to treat a patient and which plants to use or what disease is present. However this is not consistent among all of the Kruu Boran. Some become Kruu Boran because spirits appear in their dreams (all the Kruu Po Ohm) whereas some of the Kruu Nam Tchi are not taught by dreams at all but only with another Kruu Boran. The portraits of Kruu Boran (described later in the book) give more precise indications of those differences by giving details of their personal history and practices.

Bu Blao Nam Tchi = Person who knows medicinal plants = Kruu Aosot Boran

The term describes therapists who primarily use medicinal plants to treat their patients and who have learned their knowledge with another Kruu Boran. This other Kruu Boran is not necessarily Bunong, it can be a Kruu Khmer, or a Kruu Lao depending on the personal history of the Kruu Boran. The pharmacopoeia includes medicinal plants, animals and minerals. They administer the treatment through a ceremony which is intended to apologise to the spirit for the mistakes that provoked the disease and to ask for their support in the treatment.

Bu Blao Po Ohm = Person who knows how to suck diseases = Kruu Beut

The Kruu Po Ohm have always been important figures in Bunong Society. A Kruu Po Ohm may be a man or woman. They are considered not to have learned the art of healing from another Kruu but directly from the spirits. Usually the spirit appears in the dreams of the person. The spirit offers to teach him or her to become a Kruu Ohm. If the person accepts, he or she will follow the teaching of the spirit. Kruu Po Ohm are able to remove "agents of disease," called Chiass [chaja] or Kun [kũn] from the body of the patient. These agents can be from natural causes or sent by sorcerers. For the Kun who are linked with plants from the Zingiberaceae family, they can be treated using an "antagonistic". This specific knowledge of Kun by Kruu Po Ohm is also used for many "cleansing" ceremonies for appeasing spirits after bad events.

Bu blao Gnot Ndol = Person who holds the belly = Tchmob Boran

She is the traditional midwife. They are still extensively used today by Bunong. Most usually it is a woman, rarely a man, responsible for the delivery. Similar to the Bu Blao Po Ohm, she is taught by a spirit during her dreams, but she may also learn from her mother or grandmother. She sometimes uses a few plants or some rituals, but her function is primarily to monitor and control pregnancy, delivery and the postpartum phase. The various rituals and postpartum problems are further processed by the Kruu Nam Tchi or Po Ohm.

Bu Blao Chian Klet = Person who knows broken bones= Kruu Piebal Bak Tchaeun

This type of traditional healer is closely allied to the Bu Blao Po Ohm in the way they get their knowledge by dreams from the spirit. This spirit has taught them how to treat broken bones. This Kruu Boran can treat other health problems and have knowledge of medicinal plants but mostly they are consulted for their knowledge of broken bones.

Bu Blao Nang = Person who knows black magic = Kruu Tmop

This is a sorcerer who can use black magic to put a spell on people and create diseases or even cause death. They learn the use of black magic from another Bu Blao Nang. They are usually very feared by people, thus it is hard to gain precise knowledge of them.

Bu Blao Pol = Person who knows the past and future = Kruu thiey

This is the fortune teller of Bunong people. People going to them need to offer rice, incense, and/or wine for the ceremony. Then the Bu Blao Pol uses a stick to measure the arm of the people. Depending if the arm is longer or shorter than the wood the Bu Blao Pol will know if something has troubled the spirits and then an answer can be obtained to the question asked.



Bu blao Po Ohm in Purapet village making a ceremony to treat a patient. We can see the offers to the spirits, a chicken and its blood and liver, rice, and a jar wine.

WHICH PLANTS ARE THE HEALERS USING?

The number of different species of medicinal plants in use in Cambodia is estimated to be around 1,000⁷. Most are used in Mondulkiri province. Indeed, the wide range of biotopes in the province and the importance of forest areas provide its inhabitants with a copious vegetal heritage that they have learned to know and use for centuries.

It is interesting to note that the external influences in Bunong traditional medicine have led to the use of names imported from other languages and especially Khmer. Some plants are only known by their Khmer names (Damrey Pram Do, Bandol pich) or mainly called by the Khmer name even if a Bunong name exists e.g. Ko Moui (Khmer name) instead of Bof (Bunong name).

Mixed Deciduous Forest

Characterized by a large diversity of deciduous species is found in the lowland of the province. Main species are *Roka* (*Bombax Ceila* L.), *Chambak* (*Irvingia oliveri* Pierre), *Tholk* (*Parinari annamensis* Hance), *Krakas* (*Sindora cochinchinensis* Bail.), *Sralao* (*Lagerstroemia* sp.), *Khvao* (*Haldina cordifolia* Ridsdale), *Koki* (*Hopea* sp.), *Popel* (*Hopea recopei*), *Sokram* (*Xylia xylocarpa* Taub.)

Dipterocarp deciduous forest

Is a deciduous forest including many dipterocarp trees, such as *Khlong* (*Dipterocarpus tuberculatus*), *Phchek* (*Shorea obtusa*), *Reang Phnom* (*Shorea siamensis* Miq.), *Traich* (*Dipterocarpus intricatus* Dyer.),

Semi-evergreen forest

Mixing deciduous and evergreen trees it includes large trees. At least half of the trees are deciduous. *Koki* (*Hopea* sp.), *Sralao* (*Lagerstroemia* sp.), *Sokram* (*Xylia xylocarpa* Taub.), *Chambak* (*Irvingia oliveri* Pierre), *Beng* (*Afzelia xylocarpa* (Kurz) Craib.), *Neang Nuon* (*Dalbergia bariensis* Pierre), *Chhoeuteal Toek* (*Dipterocarpus alatus* Roxb.) and *Traich* (*Dipterocarpus intricatus* Dyer.).

Evergreen forest

Only evergreen trees, it is the biotope with the highest biodiversity. Numerous epiphytic and evergreen species on the ground level such as *Sla Prey* (Arecaceae) and *Akoa Akei* (Zingiberaceae).

Riverside forest

Located alongside the rivers, they are usually flooded during the rainy season.

Bamboo forest

Only or mainly bamboo. It is found inside deciduous, semi-evergreen and along riverside forest.

Bamboo forest

High grass with a few trees wide spread.

⁷ Ashwell & Waltson, 2008

The Bunong have their own taxonomy which differs from modern botanical taxonomy. They classify plants into six main broad categories, as described in the box. Plants are designated by a classifying term followed by the specific name of the plant. These categories are descriptive, based on the general appearance of the plant; its morphology; its growth mode; odour; taste, etc.

The specific name of the plant can be also associated with the appearance of the plant, e.g. *Puk Pu (Hydnophytum formicarum)* means “head” due to its shape, or following Bunong mythology, e.g. the story of *Djang (Smilax glabra)* detailed later in this book.

Tarm (T.): [təm] = Stem / Trunk = Derm

All trees, shrubs and large parts of herbaceous plants are classified Tarm (e.g. *Donax grandis* called T. Troun). A tree in general will be designated by Tarm Chi. It is the equivalent of the Khmer Derm Tcheu.

Ratao (R.) [rətaw] = Vine / liana = Vor

This category includes all creeping or climbing plants, both woody (e.g. *Bauhinia bracteata* called R. Wan) and herbaceous.

Rip [rep] = Herbs = Smaeu

Corresponding to small herbs (approximately less than 50 cm) which are mostly from Poaceae and Cyperaceae families. Their knowledge, however, is somewhat sketchy as most of these plants are used for livestock and designated in very general terms.

Tchet [chet] = Fungi = Pset

Wild mushrooms are called Tchet + tree name (e.g. Tchet Rape the fungus growing on T. Rape), while the mushrooms growing on land will be designated by Tchet + proper name. Mosses and lichens, where known, are sometimes put in to this category.

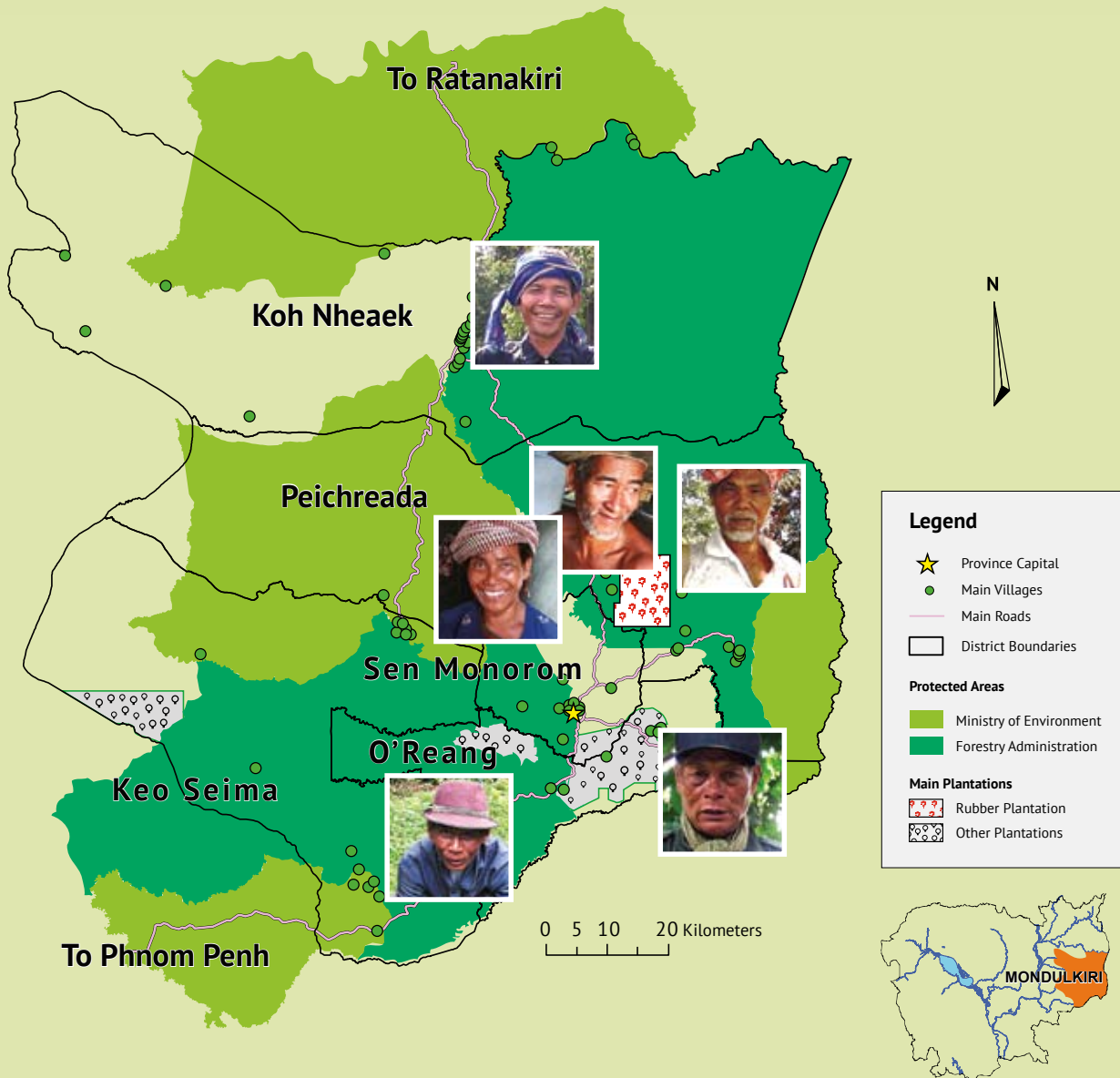
Ratogn [rətõŋ] = Ferns = Banang tchiet

Corresponding to ferns as understood in modern botany. However some plants classified as ferns by modern science are placed in category Tarm by Bunong or simply referred to their names without classifier term.

Kun [kũn] = Kind of Ginger = Protiel

This group of plants is known by their strong symbolic and magical value of a peculiar importance in Bunong culture and mythology. They belong mainly to the Zingiberaceae family but also Liliaceae, Amarylidaceae and others. The Kun are more than plants, they are “spiritual entities” that can be the cure as well as the cause of disease. Thus, these plants are used to cast spells against the forces harming the patient; to protect them from bad spirits or for direct medicinal purposes. They are mainly used by the Kruu Po Ohm, and Nang (sorcerers) However, some are also used by Kruu Nam Tchi and Bu Gnot Ndol (e.g. Kun Tool).

PORTRAITS OF TRADITIONAL HEALERS



Chuch Den

Traditional midwife massaging
a woman after delivery





Chuch Den

Ethnicity: Bunong

Address: Lauka village, Sok Dom commune
Sen Monorom district.

Birth date: 1957

Title: Traditional Birth Attendant

Formation: Family

Speciality: Delivery

How did Chuch Den become a Traditional Birth Attendant?

Her work as a midwife started many years ago, before she had her first child. Den had a dream where a spirit had called her to become a midwife. This was a sign for her and if the spirit had not appeared in her dreams she would not be practising today.

Afterwards, she learned from her mother who was a midwife herself. When still a child, Den watched her mother many times when she assisted a delivery. Den believes that her mother's skills might have passed to her after she died. All the knowledge about midwifery in general comes from the old people.

After the arrival of various NGOs in the province, she attended a few training courses about safe delivery practices. Since then, she does use a delivery kit when assisting a birth. However, according to her, being more hygienic and using the delivery kit did not significantly change her practices. In addition, she is able to refer pregnant women with complications to a public health facility.

What is her practice today?

Women, during pregnancy, visit her only in case of pain and indisposition. Through massaging the abdomen and providing traditional medicine, Den says she releases the pregnant woman from discomfort.

It is the husband's duty at the moment when labour starts, to look for her and call her to their house. First, Den checks the position of the baby from outside and massages her if necessary. She asks the family to prepare wood for fire, hot water with

Chuch Den



special leaves, ginger and other traditional medicine.

As soon as the baby is born, Den cuts the umbilical cord, washes the baby and then the mother, and lights a fire either under or next to the mother's bed (*ang pleung*). They do this as the body is believed to be cold after the delivery because the mother lost a lot of blood. The heat of the fire is needed for warmth and to bring back the mother's strength; energy, and good health. Den stays most of the time during the first few days after the delivery, with the mother and the baby, giving her massages, traditional medicine and other general advice plus taking care of the fire.

After a few days, a ceremony needs to be carried out for the mother. This is important in order to appease the spirits and avoid problems. It is also intended to thank the relatives and friends who supported during the delivery.

What about passing on knowledge to younger generations?

Den has taught her skills to many other traditional midwives in different villages. If a younger person wants to learn about midwifery they have to follow the old traditional midwives - but it is only possible to become a midwife if the spirits give them a sign.

DESCRIPTION OF SOME REMEDIES USED BY CHUCH DEN

1 Tchlong Tonle⁸ Rouyt (postpartum phase).

After delivery, use for body pain or uterus, to make the body hot. Only for the mother.

Name of plants:

Cha Ranglay (*Zingiber purpureum*)

Recipe of the medicine:

Collect tuber, pound it, and mix it with wine. To drink or to put on body (same wine mixture) to be fresh.

Dosage:

To drink 3 times per day, after shower with leaves (see below), during 2-3 month after delivery. If the woman only takes 2 showers per day, then she only drinks this medicine twice per day.

Remark:

A family usually performs a ceremony around 3 days after the delivery. During this ceremony the midwife will thank the spirit for making the medicine powerful.

Sometimes people come to her house to buy the medicine. She has to arrange a small ceremony before she gives the medicine. She sells a kg for 2000 riel⁹. She grows the plant Cha ranglay in her field and on her fallow land.

2 Tchlong Tonle rouyt (postpartum phase).

Used after delivery for the mother to take a shower to feel more comfortable, or to drink to ease the pain in general and the pain in the uterus. Used to bathe the newborn baby.

Name of plants:

Chong Po (*Bauhinia malabaricum*)

Recipe of the medicine:

Take the leaves, boil with water, either to take a shower or to drink. After the shower she gives ginger (Cha ranglay) to the mother (see interview above), either mix with wine to drink or to put directly on the skin.

Dosage:

Shower: 1-3 times per day, during one month after delivery. During this time, the mother is not allowed to take a shower outside her house (that is at a river or by a well). For each shower, she has to prepare the water with new leaves. Drink: 3 times per day. She cannot use any other parts of this tree, only the leaves, that is what the old people told her.

Remark:

She never sells this medicine. If someone needs it, they come to her house and she will tell them where to find the leaves.

This plant is not easy to find and, in case, she cannot find it, she can use instead the leaves from pineapple (T. Ngo), but they can be only used in the morning for the shower, not in the afternoon. If no leaves are available at all, the woman takes her shower only with hot water.

3 Name of disease/symptom¹⁰: Katchia (cough)

Name of plants:

Puk Pu (*Hydnophytum formicarum*)

Recipe of the medicine:

Collect tuber, cut in small pieces and dry 3-4 days. Then boil with water to drink.

Dosage:

First day: Boil 3 glasses of water with tuber until only one glass left, and then drink it all at once. Second day: boil one pot of water together with medicine, drink it during the day, any time. Drink one pot per day until cough is better. One pot needs around ½ kg of Puk Pu.

Remark:

It is necessary to check if there is any insect inside the tuber before boiling it. Some insects can be dangerous or poisonous.

She sells sometimes to people from Phnom Penh (2,000 riel/kg) or from Lauka (1,500 riel/kg)

3-4 people ask her for this medicine per month. It is difficult to find because it is found high up in the tree.

Her son collects it.

4 Name of disease / symptom: Iero Ach (simple diarrhoea), or Ach moham (diarrhoea with blood)

Name of plants:

Peur Sot (*Ziziphus rugosa*)

Recipe of the medicine:

Diarrhoea: Collect bark, boil with water and drink it. Or put salt on the bark after collecting it, grill it on fire and boil after. With salt, the medicine is more effective than the fresh bark.

Dosage:

Diarrhoea: Drink 2 pots per day (2-3 litres), any time during the day. With salt: boil the bark with only one can of water.

Remark:

She never sells or gives the plant to the people in the village. If someone needs this medicine, she tells them where to find the leaves. It is easy to find, close to the village.

⁸ Tchlong tonle means to "cross the river". It is the Khmer expression for giving birth, and used by most Bunong midwives. Tchlong tonle rouyt means that birth has already happened.

⁹ 1 USD = 4,000 riel

¹⁰ "disease / symptom" is used to speak about the health problems that can be treated by the remedy described. We use both terms as it does not always match with medical classification. Khmer and Bunong names are used by the Kruu Boran depending on the disease / symptom and their own knowledge.

STORY OF KUN TOOL



In the past there were only 30 Bunong women and 30 Bunong men living. At this time they did not have midwives to assist deliveries. When somebody was pregnant, they used to cut the belly to take the baby out and the mother died. There were never more people, because of this practice.

One day a man who loved his wife very much and was pregnant, did not want to lose her. He did not know how to help her to deliver. So he went into the forest to ask all the animals about their knowledge of deliveries.

After several hours he felt tired and so relaxed under a tree called Tarm Rahayt. He was just starting to fall asleep when he felt something fall on his head. Then he looked up in the tree and he saw a monkey just about to deliver its baby.

The husband looked more carefully and noticed that the male monkey was helping his wife and giving her some kind of plant (ginger root). The monkey cut the plant in pieces and put one on the mother's forehead. The man watched very carefully. The monkey put the

ginger next to the vagina, while the man was still observing. The monkey boiled the water and pressed on his wife's abdomen. Then the man asked the monkey: "How do you help your wife exactly to deliver? We are used to cutting the belly to separate the baby but this is very dangerous and they often die." Then the monkey looked at the man and told him: "Humans, you don't need to open the belly of your wife. We monkeys have always used this plant that we call Kun Tool to help our wives to deliver. Thanks to Kun Tool both the baby and the woman can survive. I give you Kun Tool to take home and you will be able to use it for your wife."

After the baby monkey was born safely, the man went back home to his wife. He practised everything exactly as he saw with the monkey, gave his wife the plant and in the end, the baby was born safely and the mother was still alive. Since that time Bunong always use Kun Tool for their deliveries. That is why today, we Bunong are a lot of people living in this world."



Flower of Kun Tool in Nomad garden

Kruu Jiran conducting a ceremony in his house to treat a patient. Candles, incense, money and rice wine are always offered to the spirit. Their quantity can be more or less important depending on the patient.

Jiran





Jiran

Address: Keudey Sangkum village
Soksan commune, Kohniek district

Birth date: 1953

Title: Kruu Nam Tchi

Formation: Other Kruu

Speciality: Women's delivery

How did he become a traditional healer?

His training as a Kruu Boran started when he was forced to join the Khmer Rouge army in 1977 and had to learn about traditional medicine. He was trained by a woman Kruu Boran and Tchmob Boran from Lao. He spent two years learning in Phnom Krol in Koh niek district how to prepare traditional medicine.

In 1979, when Cambodia was liberated from the Khmer Rouge, he had to move to the Thai border and spent 8 years in refugee camps. During that time he continued to learn about medicinal plants by himself and also started to have dreams about medicinal plants. Spirits came into his dreams to teach him how to use medicinal plants. After spending time in Thailand and Oddar Meanchey province, he came back to Mondulkiri in 1991 after the peace settlement, when the United Nations Transitional Authority of Cambodia (UNTAC) was set up. Nowadays he no longer learns about new plants but is improving the way he prepares remedies and how to combine medicinal plants.

What is his practice today?

His patients see him at his house. First he has a consultation with his patient to understand his/her problem. Then he starts to organize a small offering for the spirit, 5 candles, 5 incense sticks, 500 riel and 1 litre of rice wine. Then he prays to the spirit for the success of the remedy.

Jiran



Kruu Jiran is famous for treating and helping women during delivery and post-partum phase. He works in a close relationship with a traditional midwife in his village. He can also help women who have difficulties during birth. Most of his patients contact him because of body pains, for example after a motor-cycle accident; difficulties during delivery; constipation; urinary problems and malaria.

What about passing on knowledge to younger generations?

He is just starting to pass on his knowledge to his son. He considered that until recently he had been too young and inexperienced to teach someone else. He has always showed people how to use plants (to around 100 people). He has never taught about the prayers. In his opinion, someone only knows about traditional medicine if he or she has also learned about the prayers.

However, he cannot teach how to dream. The spirits cannot be called or forced to appear in someone's dream, they have to come by themselves.

DESCRIPTIONS OF SOME TREATMENTS USED BY KRUU JIRAN FOR PREGNANCY, DELIVERY AND POST PARTUM PHASE

1 Name of disease / symptom:
Tchy Pouk Tchy Kat
(febrile state)

Name of plants:

T.Boh Ors (*Zea mays*); T. Pouk Rolang (*Salacia sp.*); T. Nape (*not identified*)

Recipe of the medicine:

The trunk of T. Pouk Rolang, the roots of T. Boh Ors and the branches of T. Nape are cut in to small pieces altogether. Then they are boiled until the remedy reduces by 1/3.

Dosage:

If the patient is very sick it can be used up to 3 times per day until the patient feels better.

No special precautions are required for this remedy.

Remark:

This remedy is not sold but if effective, people usually give 10,000 riel.



Kruu Jiran stock of medicinal plants. All of these plants are difficult to find, so the Kruu Boran keeps a store at in his house. As they are very powerful he only needs a small quantity of each. He grinds them with a stone.

2 Tchlong Tonle rouyt (postpartum phase)

Name of plants:

T. Boray (not identified), T. Kolhe (not identified), T. Tong Hung (*Croton crassifolius*), T. Damrey Pram Do (*Fabaceae sp.*), T. Rovakong (*Hiptage benghalensis*).

Recipe of the medicine:

The roots of T. Rovakong and T. Tong Hung, the tuber of T. Damrey Pram Do and the trunk of T. Boray and T. Kolhe are cut and mixed together. They are boiled together in the same proportion for each plant. Instead of boiling it can be mixed with rice wine, depending on the patient.

Dosage:

Can be used many times per day. The more the patient drinks, the better he or she will feel. The remedy can be used up to 1 pot per day (around 2 litres). It is drunk until the patient feels better. No special precautions are required for this remedy.

Remark:

A similar ceremony is held by the Kruu Boran. This remedy is sold to the family of the pregnant women at 5,000 riel for one pot.

3 Name of disease / symptom: Tchy Kol (fallen uterus)

Name of plants:

R. Rameut (*Coscinium usitatum*), R. Dokoun (*Tetracera scandens*), T. Tiyong (*Cinnamomum sp.*), T. Dam Ang (not identified), T. Ta Ogn (*Saccharum officinarum*).

Recipe of the medicine:

The roots and trunk of T. Ta Ogn, R. Rameut and R. Dokun, the roots of T. Tiyong and the branch of T. Dam Ang are cut in to small pieces and dried together. Once dried they can be either directly boiled together or mixed with wine. The same proportion of each plant is used in the preparation of the remedy.

Dosage:

Can be drunk as much as needed. However if made with wine, no more than 3 glasses per day. No special precautions are required for this remedy.

Remark:

This remedy is not sold to the family of the woman but they need to promise to give an animal (chicken, pig, and cow) to the Kruu if the treatment is successful.

4 Name of disease / symptom: Tchy bing tchak bing jane (pain on the body)

Name of plants:

T. Pom (*Nauclea orientalis*), T. Rovakong (*Hiptage bengalensis*) and T. Tung Hung (*Croton crassifolius*).

Recipe of the medicine:

The trunk of T. Pom, the roots of T. Tung Hung and T. Rovakong are cut into small pieces and boiled together. The same proportion of each plant is used in the remedy. The plants can be used dry or fresh depending on the urgency of the need.

Dosage:

The patient needs to drink 3 pots during the first week. Then the second week the plants will be renewed as the medicine will start to lose effect. When it is boiled it should not be too thick, otherwise the patient will feel dizzy. This remedy has no interaction with modern medicine.

Remark:

If this medicine is overused it can lead to dizziness and even vomiting.

Klot Den

Kruu Klot Den pointing out to the Nomad
RSI team some medicinal plants .





Klot Den

Address: Pu Char Village, Sraepreah Commune
Kao Seima District

Birth date: 1961

Title: Kruu Nam Tchi

Formation: Family

Speciality: No

How did he become a traditional healer?

When he was a young boy Klot den had been sick for a long time due to black magic. He did not know at that time about medicine. So he asked his uncle who was a Kruu Boran to help him. His uncle took him in to the forest and they collected the medicinal plants to treat his disease. As this experience was successful he started to learn traditional medicine with his uncle.

Klot den, who had been forced to joined the Khmer Rouge army, in 1979, after the regime fell, moved in to the forest near the Thai border, then to Oddar Meanchey province in refugee camps. During that time he continued to learn traditional medicine with his wife's brother who was Kruu Boran Lao. He finally came back to his village in 2000 after 21 years away.

What is his practice today?

The family of the sick person come to the Kruu house and bring 1 candle, 1 plate of rice and 5,000 riel for praying to the spirit before he can treat his patient. Kruu Klot Den cannot receive more than 5,000 riel otherwise the spirit will not help him to treat this person. Before he collects the plant he needs to say this prayer: "Diamond teacher, the king of medicine, teacher tell me how I can help the human?" (*Kruu Pech Sda:ch De:m Tna:m Kruu lou:k Pda:m Oy Knho:m Pro:h Sa:t lou:k*).

Klot Den



After 7 days when the patient is feeling better he will make another ceremony to thank the Kruu Boran. He offers 30,000 riel, a jar of wine and a chicken that they will share together with the Kruu and the patient's family.

Kruu Klot Den uses medicinal plants and ceremonies to treat his patient but he does not dream about plants. He usually treats patients for diarrhoea, malaria, high fever and abnormal sick after delivery. He can also treat people who have been afflicted by black magic by spraying water on their head. He leads ceremonies only when facing serious diseases and the need to appease the spirits.

What about passing on knowledge to younger generations?

He has already taught medicine to 7 students and he is very keen to pass on his knowledge to younger generations. However, nowadays people are less interested in traditional medicine and are mainly concerned with treating serious disease or long-term sickness associated with spiritual causes. He notices that younger generations do not show as much interest in medicinal plants knowledge as modern medicine which is easier to use and faster to cure.

DESCRIPTION OF A FEW REMEDIES USED BY KRUU KLOT DEN

1 Tchlong Tonle (delivery)

Name of plants:

T. Rovakong (*Hiptage benghalensis*), T. Kob (*Flacourtia indica*), T. Rape (*Xylia xylocarpa*), T. Play Miel (*Tamarindus indica*), T. Pom (*Nauclea orientalis*), T. Damrey Pram Do (*Fabaceae sp.*)

Recipe of the medicine:

Part of the trunk of all these trees and the tuber of T. Damrey Pram Do are cut in to small pieces and dried together to be stored. When needed they are boiled with the same quantity of each.

Dosage:

The patient needs to drink 1 pot per day in 3 divided doses. After 1 week the medicine can be stopped as the patient should feel better. No special precautions are required for this remedy.

Remark:

This remedy is sold to the family of the pregnant woman at 5,000 riel for one pot.

2 Name of disease / symptom:
Ach Njor Mof (mucus diarrhoea)

Name of plants:

T. Randoong (*Ancistrocladus cochinchinensis*), T. Chi (*Shorea obtusa*), T. Rape (*Xylia xylocarpa*), T. Trobeik (*Psidium guajava*), T. Teu (*Careya arborea*), T. Raangeng (*Cratoxylum formosum*), T. Kalagn (*Dialium cochinchinense*).

Recipe of the medicine:

Trunk, root, stem and bark of all these trees are cut in small pieces, mixed together and boiled.

Dosage:

Drink one pot per day in 3 times.
No special precautions are required for this remedy.

Remark:

This remedy is sold to the patient at 500 to 1,000 riel for one pot.

3 Name of disease / symptom:
Tor Tchak (hot on the body)

Name of plants:

T. Troun (*Donax grandis*), T. Gor (*Ceiba pentadra*), T. Prit (*Musa paradisiaca*), T. Ach Yar Let (*Heliotropium indicum*)

Recipe of the medicine:

For T. Troun and T. Ach Yar Let, the whole plant is used including the roots. The leaves and bark of T. Gor and the stem of T. Prit are added in to the preparation. All of these plants are kept in water for one hour and then used when taking a shower.

Dosage:

The patient needs to use 3 times per day during showers and they must renew the plants each time. The treatment can be used for a week.

Remark:

The quantity of plants used in the preparation depends on the age of the patient.

4 Name of disease / symptom:
Leh Chouan (fatigue)

Name of plants:

T. Konkier Youk (*Gomphia serrata*), R. Sao Mao (*Passifloa foetida*), T. Ka Nienn (*not identified*), T. Gong (*not identified*)

Recipe of the medicine:

The leaves and the roots of T. Konkier ouk, the stem and leaves of R. Sao Mao and T. Gong and the roots of T. Ka Nienn are cut in to small pieces and boiled.

Dosage:

The patient takes 1 pot per day in 3 separate doses. After a week if he/she feels better it can be stopped.

Blagn

Kruu Blagn showing Nomad RSI his book where he registers recipes and medicinal plants.





Blagn

Address: Dramkaet Village
Krangteh Commune, Pichreda District.

Birth date: 1946

Title: Kruu Nam Tchi

Formation: Family and other Kruu

Speciality: No

How did he become a traditional healer?

Kruu Blagn began his training at the age of 15, in medicinal plants, with his father who was a traditional doctor himself. He taught him the names and uses of medicinal plants, which he started to register in a book. Then, during the Khmer Rouge regime, he was forced to be a health worker for the regime.

After the fall of the Khmer Rouge he continued his apprenticeship with a Bunong Kruu Boran. He had to buy one buffalo (called *Krobaye kol* in Khmer) to learn for one year with this Kruu Boran. After that he learned with other Kruu Boran including a Kruu Khmer in Kratie province and a Kruu Thai in Ratanakiri province. All together, Kruu Blagn obtained his knowledge and experience from six different Kruu Boran.

What is his practice today?

When his patients come to consult him, he first asks them what they have eaten and what they have been doing before they became sick (working hard in the field, etc.). Then when he understands the disease he initiates a simple ceremony, offering 1 plate of rice, 2 candles, 5 incense-sticks and money, to ask the spirit to make the treatment powerful.

Blagn



The most frequent consultations are related to problems of constipation, disorders of the urinary tract, childhood fevers, postpartum problems, infertile couples and spiritual diseases. For the most serious diseases, the spirits come to him during his dreams and they show him which plants to use.

The price for a consultation and treatment is around 10,000 riel, but it depends on the disease and treatment. Some plants have more value than others depending on their availability.

What about passing on knowledge to younger generations?

Kruu Blagn has a lot of experience in teaching younger generations. He claims to have taught around 100 people in his life, although most of the students want to learn about only one or two diseases. They pay around 10,000 riel to learn how to treat one disease. On average, students are 20-30 years old. All the medicinal plants and remedies he uses are registered in his notebook.

DESCRIPTION OF A FEW REMEDIES USED BY KRUU BLAGN

1 Name of disease / symptom: Tchong Mo ka (loss of appetite)

Name of plants:

T Konkier Youk (*Gomphia serrata*),
T Preb (*Gardenia obtusifolia*),
T. Rangay Ngwan (*Dendrobium lanceolatum*),
T. Rangay Mae (*Dendrobium rostratum*).

Recipe of the medicine:

The trunk of T Preb; the stem of T. Konkier Youk and the whole plant of T. Rangay are cut in to small pieces and are dried together or can be used fresh if needed quickly. Then they are boiled together in the same proportion of 4 grams for each plant.

Dosage:

If the patient is very sick it can be used up to 6 times per day. If uncomplicated sickness only 3 times per day is enough. After 2 days the treatment stops, the patient should be better. No special precaution is required for this remedy.

Remark:

This remedy is sold to the family of the pregnant woman at 20,000 riel for one pot.

2 Tchlong Tonle (delivery)

Name of plants:

T. Pouk Rolang (*Salacia sp.*),
T. Kob (*Flacourtia indica*),
T. Konkier Youk (*Gomphia serrata*)

Recipe of the medicine:

Boiling of 1.5 kg of the trunk of T. Pouk Rolang can be used alone for the first time. If 10 days later the patient is not better then 5 grams of T. Kob and T. Konkier Youk can be added in the preparation.

Dosage:

If the patient is very sick it can be used up to 3 times per day for a week. After 1 week mixed with the other plants and 3 times per day be can mixed with wine or boiled. No special precautions are required for this remedy.

Remark:

During the preparation of the remedy a simple ceremony is held. It is intended to ask the spirit to help the Kruu Boran to make the medicine powerful and effective. If the ceremony is not carried out the medicine will not be effective. This remedy is sold to the family of the pregnant woman at 20,000 riel for one pot.

3 Name of disease / symptom: Tlea Chiem (haemorrhage postpartum)

Name of plants:

T Lok Gnop (*Mimosa pudica L.*),
T Pouk Rolang (*Salacia sp.*),
T Tau Krak (*Saccharum officinarum*)

Recipe of the medicine:

3 grams of T. Lok Gnop, 5 grams of T. Pouk Rolang and 4 grams of T. Tau Krak are boiled together. All these plants need to be fresh. Then they are boiled together in the same proportion of each plant.

Dosage:

If the patient is very sick it can be used up to 3 times per day. After 1 day the treatment is stopped and the patient should be better.

Remark:

This remedy is sold to the family of the pregnant woman at 20,000 riel for one pot.

4 Name of disease / symptom: Toa¹¹ mouy roy mouk (a hundred disease of women that can occur after delivery)

Name of plants:

T. Deng Mia Mae
(*Prismatomeris tetrandra*)

Recipe of the medicine:

The trunk and the roots of T. Deng Mia Mae are collected and boiled together. The preparation can as well be done by infusion in rice wine.

Dosage:

One pot is drunk every 3 days, 3 times per day. The medicine is used for a week.

Remark:

This remedy is sold to the family of the pregnant woman at 15,000 riel for one kilogram.



Kruu Blagn boiling T. Rangay to prepare a remedy in his field house.

5 Name of disease / symptom: Pdasay (cold)

Name of plants:

T.Njor Mof Rapow (*Grewia laevigata*)

Recipe of the medicine:

The roots of the plant are cut in to small pieces and boiled.

Dosage:

1 pot for 2 days needs to be drunk by the patient, 4 times per day. The medicine is used until full recovery.

¹¹It is a state of physical collapse and failure to regain strength after delivery, which can even lead to death.

Deuy Kam

Kruu Deuy Kam is sucking the
Chiass (disease cause).





Deuy Kam

Address: Puchri Village
Puchri Commune, Pichreda District

Birth date: 1949

Title: Kruu Po Ohm

Formation: Family

Speciality: Spiritual Disease

How did he become a traditional healer?

Kruu Deuy Kam comes from a long lineage of Kruu Po Ohm. His mother was a Kruu Ohm and before she died, she taught him how to understand dreams. After her death, her spirit appeared in his dream; started to teach him how to become a Kruu Po Ohm and how to use medicinal plants. Later the spirits that visited him during his dreams gave him magic stones. At this moment he knew that he had become a Kruu – the stones made him a Kruu.

A few years ago, when his son died, he thought that the spirit had stopped protecting him, so he decided to end his practice. He threw away his stones, but the stones came back! He buried the stones in the ground, as he still did not want to carry on his work, but the stones came back again. Finally he offered a pig in a ceremony for the spirit and accepted to continue his practice as a Kruu Po Ohm.

What is his practice today?

People to be treated by him need to bring, 1 candle, 1 plate of rice, 1 egg of chicken and 500 riel in order to pray to the spirits.

He begins by throwing rice on the candle. At the same time he asks the spirit about what is wrong with this person. When the rice gets stuck on the candle it is a sign that what he is talking about is the cause of the disease. Then he repeats the same process with an egg. He prays to the spirit and if the egg does not stand up on the plate it means that the person has done something wrong. For example if a woman had a miscarriage and did not tell her family, this could lead to a serious problem

Deuy Kam



for the whole village. The Kruu Boran will see what she did wrong thanks to the egg. After that, the family will have to arrange a special ceremony and sacrifice 1 pig, 1 chicken, 1 duck, 1 dog, and 1 cow to appease the spirits.

To explain how he has learned about the uses of plants through dreams, Kruu Deuy Kam gave this example: When his son had haemorrhoids, he dreamt about the plant to treat and gave it to his son. After using the plant his son felt better, so the treatment worked. He can then use the same plant again if someone has similar problems.

Kruu Deuy kam depends heavily on the spirit of his magic stones (called “Ngar”) to operate and find healing plants. He also maintains a close relationship with different Kun as described below.

What about passing on knowledge to younger generations?

He has never had any students and he will never teach anybody while he is still alive. He will transmit his knowledge through his spirit after he dies, as his mother had done with him.

SOME TREATMENTS USED BY KRUU DEUY KAM

1 Tchlong Tonle (delivery)

Name of plants:

T. Dam Djang (*Smilax glabra*),
T. Rovakong (*Hiptage benghalensis*),
T.Bof (*Euonymus cochinchinensis*),
T. Kalagn (*Dialium cochinchinense*)

Recipe of the medicine:

The trunk of T. Ko Mouy, T.Rovakong and T. Kalagn, are cut in to small pieces with the tuber of T. Djang. Then they are boiled together dried or fresh.

Dosage:

The patient has to drink one pot per day, 3 times. The medicine is used until full recovery.

Remark:

This remedy is not sold. Kruu Boran just explain how and where to collect this plant to the family of the pregnant woman.

2 Name of disease / symptom:
Tchy Morr (swollen body)

Name of plants:

T.Patt (*Sapindus mukorossi*.)

Recipe of the medicine:

The trunk of T. Patt is collected and cut in to small pieces to be dried in the sun. When needed, he grinds it and adds in hot water for a drink.

Dosage:

The patient has to drink one spoon per time and 3 times per day. The medicine is used until recovery.

Remark:

The dose needs to be carefully respected otherwise this medicine can lead to poisoning.

3 Name of disease / symptom:
Krung Chagn (malaria)

Name of plants:

T. Pral Erl (*Sophora sp.*)

Recipe of the medicine:

The roots are collected, cut in to small pieces and dried. When needed, it is ground with a stone and mixed with warm water.

Dosage:

The patient needs to take 1 spoonful per time, 3 times per day. After 3 days the treatment needs to be stopped.

Remark:

The dose needs to be carefully respected. Pregnant women cannot use this medicine.

Kruu Deuy Kam showing Pral Erl during medicinal plant collecting with the ethno-botanist Antoine Schmitt in 2004



SOME KUN USED BY DEUY KAM

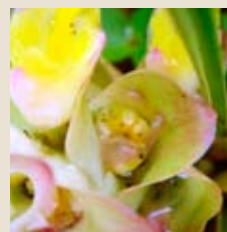


Deuy Kam

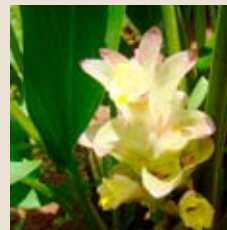
❶ Kun Ngor (Invisible Kun)

A long time ago, the spirit from Kun Ngor appeared in the dream of Bunong people. The spirit gave this plant to be used by them. Since that time old men transmit the use of this plant to younger generations.

Kun Ngor is used for protection against black magic and especially witches. Kruu Deuy Kam prepares the treatment by rolling the Kun in betel leaves with lime, to give to the person who needs protection. When the person eats this Kun the witch who is trying to do harm to that person will go away. It is also possible to grow this Kun in front of the house to be protected against black magic.



Flower of Kun Ngor



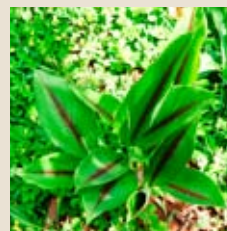
Kun Ngor

2 Kun Dah Yang (God Dah) and Kun Deuy (Bring success)

These Kun can be used in combination with Kun Ngor to protect against black magic. They are also used in ceremonies for “cleansing” bad deeds and to avoid them happening again. It can be used for many misfortunes - the family with a member who had committed suicide; or the death of a pregnant women; someone hit by lightning; a snake that came in the house, etc.



Kun Dah Yang



Kun Deuy

The ceremony requires the sacrifice of animals (dog, chicken, duck, and cow), the exact number depending on the importance of the ceremony. The Kun is cut in to small pieces and mixed with the blood of the sacrificed animals. Then a necklace is made for the member of the family who needs to be protected.



Kun Dah Yang
Flower

3 Kun Teurr Yourr (the Hoopoe bird)

This Kun, unlike the previous one, is a kind of fungus found on rice plants. It is strongly linked with a bird called “Teurr Your” (*Upupa epops*) known for eating a pest insect of rice plants. This bird is attracted by the Kun and then, just as Kruu Ohm does for humans, it sucks out the disease of the rice. People call it Ohm Paa, sucking rice. To protect the rice, a ceremony is held and some medicinal plants are offered to the spirits such as Puk Pu, Chrok, T. Klot, T.Deng, and T.Ralea.



Jof Kun Paa, “Totem” used for the ceremony to bless the spirit of rice.

Kruu Sopun praying to the spirit before treating a patient. The medicine he will use - plants, stone and mushrooms - are put on a plate of rice to be blessed by the spirit. Chicken blood and liver, rice wine, and soda are offered to the spirit.

Sopun





Sopun

Address: Pu Ndreng Village
Dakdam Commune, O'reang District

Birth date: 1935

Title: Bu Blao Chian Klet

Formation: Family

Speciality: Broken Bones

How did he become a traditional healer?

Kruu Sopun comes from a long lineage of Kruu Boran that has always transmitted knowledge from father to son. Before he died, his father as he himself had been taught, taught him how to treat people and how to use some medicinal plants. During that time he also started dreaming of spirits who helped him to understand about traditional medicine.

When he was 30 years old, he held a big ceremony with his father, offering a pig and a jar of wine to the spirit to be recognised as a Kruu Boran. Later, he was also taught by a bird (called "Yareut" the greater Cucal) how to treat people with broken bones by using a special ginger called Kun Yareut . (See the details on the next page).

What is his practice today?

His patients come to his house to check which kind of problem they have. They have to offer a jar of wine, 1 bottle of rice wine, 1 bottle of orange juice, 5,000 riel and a chicken. All of this is intended to organize the praying to his plants and talking to the spirits. When he finishes the ceremony, he grinds all the medicinal plants directly on the part of the body where the patient has the problem.

After a week, if the patient is better, he will have to thank the Kruu Boran by offering, 1 chicken, and 1 jar of wine and money (depending on the importance of the problem). If the patient is not better he does not need to offer anything.

Sopun



Sopun is famous for his knowledge and ability to cure people with broken bones. He has treated around 10,000 people since he became a Kruu Boran, 45 years ago. Today his reputation attracts patients from other provinces some very distant, such as Kratie, Stung Treng, Pursat etc. However, he is also consulted for diarrhoea, malaria and unusual sickness after delivery.

What about passing on knowledge to younger generations?

Transmission of his knowledge will be done following the tradition from father to son. He is teaching to his son in the same way that his father had taught him.

DESCRIPTION OF A FEW REMEDIES USED BY KRUU SOPUN

1 Tchlong Tonle rouyt (postpartum phase)

Name of plants:

T. Dam Djang (*Smilax glabra*),
T. Rovakong (*Hiptage benghalensis*),
T. Rape (*Xylia xylocarpa*)

Recipe of the medicine:

The trunk of T. Rape and T. Rovakong and the tuber of T. Djang are cut in to small pieces and boiled together. The preparation can as well be done by infusion of the plants in rice wine.

Dosage:

The medicine is taken 3 times per day. 2 glasses are drunk each time if boiled and 1 glass if soaked in alcohol.

The treatment can be followed up for one 1 month.

Remark:

The remedy is given to the traditional birth attendant.

2 Name of disease / symptom:
Iero Ach (simple diarrhoea)

Name of plants:

T. Rovakong (*Hiptage benghalensis*),
T. Tang Yang (*Helicteres angustifolia*),
R. Play Tchy (*Willughbeia edulis*),
T. Raya (*Terminalia bialata*),
T. Teu (*Careya arborea*),
T. Ach Krah (*Hyptis suaveolens*)

Recipe of the medicine:

Trunk, bark, stem of all plants are cut in to small pieces and dried together. Then they are boiled. They can be used fresh if needed.

Dosage:

1 pot per day, 3 times needs to be drunk. After 2 days if the patient is not better he needs to continue the treatment.

Remark:

This remedy is sold to the patient at 15,000 riel for one pot.

3 Name of disease / symptom:
Kok Chiem (coagulated blood)

Name of plants:

T. Deng Mia Mae
(*Prismatomeris tetrandra*)

Recipe of the medicine:

The roots of T Deng Mia Mae are cut in pieces and dried. When needed, it is ground with a stone directly on the skin.

Dosage:

Usually it used 3 times per day for 7 days. Then the patient should be better. If the patient is very sick it can be used up to 7 times per day.

Remark:

This remedy is not sold to the patient but he/she needs to give 10,000 riel for the ceremony.

4 Name of disease / symptom:
Krung Kadaw (fever)

Name of plants:

T. Deng Mia Ngwang
(*Prismatomeris sessiliflora*)

Recipe of the medicine:

The roots and the stem of T. Deng Mia Ngwang are cut together and boiled, dried or fresh.

Dosage:

The medicine is taken 3 times per day corresponding to one pot in total per day. It has to be used for 5 days.

Remark:

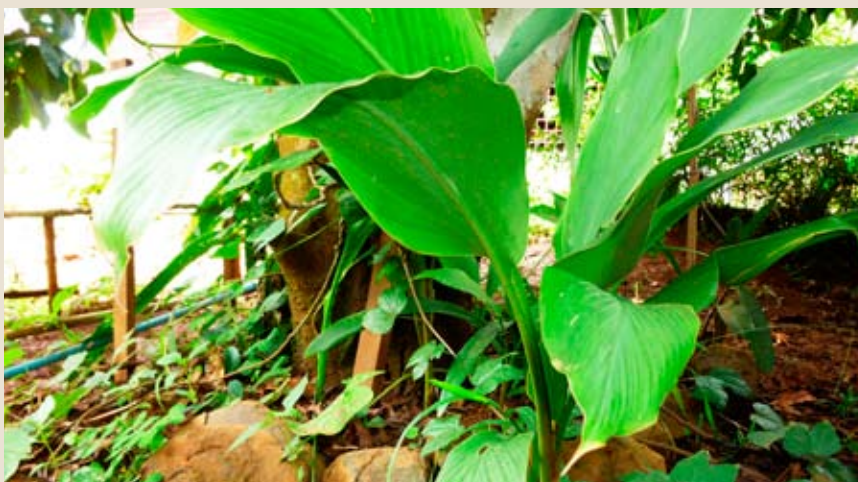
This remedy is not sold but the patient should give at 2,000 to 5,000 riel for one pot.

SOME KUN USED BY SOPUN



Sopun

❶ Kun Yareut



Kun Yareut growing in the Nomad RSI demonstration Medicinal Garden in Sen Monorom. This special Kun needs to be grown in a place where nobody will step on it. Indeed, it could cause damage to that person

Yareut is the name of a bird called the “Greater Cucal” or the “crow pheasant” (*Centropus sinensis*). Bunong people believe that when you find the nest of this bird with chicks in it, you can obtain good luck by breaking the leg of a chick several times. That is what Kruu Sopun did when he found the nest. He broke the leg for the first time before he went back home.

The next morning he went back to the same place and did the same thing. He did it 7 times and on the 7th day he saw the Kun (kind of ginger) inside the nest of the bird. Then that night he dreamt about the spirit of Yareut who told him that he can use this Kun to treat people with broken bones. The spirit told him that he was a good person and that he should use this gift for the well-being of people. So up to now he uses this Kun and has become a famous healer of broken bones.

2 Kun Nlaey (Lightening)

This Kun is used to protect houses and farms against lightening strikes.

A long time ago, a young boy tending his cows was playing with a bird called “ach euk” and a lizard called “Ngway”. He had made an ox-cart with bamboo (Tarm Rala) and was using the lizard and the bird as oxen. This young boy did not know that the animals used for an ox-cart need to be the same otherwise it will attract lightening. Thus, a shaft of lightening fell on this unconventional oxcart and tried to hit it with a sword. When the sword struck the ox-cart it became stuck in the bamboo. (Tarm Rala has the specificity of possessing spines.)

The lightening had no choice but to go down and try to recover the sword, but the young boy did not want to give it back for nothing, so he asked the lightening to give him something in exchange.

The lightening gave a Kun to the young boy and explained to him that he could use it for protection against lightening or in order to hold a ceremony to “cleanse” in case of problems due to lightening. Since that time Bunong people use this Kun that they call Kun Nlaey (lightening).



Kun Nlaey protects from lightening

MEDICINAL PLANTS CONTENTS

Ancistrocladus cochinchinensis

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Kh: Khan Ma

Bauhinia bracteata

Bu: Wan p 60

Kh: Kley n Poa

Bauhinia malabaricum

Bu: Chong Po p 62

Kh: Tcheung Ko

Clinacanthus nutans

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Dendrolobium rostratum

Bu: Rangay Mae p 66

Kh: Sombok chieh Nhi

Dendrolobium lanceolatum

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Sapindus mukorossi

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Stephania venosa

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Bu: Raya p 106

Kh: Popiel Kae

Ziziphus rugosa

Bu: Peur Sot p 108

Ziziphus cambodiana

Bu: Rangong p 110

Kh: Ankrong

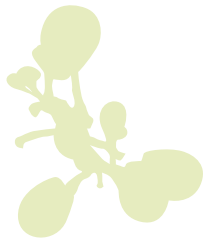


Scientific Name : *Ancistrocladus cochinchinensis* Gagnep.

Family : Ancistrocladaceae

Bunong Name : Randoong [rǎntun], Doong [ntun]

Khmer Name : Khan Ma



Description and habitat:

Lianous shrub climbs up to 20 m high. Very large oblong leaves, entire, arranged spirally on the trunk or secondary branches. Lateral branches with spiralling hooks.

Grows in deciduous to evergreen forests throughout the province of Mondulkiri.

Conservation status:

Not reported by IUCN nor CITES. Considered as decreasing by local traditional healers due to overuse.

Parts used:

Roots and sap

Traditional medical uses of Bunong:

This plant is effective to combat diarrhoea. It can be used alone or in combination with other plants as described by the Kruu Klot Den (see page 39).

If used alone, only the roots are used. 7 units, each equivalent to the width of a hand, are boiled in a volume of water equivalent to four medium-size cans. The volume is reduced by a factor of 4 to 1. Drinking the equivalent of one can per day for adults and 3 tablespoons for children. If overused the remedy causes headaches and vomiting.

The sap is applied to the eyes to treat ocular pain.

Other uses by Bunong:

The leaves are used for thatch. They are considered as resistant to fire contrary to the thatch grass "Chaa" (*Imperata cylindrica*).

Reported medicinal uses in Cambodia:

No

Main references:

HMRC, IMR, 2002,
Antoine Schmitt, 2004.



Lianous shrub up to 20 m high



Large oblong leaves



Leaves spirally arranged on the trunk



Spiralling hooks

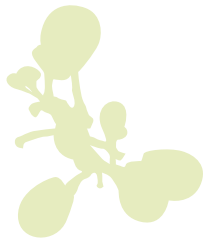


Scientific Name : *Bauhinia bracteata* (Benth.) Baker

Family : Fabaceae

Bunong Name : Wan [vǎn] (enclose)

Khmer Name : Kleyñ Poa (Colourful kite)



Description and habitat:

Large woody liana provided with coiled hooks. Leaves alternate with orbicular stipules, early caduceous; blade ovate to rounded, cordate at base, lobes deltoid, obtuse, glabrous above, pubescent below the ribs (9-11). Inflorescences in clusters or panicles. Zygomorphic flowers whitish. Large pods dehiscent containing 2-8 seeds.

Grows on big trees of evergreen or semi evergreen forest in Kao Seima Pichreada and Koh Niek districts.

Conservation status:

Not reported by IUCN nor CITES.

Parts used:

Bark, roots, sap

Traditional medical uses of Bunong:

For simple diarrhoea, a section of the trunk is cut and the sap is collected to drink. In case of diarrhoea with vomiting (“*Tero Ok*”) the bark is boiled and 3 glasses of this

preparation are drunk every day. If the dose is exceeded, there is a risk of stomach-ache.

To improve the treatment, before boiling, it can also be passed through fire. This will treat headaches at the same time.

In case of dysentery, drink the boiling of the roots and bark.

The boiling of the bark also addresses poisoning (e.g. DDT) and tuberculosis (when mixed with beeswax).

Other uses by Bunong:

The leaves are traditionally used for rolling tobacco. The bark is used to make links and strings.

Reported medicinal uses in Cambodia:

Infusions of the bark are used as an antidote in the case of poisoning. The boiling of trunk treats diarrhoea.

Main references:

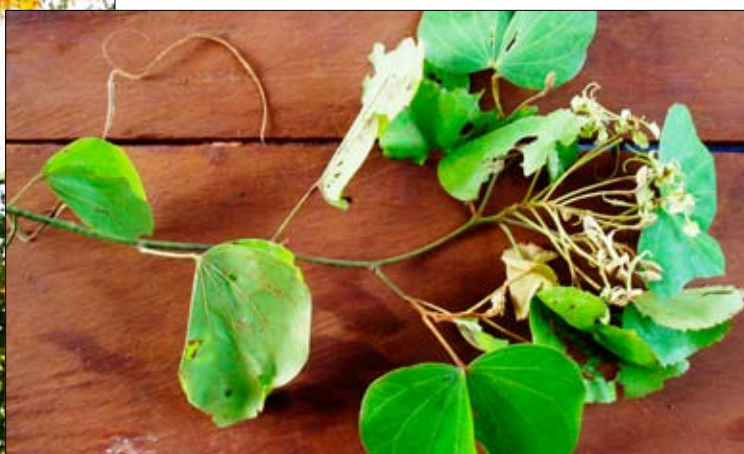
Dy Phon, 2000 Antoine Schmitt, 2004.



Large woody liana with coiled hooks



Zygomorphic whitish flower



Leaves: ovate cordate base blade, obtuse deltoid lobes, 9-11 ribs



Large pods dehiscent containing 2-8 seeds

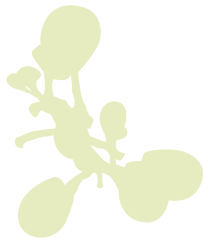


Scientific Name : *Bauhinia malabaricum* (Roxb.) Benth

Family : Fabaceae

Bunong Name : Chong Po [ឆុងប៉ូ] (salty taste); Njor (salty)

Khmer Name : Tcheung Ko (Beef hoof)



Description and habitat:

Shrub or small tree 4-15 m high, Young twigs sometimes reddish, glabrous or pubescent.

Leaves bilobed, with blade ovate or rounded, whitish glaucous beneath, with 8-11 ribs. Inflorescences in clusters or pinkish-white flowers. Pods brown indehiscent (or tardily dehiscent) approximately 20 x 2 cm containing up to 30 seeds.

Grows in deciduous forests throughout Mondulhiri province.

Conservation status:

Not reported by IUCN nor CITES. Locally known as decreasing due to deforestation for plantation. Traditional midwives tend to use the leaves from pineapple (*Ananas comosus*) instead.

Parts used:

Bark, leaves, fruits

Traditional medical uses:

This plant is mainly used by midwives for the postpartum stage, like Chuch Den described page 29.

The boiling of the bark can treat simple diarrhoea. In combination with other plants, the remedy is more effective, especially with T Teu (*Careya arborea*).

The boiling of leaves and fruit is used to treat body pain.

Other uses by Bunong:

The young sour leaves are eaten. The leaves and the fruit are boiled together to be used as shampoo.

Reported medicinal uses in Cambodia:

The bark is used against dysentery, diarrhoea and also for coughs.

Main references:

HMRC, IMR, 2002



Leaves bilobed, with blade ovate or rounded, 8-11 ribs



Pinkish-white flowers



Pods brown indehiscent 20 x 2 cm containing up to 30 seeds



This small tree, up to 15 m high grows in open forests of the whole province

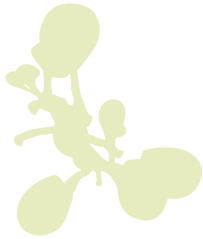


Scientific Name : *Clinacanthus nutans* (Burm. f.) Lindau

Family : Acanthaceae

Bunong Name : Marat teak [mərǎc tək] (water chilli)

Khmer Name : Match teuk (water chilli)



Description and habitat:

Annual herb 1 to 2 m high. Cylindrical green stems pendulous, very finely grooved along their length. Leaves opposite, lanceolate shape, slightly toothed. Tubular pink flowers. Fruit box, round, elongated brown.

The plant is found growing along streams and in wetlands, especially in Pichreada district.

Conservation status:

Not reported by IUCN nor CITES. Locally difficult to find.

Parts used :

Roots and leaves

Traditional medical uses:

The roots are used in a mixture to treat severe stomach-aches and intestine fever. The boiling of the roots of the plant are mixed with, T. Tor Né (*Antidesma ghaesembilla*), T. Ratak (*Cananga latifolia*), Mloo (*Dillenia ovata*). They are also used to restore appetite.

The crushed leaves are soaked and used as an external application for skin problems and leprosy.

Other uses by Bunong:

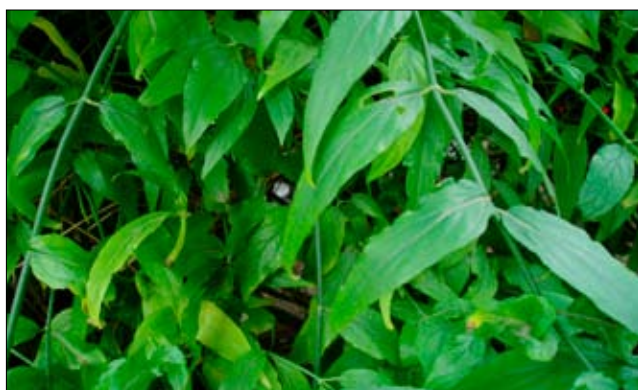
The leaves and fruits are eaten like pepper.

Main references:

Antoine Schmitt 2004



Herb 1 to 2 m high, cylindrical green stems.



Leaves opposite, lance shape, slightly toothed



Tubular pink flowers



Scientific Name : *Dendrolobium rostratum* Schindl.

Family : Acanthaceae

Bunong Name : Rangay [raŋkaj] Mae (Female Rangay)

Khmer Name : Sombok chieh Nhi (Female Sombok Chieh)



Scientific Name : *Dendrolobium lanceolatum* Schindl

Family : Acanthaceae

Bunong Name : Rangay [raŋkaj] Ngwang (Male Rangay)

Khmer Name : Sombok chieh Tchmol (Male Sombok Chieh)

Medicinal Plants



People distinguish two different types of this plant designated by the same name “Rangay”.

On the left part of the picture is the female type, with white flowers and round leaflets. The right part corresponds to the male type, with yellow flowers smaller and more elongated leaflets.

Both types are used for the same purposes and correspond to two species of the same genus *Dendrolobium* (Fabaceae) .

Description and habitat:

Shrubs usually 1-3 m tall. Alternate leaves three foliolate, petiole 0,5-2 cm. Terminal leaflet blade oblong, more ovate for *Dendrolobium rostratum* and more lanceolate for *Dendrolobium lanceolatum*. The lateral leaflets are smaller.

Flowers zygomorphic axillary clusters, yellow or white. The fruit is a pod in an article in *Dendrolobium lanceolatum* and several in *Dendrolobium rostratum*.

Both species grow in deciduous and semi deciduous forest mostly in open areas, mountain slopes and grassy riverbanks on the foothills of Mondulkiri (Kao Seima, Pichreada and Koh Niek district).

Conservation status:

Not reported by IUCN nor CITES.

Parts used :

Roots

Traditional medical uses:

Kruu Blagn uses both species together to treat lack of appetite, especially for pregnant women, as described page 43.

The boiling of the roots alone has an anti-febrile action and general health reinforcement.

For malaria, the roots are mixed with the trunk or roots of Gnao (*Morinda citrifolia* L.): Boil (reduction by a factor of ½) 500 / 600 g of dry plant material in two pots of water (4 litres).

The roots are also used for simple diarrhoea, alone or with those of Tan Yang: Take a handful of the mixture, boil in 2 glasses of water by reducing by a factor ½. Drink one glass per day.

Other uses by Bunong:

The leafy branches are used to beat buffaloes and cows in order to facilitate delivery.

Reported medicinal uses in Cambodia:

Little information on these plants has been found. According to Dy Phon, it is used against rheumatism.

Main references:

Dy Phon, 2000;
Antoine Schmitt, 2004





Zygomorphic white flowers



Shrub 1-3 m tall.



Alternate leaves, three foliolate, ovate blade. Pods in several articles.



Shrub 1-3 m tall



Alternate leaves, three foliolate, lanceolate blade. Pods in an article.



Zygomorphic yellow flowers

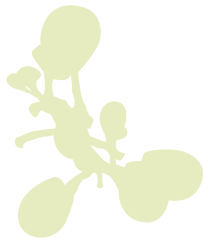


Scientific Name : *Dialium cochinchinense* Pierre

Family : Acanthaceae

Bunong Name : Kalagn [kəlaɲ]; Moham (blood)

Khmer Name : Krolagn



Description and habitat:

Tree 15 to 25 m high. Leaves compound with 4-8 leaflets ovals. Bark very thick, red with red sap. Compound white flowers in panicles. The fruit is an ovoid pod, finely pubescent, brown at maturity.

This endemic tree of South Vietnam, Laos, Thailand and Cambodia is growing in semi-evergreen forests of Mondulkiri province.

Conservation status:

Near threatened IUCN (timber over-exploitation). Not reported by CITES. In Mondulkiri this tree has almost disappeared and is only found in the protected area around Dey Ey commune.

Parts used:

Bark

Traditional medical uses:

This plant is often compared, among other properties, with vitamin B12, because it "produces blood." For this property, it is specifically addresses postpartum and post malarial phases.

It was used routinely with T. Rovakong and T. Bof by therapists of the Khmer Rouge regime for general health reinforcement.

Kruu Deuy Kam uses a similar remedy for delivery, see page 46.

The plant is also used to treat diarrhoea and simple dysentery. For this purpose, the bark is put to soak in alcohol or boiled, alone or in combination with other plants. For example, Kruu klot Den boil the bark of T. Kalagn in a preparation involving 6 other plants (page39).

Other uses by Bunong:

Fruits and leaves are eaten

Reported medicinal uses in Cambodia:

The bark can replace the areca nut in betel quid. The bark is used to treat diarrhoea and vertigo.

Main references:

Dy Phon, 2000;
Antoine Schmitt, 2004



This endemic tree 15 to 25m high has become rare in recent times. Leaves compound with 4-8 ovals leaflets.



Very thick red bark and red sap



Compound white flowers in panicles.



The fruit is an ovoid pod, finely pubescent, brown at maturity

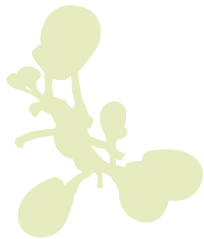


Scientific Name : *Donax grandis* Ridl.

Family : Marantaceae

Bunong Name : Troun [trũn]; Rechiang [rěcãŋ] (name of a bird)

Khmer Name : Ruun



Description and habitat:

Tall herb of 1 to 3 metres high. Large entire leaves, smooth, veins are parallel, alternate, with long sheathed petioles. White flowers in long clusters zygomorphic axillary drooping. The fruits are berries.

This herb grows in wet places, especially near springs on the red soils of the high lands of Mondulkiri (O'reang, Sen Monomrom and Pichrada district).

Conservation status:

Not reported in IUCN nor CITES.

Parts used:

Whole plant.

Traditional medical uses:

For fevers, crush the whole plant and soak in a large volume of water for one to several hours, then use the liquid to take a bath. Must be used in combination with other plants with similar properties such as *T. Pulong (Oroxylum indicum)*, *T. Sway (Mangifera indica)*,

T. Prit kof (Musa paradisiaca),

T. Prit Ngo (Ananas comosus).

For example see the recipe of Kruu Klot Den page 39.

Other uses by Bunong:

The stem is used to manufacture vegetable fibre trays and traps for fish. However it is weaker than bamboo.

Reported medicinal uses in Cambodia:

An infusion of the whole plant is used for showering to treat fevers with skin manifestations (measles, rubella, etc.). Boiling of the tuber is used against snake poison, to enhance blood for women and treat haemorrhoids.

Main references:

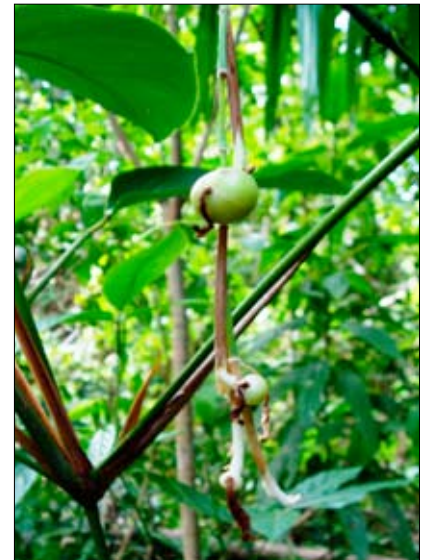
Chuakul, 1997; HMRC, IMR, 2002.; Antoine Schmitt, 2004,



Tall herb of 1 to 3 meters high. Large entire leaves, smooth, veins are parallel, alternate, with long sheathed petioles.



White flowers in long clusters zygomorphic axillary drooping



Fruits are berries

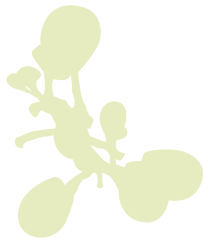


Scientific Name : *Euonymus cochinchinensis* Pierre

Family : Celastraceae

Bunong Name : Bof [bǒf]

Khmer Name : Ko Moui [ko muj] (one cow)



Description and habitat:

Evergreen tree 10-15 m high, growing in shady areas. Leaves 7-15 cm, elliptic or oval, opposite, somewhat coriaceous, smooth, acuminate. Inflorescences axillary clusters. Flowers have five petals rose-purple long much frayed at the ends. Capsular pink fruits, turbinate, 3 to 5 rounded lobes.

Remark:

Some distinguish two types: the first (male type) has small rounded leaves and grows in mixed deciduous forests; the second (female type) has larger and more elongated leaves and grows in evergreen and semi-evergreen forest. Both corresponds to the same specie.

Conservation status:

Reported as least concern by IUCN. Difficult to find in Mondulkiri only in a few areas far from villages.

Parts used :

Trunk

Traditional medical uses:

This plant is often compared to vitamin B11, able to produce and clean blood. It is used to enhance health, or recover health after diseases such as malaria or the postpartum phase. It is used alone or in combination. Many recipes exist with this plant which is used by all Kruu Boran interviewed.

This plant was used routinely with T. Kalagn and T. Rovakong by therapists of the Khmer Rouge regime. Kruu Deuy Kam use a similar remedy for delivery, see page 46.

The dead trunk floating in the rivers is believed to be more efficient.

Reported medicinal uses in Cambodia:

The bark and roots soaked in rice wine, or brew, give a tonic remedy providing the "strength of an ox." Compared with quinine wine to increase appetite.

Main references:

Dy Phon, 2000;
Antoine Schmitt, 2004,



Evergreen tree 10-15 m high.
Leaves 7-15 cm, elliptic or oval,
opposite, somewhat coriaceous,
smooth, acuminate.



Flowers have five petals rose-purple
long much frayed at the ends.



Capsular pink fruits, turbinate,
3 to 5 rounded lobes.



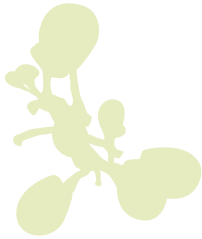


Scientific Name : *Gardenia obtusifolia* Roxb

Family : Rubiaceae

Bunong Name : Preb [prəp]

Khmer Name : Chantol pong moan



Medical Plants

The Kruu use different types of plants referred to as T. Preb. These types correspond to different species of the genus *Gardenia*. The specie presented here is *Gardenia obtusifolia* but another one, *Gardenia sootepensis*, is also part of the pharmacopoeia.

Description and habitat :

Tree or shrub 2-5 m. Large entire leaves speckled in terminals. Flowers terminal. The fruit is round and fleshy, similar to a small apple.

This small tree is found growing in mixed deciduous forest and deciduous dipterocarp forests of Mondulkiri, especially in Koh Niek and Kao Seima district.

Conservation status:

Not reported by IUCN nor CITES. Considered as endangered in Cambodia by the NCTM. Locally widespread in Mondulkiri.

Parts used :

Trunk and roots

Traditional medical uses:

This plant is known for its action on general health but it is especially used for pregnancy delivery and post partum phase.

It used in combination with other plants by Kruu Blagn to restore appetite of pregnant women (see page 42)

To facilitate the delivery. It needs to be drunk regularly from the 7th month. Then it would widen the cervix.

For the postpartum phase to recover from the fatigue and “make the body hot”.

Reported medicinal uses in Cambodia:

To avoid back pain during pregnancy and facilitate delivery.

Main references:

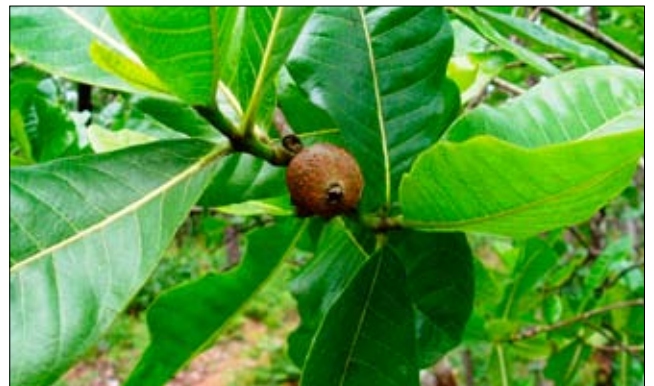
Antoine Schmitt, 2004;
NCTM 2010.



Tree or shrub 2-5 m of secondary forests of Indochina



Round and fleshy fruit, resembling to a small apple.



Large entire leaves speckled in terminals

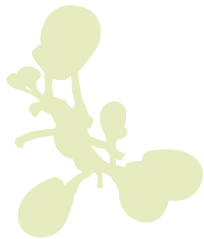


Scientific Name : *Gomphia serrata* (Gaertner) Kanis

Family : Ochnaceae

Bunong Name : Konkier Youk [kõŋ kia jok]; Konkier Teak

Khmer Name : Angkier Tchmol, Chiem Antong (Eel blood)



Description and habitat:

Shrub or tree that can reach 15 m. Grows in places more or less humid (evergreen forests and semi evergreen). Large alternate leaves, coriaceous, with shiny blade on the upper surface. Fruit composed of 1-2 (5) drupelets dark purple or blue to black at maturity brought by a container up to 1 cm.

This specie is the only one of the genus *Gomphia* in Asia. It grows in evergreen forests of Mondulkiri.

Conservation status:

Lower risk/ Least concern IUCN. According to traditional healers the plant is more difficult to find due to deforestation.

Parts used :

Trunk

Traditional medical uses:

This plant is popular in remedies used for recovery during convalescence. It can be used as well to reinforce the body in order to

prevent disease. It is also used for post partum phase to strengthen the body.

It is used by Kruu Klot Den for lack of energy - see recipe page 39. Kruu Blagn uses it to help pregnancy and delivery, see page 42. Another popular recipe used by Tchmob Boran is an alcoholic preparation with T. Bof, T. Damrey Pram Do, T. Reang Teak and T. Deng Mia.

Reported medicinal uses in Cambodia:

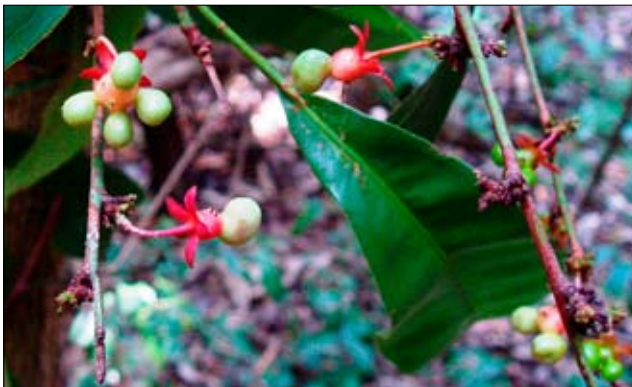
The black sap obtained by section of the trunk above the fire is used as an antiseptic and as an anti-inflammatory gum.

Main references:

Dy Phon, 2000; Kham, 2004; Antoine Schmitt, 2004.



Large alternate leaves, coriaceous, with shiny blade on the upper surface



Fruit composed of 1-2 (5) drupelets



Shrub or tree 15 m high from evergreen to semi evergreen forests



Scientific Name : *Grewia laevigata* Vahl

Family : Tiliaceae

Bunong Name : Njor Mof Rapow [ɲɔɹ mof rəpɔ] (Buffalo glanders)

Khmer Name : Not known



Scientific Name : *Grewia hirsuta* Vahl

Family : Tiliaceae

Bunong Name : Njor Mof Ndrouk [ɲɔɹ mof ntrʊk] (Cow glanders)

Khmer Name : Bay Kriem

Medicinal Plants

Those plants employ two appointees from the same basic term: Njor Mof Rapow (*Grewia laevigata*) and Mof Njor Ndrouk (*Grewia hirsuta*). Both are used for the same purposes by Kruu Boran.

On the next pages the characteristics of these plants are compared through pictures. On the left part we can see *Grewia laevigata*, whereas *Grewia hirsuta* is on the right side.

Description and habitat:

Shrubs of 1 to 3 m high. Branchlets coarsely gray-brown stellate hairy. Alternate leaves, with lanceolate blade, leathery, narrow base, shallowly cordate, margin serrulate, apex acuminate. The fruit is a drupe 1 or 2-lobed, sparsely coarsely hairy; drupelets 2 per lobe.

Grewia laevigata is often higher and grows in deciduous forests whereas *Grewia hirsuta* tends to not be over 1m high and grows in open land and grasslands.

Conservation status:

No IUCN nor CITES report.

Parts used:

Roots

Traditional medical uses:

The boiling of the roots can be used alone to treat cold. Kruu Blagn use T Njor Mof Rapow for this purpose, see page 43.

In combination with other plants it can treat different diseases such as:

- Simple diarrhoea. It can be either the plant alone or in combination with T. Torné (*Antidesma ghaesembilla* Gaertn.) and T. Taow (*Microcos tomentosa* Sm).
- Dysentery. In combination with T. Torné and T. Rangong or with T. Torné, R. Dokoun and T. Kouar (*Lagerstroemia* sp.).
- Postpartum phase. Boiling of the plant alone, needs to be drunk for a month. This improves health and skin beauty.

Other uses by Bunong:

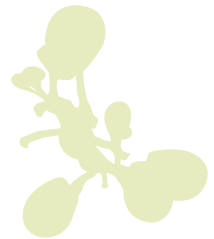
Their fruits are eaten once toxic seeds are removed.

Reported medicinal uses in Cambodia:

The roots of *Grewia hirsuta* are used for boils. Few species of the genus are described as medicinal.

Main references:

Dy Phon, 2000; Kham, 2004; Antoine Schmitt, 2004, HMRC, IMR, 2002





Shrubs 1 m high grow in open areas and grassland



Alternate leaves, with lanceolate blade, leathery, narrow base, shallowly cordate, margin serrulate, apex acuminate.



Drupe sparsely coarsely hairy



Shrubs 1 to 3 m high grow in open forest areas



Alternate serrate leaves



Tetragones berries

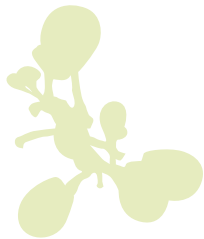


Scientific Name : *Helicteres isora* L.

Family : Sterculiaceae

Bunong Name : Bar Pret [bar pret]

Khmer Name : Poan Tlong



Description and habitat:

Plant or small shrub up to 3 m high. Leaves are simple, alternate; leaf blade is toothed, broadly oblong-ovate. Axillary inflorescences with red to purple flowers of around 4 cm. The fruits are brown pods of about 5 cm, dehiscent, spun clockwise and containing many small black seeds.

The plant is found growing mainly in mixed deciduous and deciduous forests throughout Mondulhiri province.

Conservation status:

No IUCN nor CITES report

Parts used:

Fruits and roots

Traditional medical uses:

Considered as a very effective remedy for diarrhoea and dysentery.

Usually the fruit is boiled or in case they are not present, the roots are used. It can be used alone or in

combination with the roots of Wan Cheh (*Bauhinia* sp.). Kruu Sopun use it for simple diarrhoea in combination with 6 other plants (see page 53).

Other uses by Bunong:

The bark is used to make ropes.

Reported medicinal uses in Cambodia:

The roots and the stem are tonics and used to treat diarrhoea, dysentery, gastralgia, flatulence and energy. The fruit is used for diarrhoea and swollen limbs.

Main references:

Dy Phon, 2000; Kham, 2004; Antoine Schmitt, 2004, Chuakul, 1997; HMRC, IMR, 2002



Plant or small shrub up to 3 m high.
Leaves are simple, alternate with a
toothed blade oblong-ovate.
Red to purple flowers of around 4 cm.



The fruits are brown pods of about
5 cm, dehiscent, spun clockwise and
containing many small black seeds.



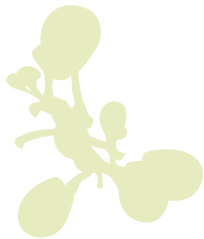


Scientific Name : *Hiptage benghalensis* (L.) Kurz

Family : Malpighiaceae

Bunong Name : Rovakong [rova koŋ]

Khmer Name : Krobay bay



Description and habitat:

Deciduous shrub or small tree, 4 to 10 m high. Bark and branches glabrate, ferruginous-red or dark gray. Leaves simple, opposite leaf blade leathery, oblong, elliptic-oblong, or ovate-lanceolate. Very fragrant flowers with five white petals stained yellow or pink. Red winged fruit sorting.

The plant is found growing in deciduous forests of a few areas of Mondulkiri, especially in Pichreada and Koh Niek district.

Conservation status:

No IUCN nor CITES report. This plant is more and more difficult to find due to overuse, especially for post partum.

Parts used:

Trunk

Traditional medical uses:

This plant, used to improve health and strengthen the body, is known by all Kruu and forms part of remedies to treat many different diseases. As T. Kalagn, It is sometimes compared to vitamin B12.

The trunk is included in many remedies to treat:

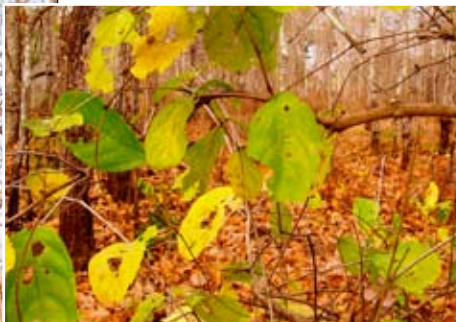
- Delivery - used by all Kruu Boran (see page 35, 38, 46 and 52)
- Malaria - when mixed with T. Tchiang Ler (*Psychotria adenophylla*) and T. Rovak
- Recovery -after diseases like malaria or to reinforce the body, many recipes exist, such as the one used by Khmer Rouge.
- Body pain - it is part of a remedy used by Kruu Jiran, page 35.
- Simple diarrhoea, Kruu Sopun use it in combination with 5 other plants, page 53)

Reported medicinal uses in Cambodia:

The wood is antifatulent, carminative, aphrodisiac, appetizer, help for convalescence and increases longevity. Leaves applied externally for skin disorders, acts also as insecticide.

Main references:

Antoine Schmitt, 2004



Deciduous shrub or small tree, 4 to 10 m high. Bark and branches glabrate, ferruginous-red or dark gray. Leaves simple, opposite leaf blade leathery, oblong, elliptic-oblong, or ovate-lanceolate.



Very fragrant flowers with five white petals stained yellow or pink. Red winged fruit sorting.

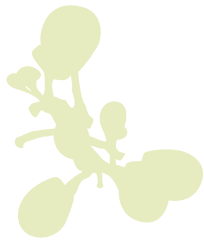


Scientific Name : *Hoya kerrii* Craib.

Family : Asclepiadaceae

Bunong Name : Plet raveh [plět räüěh] (elephant cake)

Khmer Name : Teuk Nom Damrey (elephant urine)



Description and habitat:

Epiphytic climbing vine. Leaves are simple opposite heart-shaped; robust leaf blade obovate to orbicular, base rounded to broadly cuneate. Stems stout, up to 1 m, glabrous. Petiole 0.5-2 cm, robust.

The plant is found in deciduous forests throughout Mondulhiri province.

Conservation status:

No IUCN nor CITES report.
The plant is locally widespread.

Parts used :

leaves or whole plant

Traditional medical uses :

The boiling of the leaves is used in case of splenomegaly for children in infancy (due to chronic malaria). The leaves can also be passed over fire and then applied directly on the spleen. This has to be done for six days.

The whole plant is boiled with Tchieut (*Platyterium coronarium*) to treat fevers or with roots of Lok Pam (*Flueggea virosa*) and the trunk of Pouk Rolang (*Salacia sp.*) for liver problems.

The plant is also known to treat asthma and some lung problems (boiling). The leaves are then passed over fire, then applied to abscesses.

Reported medicinal uses in Cambodia:

The latex is used to heal cuts caused by sharp weapons.

Main references:

Dy Phon, 2000;
Antoine Schmitt, 2004,



This epiphytic climbing vine possesses simple opposite round to heart-shaped leaves.
The robust leaf blade, stem and petiole are glabrous.

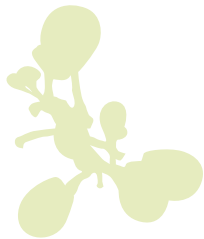


Scientific Name : *Hydnophytum formicarum* Jack.

Family : Rubiaceae

Bunong Name : Puk Pu [puk pu] (The head of someone)

Khmer Name : Sout Damrey (Elephant lung)



Description and habitat:

Epiphytic plant, 25 to 60 cm in symbiosis with ants as its caudex is like a chamber colonised by ants. Leaves, leathery brownish, elliptic or lanceolate 6-12 pairs of veins. Small white flowers. The fruits are obovoid drupes, turning orange when ripe.

The plant grows in all kinds of forest in the highland of Mondulkiri, especially in Sen Monorom, O'reang, Pichreada.

Conservation status:

Not reported by CITES nor IUCN. Disappeared in some areas of Mondulkiri due to overexploitation and market demand in Vietnam.

Parts used :

Whole plant

Traditional medical uses:

This plant is used:

- For mild fevers, mixed with Lok Gnop,
- As a cure for health, in combination with T. Bof
- For cough and lung diseases (Chuch Den see page 29)

Other uses by Bunong:

Important plant for Bunong culture as it is used for the rice ceremony to protect plants from diseases and insects. Indeed, during ceremonies a sort of bamboo structure is made for the spirit of rice Paa.

The other important element of this structure is Puk Pu. The plant is, as well, crushed in a mixture with other plants, and spread in the field accompanied by incantations.

Main references:

Antoine Schmitt, 2004



Epiphytic plant up to 60 cm whose caudex is a nest for ants.
The leaves are leathery brownish, elliptic or lanceolate 6 to 12 pairs of veins.



The fruits are obovoid drupes, turning orange when ripe.



Dried and chopped caudex of *Hydnophytum f.*
sold in the market in Phnom Penh

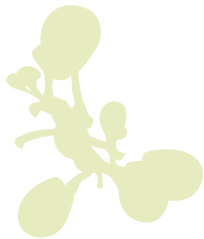


Scientific Name : *Nauclea orientalis* (L.) L

Family : Rubiaceae

Bunong Name : T. Pom (Chicks)

Khmer Name : Kadol



Description and habitat:

Tree 15-20 m high. Bark dark brown to blackish. Leaves coriaceous 10-30 cm long, ovate or oblong, opposite. Stipules broadly ovate to orbicular 1- 2 cm. Axillary inflorescence of single small dense orange-yellow flowers. Woody brown fruit grouped into a head of 2- 4 cm in diameter.

This tree is found growing in semi open areas of mixed deciduous forests and along streams throughout Mondulkiri province.

Conservation status:

Not reported by CITES nor IUCN.

Parts used :

bark and trunk

Traditional medical uses:

Kruu Jiran uses it in a remedy to treat body pain, see page 35. For Kruu Klot Den it is part of a remedy to help delivery, see page 38.

The plant is also used to treat malaria. Part of the trunk needs to be finely cut and mixed with the bark. This mixture is boiled or soaked in water. Then the preparation is drunk. This remedy has no side effects. To increase its efficiency, it is preferable to use this plant in combination with Nandang (*Azadirachta indica*) and Tchiang Troy (*Eurycoma longifolia*).

Other uses by Bunong:

The fruits are used as bait for fishing.

Reported medicinal uses in Cambodia:

Bark and trunk are used to treat fever and liver problem. It was used in combination with Gnao during the Khmer Rouge regime.

Main references:

Pordié, 1998;
Antoine Schmitt, 2004;



15 to 20 m high tree 15-20 growing in semi-open forest and along streams. The bark is dark brown to blackish. The large stipules are broadly orbicular



Axillary inflorescence of a single small dense orange-yellow flowers. Woody brown fruit grouped into a head of 2- 4 cm in diameter.



Leaves coriaceous, oblong.



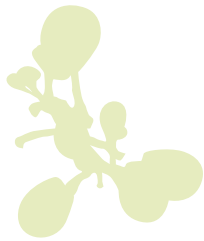


Scientific Name : *Ochna integerrima* (Lour.) Merr.

Family : Ochnaceae

Bunong Name : Reang Teak [reɑŋ tək] (crab)

Khmer Name : Ankier Seul



Description and habitat:

Tree or shrub 4-12 m high.
Branchlets gray-brown, glabrous.
Leaves entire, alternate, sometimes slightly toothed at the edges; leaf blade elliptical, obovate-lanceolate. Clusters of 4-6 yellow flowers.
Fruit composed of drupelets carried by a receptacle enlarged.

Mostly found in wetlands and border of rivers of Mondulkiri province except Koh Niek district.

Conservation status:

No IUCN nor CITES report.

Parts used :

Trunk

Traditional medical uses:

Plant very often used by traditional healers in various mixtures for general health or to recover after diseases such as malaria. It is often associated with T. Bof, Konkier Youk, Damrey Pram do, T. Kop.

Other uses by Bunong:

The young leaves are eaten raw as a vegetable.

Reported medicinal uses in Cambodia:

The bark is a tonic digestive. It is also used for women after delivery.

Main references:

Dy Phon, 2000;
Antoine Schmitt, 2004



Leaves entire, alternate,
slightly toothed, leaf blade
lanceolate

Tree or shrub from 4 to 12 m high. Growing in humid places or near rivers



Clusters of 4-6 yellow flowers

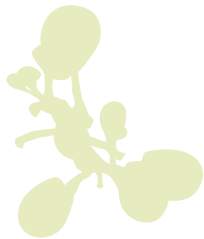


Scientific Name : *Prismaticomeris sessiliflora* Pierre ex. Pitard

Family : Rubiaceae

Bunong Name : Deng Mia Mae [ntɛŋ mjah]; Prom Taak (snare trap)

Khmer Name : Rumdenmia



Medicinal Plants

Description and habitat:

Common branching shrub, 2-4 m high. Entire leaves opposite, slightly embossed. The inflorescences are axillary with the flowers consisting of four white petals long welded tube.

The vernacular name is differentiated into two kinds male and female. The female type (*Prismaticomeris tetrandra*) corresponds to a plant with rounded leaves, and a peduncle of a few centimetres, while the male type (*Prismaticomeris sessiliflora*) has more elongated leaves and a peduncles virtually nonexistent. It's this type which is presented here.

Both plants are found only in semi-evergreen or evergreen forests of Mondulkiri province, especially in Kao Seima and Pichreada (Bu sra, Krang the).

Conservation status:

No IUCN nor CITES report.

Parts used :

Roots

Traditional medical uses:

Plant used for general health and body reinforcement. It especially addresses complications during postpartum phase and is mixed with T. Bof, T. Damrey Pram Do and T. Konkier Youk.

If the plant is drunk in excess, there is a risk of miscarriage. The plant can also regulate a woman's menstruation. Thus, 300 grams of crushed root are soaked in a litre of alcohol. 3 glasses of tea are drunk per day for 3 days.

The plant is also used to treat fevers by Kruu Sopun, page 53.

Other uses by Bunong:

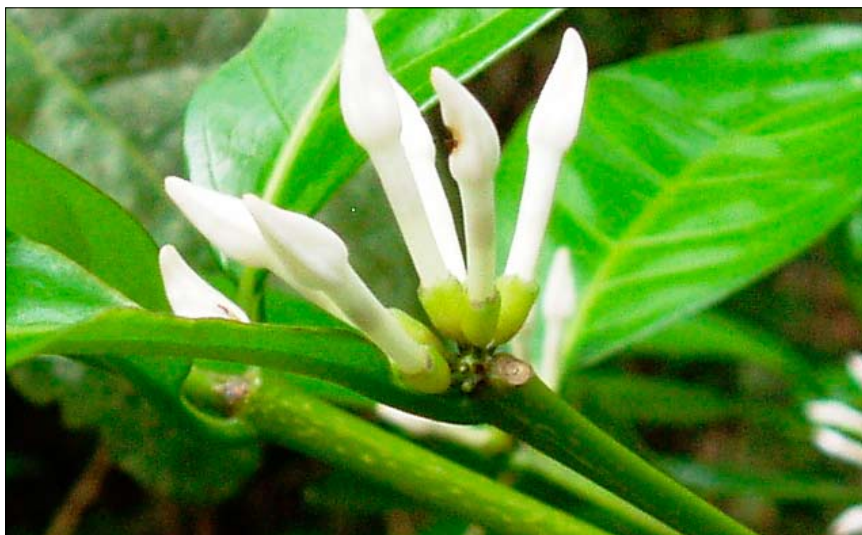
The wood is purifying and tonic, used in boiling. The roots are used in a drug preparation against bronchitis. Leaves can be used as a poultice on wounds.

Main references:

Dy Phon, 2000;
Antoine Schmitt, 2004.



Common branching shrub, 2-4 m high growing in dense forests. Entire leaves opposite, slightly embossed



The fruit is a drupe turning to shiny dark when mature

Axillary inflorescences with white petals long welded tube. Contrary to the other specie (*Prismatomeris tetrandra*), *Prismatomeris sessiliflora* has virtually no peduncle.

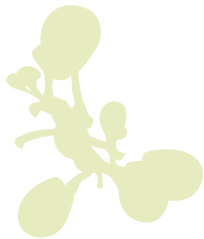


Scientific Name : *Sapindus mukorossi* Gaertn.

Family : Sapindaceae

Bunong Name : Patt [pət]

Khmer Name : Not known



Description and habitat:

Tree 10-20 m high. Grey shiny bark. Leaves pinnate with 4 to 5 pairs of leaflets. Fruit indehiscent, 2-3 cm, ovoid. Big black seed round and smooth, with a hairy tuft at its base.

The tree grows on forest edges of Mondulkiri plateau (Sen Monorom and O'reang district mainly)

Conservation status:

Reported as endangered by all traditional healers. Reported to have already disappeared from some areas (Busra, Krangthe)

Parts used:

Fruit pulp and trunk.

Traditional medical uses :

The trunk of the plant is used in a recipe against malaria in association with T. Peu Dong (*Millingtonia hortensis* L. f.), T. Lok Robla (*Harrissiona perforata* (Blanco) Merr.), T. Rata (*Cananga latifolia*),

T. Reulan (*Combretum quadrangulare*), T. Gnao.

Its role is to enhance the activity of the remedy.

For sore throats and coughs, the fruit without the seed is soaked overnight in water or alcohol (one fruit per glass of water, 10 fruit per litre of alcohol).

Kruu Deuy Kam uses the trunk of T. Patt to treat swollen body, see page 47.

Other uses by Bunong:

Crushed and soaked in water, the lotion is used as a repellent for ticks, leeches, mosquito and poison for fish.

Main references:

Petelot, 1952;
Antoine Schmitt, 2004.



Tree 10-20 m high growing in the highlands of Mondulkiri. Grey shiny bark. Leaves pinnate with 4 to 5 pairs of leaflets.



The fruit is a drupe which contains a unique big black seed. Its high level of saponin makes it a good soapnut.

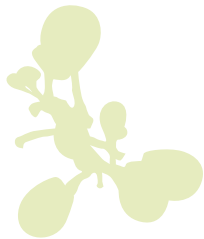


Scientific Name : *Smilax glabra* Roxb.

Family : Smilacaceae

Bunong Name : Dam Djang [ntəm ɲɔŋ]

Khmer Name : Meum Chen [măm cən]



Description and habitat:

Climbing vine, unarmed of several metres long. Stem, woody, smooth cylindrical or sub-cylindrical, devoid of spines. Large leaves elliptic or ovate orbicular, 3 main veins and 2 long tendrils from the base of the petiole. Berries blue to black

This vine grows in evergreen and semi-evergreen forests of the highlands of Mondulkiri (Sen Monorom, Pichreada and O'reang).

Conservation status:

Not reported by IUCN nor CITES. This plant has already disappeared from some areas (Koh Niek) or is more difficult to find (Dak Dam).

Parts used:

Rhizomes

Traditional medical uses:

The plant alone is a common beverage in Mondulkiri households. A tea is made from the rhizome giving strength to the body and preventing common diseases. It is well appreciated as it gives a

good taste to water. A boiling of the rhizomes in combination with T. Bof, T. Kop and T. Kalagn is used to treat fatigue, lack of appetite and body aches.

It is also used for delivery by Kruu Deuy Kam and Sopun, see page 46 and 52.

Other uses by Bunong:

The plant is sold in markets in Cambodia at a high price. In Mondulkiri, the roots are sold to Vietnam. See the legend about the plant on the other page.

Reported medicinal uses in Cambodia:

The rhizomes are soaked in alcohol to make an invigorating beverage.

Main references:

Kham, 2004;
Antoine Schmitt, 2004



Climbing vine, growing mainly in dense forest. Stem, woody, smooth cylindrical or sub-cylindrical.



Large leaves elliptic or ovate orbicular, 3 main veins and 2 long tendrils from the base of the petiole.



STORY

A long time ago two brothers were leading their cows and buffaloes to graze on the mountain far away from their home. During that time, the wife of the oldest brother went alone to check an animal-trap. When she arrived at the trap she saw a peacock that had been caught. She thought that she would like to take this bird home, but the peacock attacked her face. Once home, her husband asked her what had happened to her face? She replied that his brother had tried to rape her. So her husband became very angry with his younger brother. When he came back from pasturing the buffaloes and cows, he killed him. Then he threw the body of his brother into the forest where they had been grazing the animals. Later when he returned to this place, he saw a plant growing close to his brother's body. From that time, generation to generation, Bunong people call this plant after the name of the young brother, "Djang".

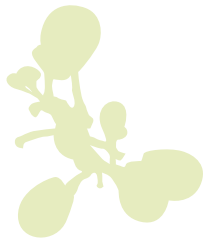


Scientific Name : *Sophora sp.*

Family : Fabaceae

Bunong Name : Pral Eul [präl hal]

Khmer Name : Not known



Description and habitat:

Small shrub 1 or 2m high. Leaves compounds imparipinnate; small leaflets, ovate, rounded base and rounded to cordate apex.

Inflorescence is a raceme terminal composed of zygomorphic purple flowers. The fruit is a brown dehiscent pod producing 3 to 5 seeds.

The plant is found growing in deciduous dipterocarp forest in Pichreada district.

Conservation status:

Due to increasing deforestation in this district the plant is threatened with disappearing in the medium term.

Parts used :

Roots

Traditional medical uses:

To treat malaria, the roots of the plant can be used alone, such as Kruu Deuy Kam recipe page 47, or with those of Rambong (*Croton sp.*) and tubers Cha Ranglay.

The plant material is shredded in water. Around 1 cm of the roots of a mature plant is used for the equivalent of a large glass of water. A glass per day needs to be drunk.

This plant is considered as an equivalent to quinine. During treatment, it has the property to kill mosquitoes that sting the person, like T. Kraol (*Strychnos nux-vomica*). This plant is also used by the Kruu Ohm to kill “Chiass” (disease agents).

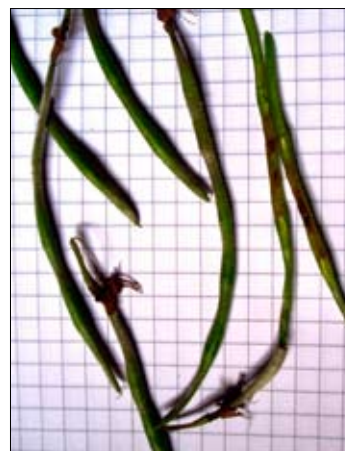
A boiling of the root applied externally would kill skin worms (unidentified) for cattle.

Main references:

Dy Phon, 2000; Kham, 2004; Antoine Schmitt, 2004,



Small shrub of 1 or 2 m high growing in open forest areas. The leaves are imparipinnate with small leaflets, ovate, rounded base and rounded to cordate apex. It is considered as an equivalent of quinine.



Raceme terminal is composed of zygomorphic purple flowers. The fruit is a brown dehiscent pod producing 3 to 5 seeds

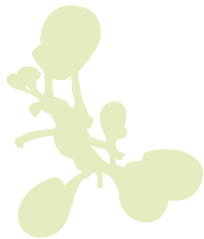


Scientific Name : *Stephania venosa* Spreng.

Family : Menispermaceae

Bunong Name : Moham [mǎham] (Blood)

Khmer Name : Chiem [chiəm] (Blood)



Description and habitat:

A slender climber up to 20m long, root tuberous, leafy stem herbaceous, containing red sap; leaves broadly triangular-ovate, flowers in an axillary umbelliform cyme, pedicellate. The fruit is a red drupe with a single seed horseshoe-shaped.

The plant is found in evergreen and semi-evergreen forests close to rivers of the highlands of Mondulkiri province.

Conservation status :

Endangered in Cambodia due to its overuse and marketing. In Mondulkiri it occurs scattered and is found only in a few areas.

Parts used :

Tuber

Traditional medical uses :

For general health the plant is believed to be able to enhance blood production and is compared with vitamin B12. It is used in boiling or soaked in alcohol in combination with T. Ti Yong, T. Bof and T. Rovakong.

Other uses by Bunong:

In Mondulkiri the plant is sold to Vietnam markets.

Reported medicinal uses in Cambodia:

A tuber soaked in alcohol is used as a tonic and aphrodisiac. Dried and powdered, then mixed with honey, it is a medicine for durability and appetite. Leaves are used in the treatment of wounds.

Main references:

Antoine Schmitt, 2004.



Leaves broadly triangular-ovate.



The fruit is a red drupe with a single seed.



Its red sap gave its name of blood liana.

A slender climber up to 20m long, grows in dense forest of Mondulkiri Highlands

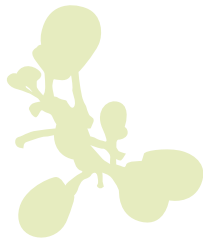


Scientific Name : *Terminalia bialata* (Roxb.) Steud.

Family : Combretaceae

Bunong Name : Raya [rəja] (lezard Varanus type)

Khmer Name : Popil Ké



Description and habitat:

Tree, often large, 8-15 m high. Leaves spiralled, alternate, subopposite, or opposite; leaf blade oblong, often with domatia. Inflorescences axillary or terminal spikes composed of many small yellowish white flowers on the cob. Winged fruits variable in size and shape.

The tree is found in open areas such as mixed deciduous, deciduous dipterocarp forests, savannas and fields mostly on the plateau of Mondulkiri province.

Conservation status:

Not reported by IUCN nor CITES.

Parts used:

Bark, roots and trunk

Traditional medical uses:

Kruu Sopun uses the plant in a recipe for delivery, see page 53. For fevers, roots are used in a mixture with *T. Rapet*, *Chaa* and *Rip Ach che*.

For simple diarrhoea, the bark is boiled with other plants used for this problem such as *T. Kouar*, *T. Klet* and *T. Taow* For swollen limbs, it is used with *Gnao*.

It can cure also fevers accompanied by rash (measles, chicken pox). The roots or trunk are mixed with *T. Sway*. The material is finely chopped, soaked in water and taken in the form of a bath.

Other uses by Bunong:

The young leaves are eaten fresh with fish or meat.

Reported medicinal uses in Cambodia:

The boiling of the roots is a tonic, used in postpartum pain as an analgesic and to treat dysentery.

Main references:

Dy Phon, 2000; Kham, 2004; Antoine Schmitt, 2004.



Leaves spiralled, alternate, subopposite, or opposite; leaf blade oblong, often with domatia.

Large tree, from 8 to 15 m high growing in open areas.



Winged fruits variable in size and shape.



Inflorescences axillary or terminal spikes composed of many small yellowish white flowers on the cob.

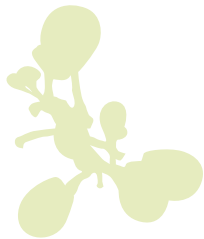


Scientific Name : *Ziziphus rugosa* Lam.

Family : Rhamnaceae

Bunong Name : Preu Sot [pǎ sǎt]

Khmer Name : Unknown



Description and habitat:

Small evergreen tree up to 9m high. Spines on the trunk and stems. Leaves alternate; leaflet broadly ovate, with 3-5 main veins, tomentose. Inflorescences axillary cymes, clusters of small yellow flowers. Indehiscent fleshy fruit 1-2 cm which contains one large seed.

The tree is found growing in open areas and grassland throughout Mondulkiri province. It seems that this plant corresponds also to *Ziziphus mauritiana* (Putrier prey) which is quite similar and for which several varieties of different morphology exist.

Conservation status:

Not reported by IUCN nor CITES

Parts used :

Bark and roots

Traditional medical uses:

A boiling of the roots of the plant is used alone or with T. Kram (*Ziziphus oenoplia*) to treat simple diarrhoea. Niot Ndol Chuch Den is also uses it to treat dysentery, see page 29.

The roots are also used in a remedy to recover from the fatigue after malaria. With the roots of T. Kop, it gives an energizing boiling.

The bark is chewed for toothache.

The plant is also involved in a remedy against swollen limbs.

Other uses by Bunong :

The fruits are eaten.

Main references:

Kham, 2004;

Antoine Schmitt, 2004.



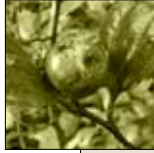
Small evergreen tree up to 9m high growing in secondary formations. Spines on the trunk and stems. The leaves are alternate with an ovate leaflet containing 3 to 5 main veins.



Inflorescences axillary cymes, clusters of small yellow flowers.



The sweet fruit is eaten. It contains a unique seed.

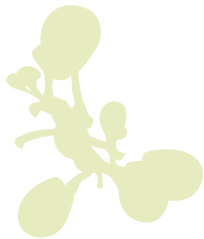


Scientific Name : *Ziziphus cambodiana* Pierre

Family : Rhamnaceae

Bunong Name : Rangong [rǎŋoŋ]

Khmer Name : Angkrong (Red ants)



Description and habitat:

Small tree or shrub, 2-6 m high, evergreen, erect or straggling, often spinose. Alternate leaves, petiolate with 3 parallel veins. The flowers are small yellow-green. The fruit is a berry of 1-3 cm thick containing a unique seed.

The plant is found in the undergrowth of mixed deciduous forests of lowlands of Mondulkiri, especially in Koh Niek and Kao Seima district.

Parts used:

Roots, bark and fruits.

Conservation status:

Not reported by IUCN nor CITES

Traditional medical uses:

For diarrhoea and stomach aches:

- The roots are put in fire then boiled together with Tor Né and Njor Mof.

- The boiling of the bark and roots along with 7 fruits. Note that drinking a daily boiling of seven fruits of these conditions would be preventive as well.
- The infusion in alcohol of dried and roasted fruits.

The boiling of the roots (or bark) is also used to facilitate childbirth and as a carminative.

Reported medicinal uses in Cambodia:

The boiling of the bark is used against ovarian disease and a cure for the care of mycoses.

Main references:

Dy Phon, 2000;
Antoine Schmitt, 2004,

Spinose evergreen small tree of 2 to 6 m high found in undergrowth forest.



Alternate leaves, petiolate with 3 parallel veins



The fruit is a berry of 1-3 cm thick containing a unique seed.



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