

**ETHNOMEDICINE AND MATERIA MEDICA USED BY KUI
TRADITIONAL HEALERS IN NORTHEAST THAILAND**

MISS ARIKA VIRAPONGSE

**A THESIS FOR THE DEGREE OF MASTER OF SCIENCE
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**A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS
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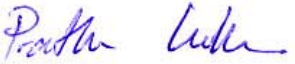
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บทคัดย่อ

ชนชาติกูยเป็นกลุ่มชาติพันธุ์หนึ่งในห้าสิบกลุ่มชาติพันธุ์ที่ไม่ใช่ไตในประเทศไทย และอาจเป็น
กลุ่มชาติพันธุ์แรก ๆ ที่เข้ามาตั้งถิ่นฐานอาศัยอยู่ทางตอนใต้ของภาคตะวันออกเฉียงเหนือของประเทศไทย
การศึกษานี้มีวัตถุประสงค์เพื่อศึกษาประมวลแนวคิดในเชิงทฤษฎีในระบบการแพทย์พื้นบ้านของกลุ่มชาติ
พันธุ์กูย และยาสมุนไพรที่ใช้บำบัดโรคหรือความเจ็บป่วยต่าง ๆ กลุ่มประชากรที่ใช้ในการศึกษาคั้งนี้เป็น
หมอพื้นบ้านชาวกูยจำนวน 388 คน ซึ่งตั้งถิ่นฐานอยู่ในพื้นที่จังหวัดสุรินทร์ ศรีสะเกษ และอุบลราชธานี
โดยการศึกษาเชิงลึกกับหมอพื้นบ้านจำนวน 30 คน วิจัยที่ใช้ในการเก็บรวบรวมข้อมูลประกอบด้วยการใช้
ความจำแบบเสรี บันทึกข้อมูลด้านสุขภาพ การสังเกตการณ์โดยนักวิจัย การสังเกตการณ์โดยผู้เข้าร่วม
โครงการวิจัย การเก็บรวบรวมตัวอย่างสมุนไพร และการสัมภาษณ์ ผลที่ได้ได้วิเคราะห์และประมวลเป็น
แนวคิดในเชิงทฤษฎีในระบบการบำบัดรักษาความเจ็บป่วยของหมอพื้นบ้าน พบว่าโรคและความเจ็บป่วย
ที่หมอพื้นบ้านชนชาติกูยให้บริการบำบัดรักษาได้ มี 100 โรคหรืออาการ ใช้รูปแบบการเตรียมยาแตกต่าง
กันได้ 9 วิธี ใช้เครื่องยาสมุนไพรจำนวน 374 ชนิด นอกจากนี้ยังได้วิเคราะห์ภูมิหลังทางสังคมของหมอ
พื้นบ้านที่ศึกษาในเชิงลึก ผลการศึกษาได้แสดงให้เห็นว่าบทบาทของหมอพื้นบ้านในระบบการแพทย์
พื้นบ้านถูกกำหนดโดยความสามารถในการใช้ยาสมุนไพรและการบำบัดรักษาความเจ็บป่วย
ทรัพยากรธรรมชาติในท้องถิ่นเป็นปัจจัยสำคัญในการเลือกใช้ยาสมุนไพร และปัจจัยอันเป็นภูมิหลังทาง
สังคมของหมอพื้นบ้านมีผลต่อองค์ความรู้ในการใช้ยาสมุนไพร

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ABSTRACT

The Kui indigenous group is one of fifty non-Tai ethnic groups in Thailand and they may be distinguished as the earliest residents of the southern part of Northeast Thailand. The purpose of this study was to define the role of traditional healers within the Kui ethnomedical system, and examine their uses of materia medica for the treatment of health conditions. Three hundred and eighty-eight Kui healers from Surin, Si Sa Ket, and Ubon Ratchathani provinces were surveyed, and thirty healers from six districts of these provinces were selected for in-depth study. Research tools used to collect data included profile, socio-demographic, treatment methods, interviews, free-lists, health condition logs, observation, and specimen collection. The results of this study describe and analyze the healers' treatment system, 100 health conditions, 9 types of preparation methods, 374 types of materia medica, and 14 socio-demographic factors among the thirty Kui healers. These results signify that the roles of healers within the traditional medical system are defined by their uses of plants and treatable health conditions, patterns of materia medica used are evident among healers, local natural resources of healers affect the way that they use plants, and socio-demographic characteristics of healers affect their materia medica knowledge.

This thesis is dedicated to my parents,
who have devoted the majority of their lives to provide us with a
loving, rich, supportive and encouraging environment for which to cultivate our
inner strength and freedom of mind.

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Electronic copies (PDF) of this manuscript are available through www.econbot.org or upon request from the author at arikavira@yahoo.com. Throughout the manuscript, the reader should refer to Appendix A, F, and G to determine codes for photos (ex. photo 1), health conditions (ex. health condition 1.1), materia medica (ex. PL1), respectively.

Arika Virapongse

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CHAPTER I

INTRODUCTION

Traditional knowledge is an invaluable resource for both undeveloped and developed societies. Traditional pharmacopeias and medicinal plants are one aspect of traditional knowledge which has captured worldwide attention. Thailand has had a long history of Thai traditional medicine (TTM), even though governmental support of this discipline declined for almost one hundred years after the introduction of Western medicine (Subcharoen et al., 1999). Since the late 1970's, the Thai Royal Government has emphasized the integration of TTM and medicinal plants into primary health care to achieve objectives of the National Economic and Social Development Plan¹ (Health development, 1995). Today, the Ministry of Public Health supports the development of Thai traditional medicine in an aim to provide Thai people with both traditional and western forms of medicine (Subcharoen, 1999).

TTM varies greatly across Thailand by region, ethnicity and language and it is not unified as a single tradition (Anderson, 1986a and 1986b; Brun, Schumacher, 1994; Chantachon, 2001; Bonchai, 2002a and 2002b). These variants often lack organization and standardization and there is a high level of traditional secrecy among the healers. While this may have weakened these variants as disciplines, it has also enhanced and conserved the diversity of traditions (Brun, Schumacher, 1994).

To study traditional medicine, ethnomedical studies often limit the parameters of research by selecting a region or ethnic group of study (Virapongse, Picheansoonthon, 2005). Regional studies select groups of people who share a common environment and culture. In broad regions with high ethnic diversity, studying communities who share a common ethnicity helps to focus and standardize data. Ethnic groups can provide a sink of traditional knowledge that is protected by unique culture, tradition and language. Research studies must be conducted among different communities to build a larger picture of TTM (Picheansoonthon, 2003).

¹ The Thai Royal Government's renewed interest in TTM and medicinal plants was partly stimulated by a declaration from a World Health Organization conference on indigenous medicine Alma-Ata, which urged member countries to include traditional medicine and medicinal plants into their primary health care system (Health development, 1995)

Kui² are one ethnic group of Northeast Thailand who are distinguished as the original inhabitants of the lower parts of this region (Seidenfaden, 1952). Because of this, the ethnomedicine and materia medica use among Kui have high potential for contributing towards knowledge of TTM. Five major aspects of ethnomedicine include the system of treatment, health conditions and treatment range among healers, preparation methods, materia medica, and defining characteristics and socio-demographics of healers (Virapongse, Picheansoonthon, 2005). By focusing research on these topics, it is possible to build a comprehensive study of Kui traditional medical system. Each of these aspects is briefly introduced in the following sections, and the remainder of this manuscript will elaborate on these aspects as guiding themes of the study.

1.1 System of treatment

A system of treatment can involve a variety of aspects that are related to the role of the health practitioner and the relationship between health practitioners and patients (Kongtapan, 2002). These aspects can include a procedure for gaining traditional medical treatment from healers, restrictions related to the role of the healer (Chantachon, 2001), and specific treatment methods of the healers. The system of treatment among the Kui will be explored and analyzed in this manuscript.

1.2 Health conditions and treatment range among healers

The health conditions that are treated by healers can define the traditional medical system by mapping the range and capabilities of a health care system (Brun, Schumacher, 1994). By focusing on the health conditions it is possible to define the roles of the healers with the health care system according to their abilities to treat the health conditions. Studies in ethnomedicine often use health conditions as a basis for exploring the use of materia medica among a group of people (Balick et al, 2000; Thuan, 2001).

1.3 Preparation methods

Preparation methods of materia medica can be used to define healers. By studying these methods, there is also potential for gaining insight into the healers' perspective of the materials and resources of materia medica (Virapongse, Picheansoonthon, 2005).

² For the purpose of this manuscript, the word 'Kui' is used broadly to include groups in the southern part of Northeast Thailand who are identified as *ꨀꨣ* (*Kui*), *ꨀꨣꨣ* (*Kuay*), and *ꨀꨣꨣꨣ* (*Nyeu*).

1.4 Materia medica

The materia medica or natural substances that are used for medicine are major components of traditional health care systems. Thai traditional medicine, for example, is heavily reliant on materia medica made up of plants, animals and minerals and remedies often consist of multiple ingredients (Brun, Schumacher, 1994; Picheansoonthon, 2004). Traditional healers usually rely heavily on materia medica for treating diseases (Seters, 1997). Studies of materia medica use among traditional peoples can also offer insight into their relationship with the local natural resources (Nolan, 1998).

1.5 Defining characteristics and socio-demographics of healers

Socio-demographics have been shown to effect the use and knowledge of traditional medicine among both patients (Kongtapan, 2002) and healers (Do Thi, 1994; Nolan, 1998). Socio-demographic factors among healers can have direct impacts on the plant use knowledge of healers (Nolan, 1998).

1.6 Conceptual design of research

1.6.1 Objectives of research

The purpose of this research is to explore the use of materia medica for treatment among Kui traditional healers in Surin, Si Sa Ket, and Ubon Ratchathani provinces of Northeast Thailand. The following objectives were established:

1. Describe the health conditions treated and method of treatment by each type of healer and define their role as health practitioners.
2. Identify plants and plant parts used in treatments and evaluate their significance.
3. Examine the relationship between traditional healers and local natural resources.
4. Determine the effect of socio-demographic factors on materia medica knowledge.

1.6.2 Scope and applications of research

The roles of herbalists, blowing doctors and spirit healers as health practitioners will be defined according to the health conditions that they treat, methods of treatment, treatment practices, and use of medicinal plants. The materia medica and parts used in treatments are identified and their importance as a medicine will be evaluated. The consistency of knowledge within same-type healers, effect of socio-demographic factors on use of medicinal plants used for medicine, and healer's use of plants from the local natural

environment will be evaluated. By covering these aspects, this study will provide a comprehensive documentation of Kui ethnomedicine and thereby contribute towards the overall knowledge of traditional medicine in Thailand.

1.7 Definition of terms

Ethnomedicine: a cultural interpretation of health, disease, and illness, including patients' process for seeking health care, and health practitioners' methods used for providing treatment (Pieroni et al., 2005).

Traditional healers: experts who hold an expansive knowledge of healing and treating illness, diseases, and concerns within the community. Their body of knowledge is passed on from generation to generation as a tradition. A new initiate to the tradition is often carefully selected by the previous healer for specific personal characteristics and must often participate in a ceremony to officiate the initiate as an apprentice healer (Brun, Schumacher, 1994; Chantachon, 2001).

Traditional knowledge: the knowledge and experience passed on from generation to generation among a group of people as a way supporting their livelihood. This knowledge is edified through observation and direct experience (Chantachon, 2001).

Traditional medicine: any non-Western medical practice (Bannerman et al, 1983).

CHAPTER II

LITERATURE REVIEW

This chapter first provides background information on the study site, study of ethnecology, and ethnomedicine studies that have been conducted in Thailand. This is followed by a literature review of Kui ethnomedicine and demographics that is organized by topics (sections established in Chapter 1) and then, chronologically within each section. Because topic was used as the first order of organization, literature sources may appear in more than one section. Names written in Thai characters and English approximations are according to the referenced author. English approximations inside parentheses were added by the researcher for consistency.

Thailand is divided into five regions (North, South, East, Central and Northeast), which are further divided into 75 provinces. Each province (จังหวัด) is made up of districts (อำเภอ), sub-districts (ตำบล), and villages groups (หมู่บ้าน). The Tambol Administration Organization: TAO; *Tamnam* (องค์การบริหารส่วนตำบล) and head of the village are the official government representative of the sub-district and village, respectively. Both are democratically elected by villagers registered to each sub-district.

Thailand has an estimated 12,000–18,000 plants species with about 1200 endemic species, 295 mammal species, 920 bird species, 300 reptile species, and 100 amphibian species (WWF, 2001). Much of the natural forest was destroyed over the past century; forest percentage in the country dropped from 60% forest coverage in 1937 to 26% in 1991. However, more recent conservation initiatives have stabilized Thailand's forest coverage³, which totaled 25.28% of the total land area (129,000 sq. km.) in 2001. This was designated into 17.6% (70,771 sq. km.) of protected land⁴-- an increase from 12.4% in 1990 (Forestry statistics, 2001).

³ Existing forest area is all forest types with exception of rubber plantations and orchards (Forestry statistics, 2001).

⁴ Protected area: legally established land and water area under public and private ownership, regulated and managed to achieve specific conservation objectives (Forestry statistics, 2001).

The official language of Thailand is Thai. Thai people have an average of 7.2 years of academic education and 90.8% of the population (over the age of 6) is literate (Education, 2005). In 2002, 9.8% of Thailand's population, of which 4% resides in urban areas and 12.6% resides in rural areas, was below the National Poverty Line⁵ (National income, 2003).

Northeast Thailand is commonly known as Isan (อีสาน) by Thai people. There are 20.8 million people in the Northeast who represent 30 % of Thailand's population (Isan, 2005). The major language of Northeast Thailand is Isan (an Austro-Thai language closely related to Lao) with an estimated 15 to 23 million speakers (Isan, 2005). The people of Northeast Thailand have the lowest wages in the country (3,928 baht per month in 2002) (Isan, 2005). They are primarily agriculturalists, although supplemental income may be sought by working outside of the region. Agriculture is the largest sector of the economy and generates around 22% of the Gross Regional Product in Northeast Thailand (Isan, 2005). Rice is the main crop and accounts for about 60% of the cultivated land.

Northeast Thailand is organized into 19 provinces (refer to Figure 1). It is bordered on the north and east by the Mekong River, on the south by the Dong Rek mountain range, and on the west by the Petchabun mountain range. These natural boundaries neatly separate Northeast Thailand from Laos P.D.R., Cambodia and North and central parts of Thailand but nevertheless, the Northeast population still represents a unique blend of ethnicities and culture from these surrounding neighbors. The ethnicity of the Northeastern Thai population is made up of over fifteen ethnic groups, with Lao and Khmer as the largest ethnic groups (Schliesinger, 2000; Pramsrirat, 2003).

Since the 1970's, hospitals in Northeast Thailand have been established in provincial capitals and district centers. Hospitals in provincial capitals offer higher levels of health care, in comparison to those located in district centers. Sub-district health centers (*sa-tha-nee-anamai* or สถานีอนามัย) with health care officials (non-M.D. practitioners, such as nurses and midwives) were established by the government to serve the needs of smaller district towns and villages. Pharmacies are located in district towns and larger villages and pharmacists can play important roles in diagnosis and provision of treatments in these areas. Today, villagers are well acquainted with modern treatment and often seek out Western trained health care practitioners to treat all manners of illness (Phongpit, Hewison, 2001).

The term 'ethnobotany' was first established in the late 1800's to describe the use of

⁵ Poverty: Minimum standard required by an individual to fulfill his or her basic food and non-food needs. Unit is baht/person/month (National income, 2003).

plants by aboriginal people (Harshberger, 1896). Ethnobiology is a broader study that includes all biota and environments (Salick *et al.*, 2002). Both disciplines are considered sub-disciplines of ‘ethnoecology,’ which is the multidisciplinary study of the direct interrelationship between people and all aspects of the natural environment (Martin, 1995). Methods in ethnobotany and ethnobiology originate mostly from the social and natural sciences but increasingly, methods from a wide range of disciplines are being borrowed and adapted for use (Salick *et al.*, 2002). Studies in ethnoecology can be widely applied towards such endeavors as conservation, community development, and development of natural products (Cunningham, 2001; Martin, 1995; Salick *et al.*, 2002).

Many ethnoecology studies have been conducted in Thailand. Some examples include studies on general ethnobotany by Anderson (1993), medicinal plants by Anderson (1986a, 1986b), homegardens by Gajasenii and Gajasenii (1999), Moreno-Black *et al.* (1996), Miyagawa and Konchan (1990a and 1990b), and Yongvanit *et al.* (1990), and food plants by Moreno-Black (1996), Somnasang and Moreno-Black (2000), Somnasang *et al.* (1988), and Wester and Yongvanit (1995). This diversity of studies shows that there still remains great potential for researching and applying ethnoecology in Thailand. Ethnoecology research methods can be especially useful for studies in traditional medical knowledge or ethnomedicine (Fabricant, Farnsworth 2001).

Ethnomedicine studies in Northeast Thailand usually focus on a type of healer or traditional healers of an ethnic group. Kritaya (1984) studied *Moh Lum Phi Pha*, Somchai (1992) studied Mo-Tham, and Bonchai (2001) studied the role of Buddhist monks in community medicine. Studies on ethnomedicine of ethnic groups in Northeast Thailand have been conducted on the Kaloeng (Chantachon, 2001; Bonchai, 2002a) and Bru (Bonchai, 2002b). Brun and Schumacher (1987) conducted a study on traditional medicine of Northern Thailand that may be the most well-designed and comprehensive study on ethnomedicine in Thailand. Because of this, their study is also included in this literature review. The remainder of this section describes each study, with a focus on research design. Table 1 demonstrates different types of traditional healers of the rural variants of TTM that have been recorded.

Kritaya (1984) provided one of the earliest studies on a traditional healer of Northeast Thailand. However, she focused on the mental health of *Moh Lum Phi Pha*, rather than their traditional skills as healers. Kritaya’s study group included leaders and participants of the ceremony and patients who were treated with the ceremony, among communities in two districts of Roi-et province. She used psychological examinations to study their background,

mental health, treatment competency and process, and the outcome of the treatment. She determined that there was no significant difference between the mental health of the healers and a control group.

Table 1 Types of traditional healers recorded in Thailand according to literature sources.
Vernacular names: Listed in Thai or English approximations, according to the reference, unless otherwise noted.

| Vernacular names | English translation | References |
|---|---|---|
| หมอยา, หมอสมุนไพร | Herbalists | Brun, Schumacher, 1994; Chantachon, 2001 |
| หมอเป่า | Blowing doctors | Brun, Schumacher, 1994; Chantachon, 2001 |
| หมอนวด | Masseuses | Brun, Schumacher, 1994 |
| หมอดำแย | Midwives | Chantachon, 2001 |
| หมอทรง; <i>Mo Yao and Momo</i> (Kaleong); หมอลำผีฟ้า (Lao) | Spirit mediums | Brun, Schumacher, 1994; Chantachon, 2001; Kritaya, 1984 |
| หมอคานา, หมอเวทมนต์, หมอธรรมไสยศาสตร์ | Incantation and magic experts or senders | Brun, Schumacher, 1994 Chantachon, 2001; Somchai, 1992 |

Somchai (1992) conducted an anthropological study on Mo-Tham in a village in Khon Kaen province. His year long study included 11 Mo Tham healers, 11 regular followers, 5 Mo Tham apprentices, 10 patients who were treated by the Mo Tham, heads of the village, and ceremonial leaders of the village. He studied the diseases and their origin, decision making of the community members to seek treatment from the healer, treatment methods of the healer, and the relationship between the community members and the healer. He found that these healers are an integral part of the community. Besides their role to treat illnesses, the healers reinforce community values and provide mental and emotional support for the community by offering advice and conducting traditional ceremonies.

Bonchai (2001) studied the role of Northeast Thai Buddhist monks in traditional herbal medicine and community healthcare. Bonchai interviewed monks to identify treatable diseases and herbal remedies used to treat the diseases. He found that medicinal plants are often grown at monasteries and monks have specific methods for collecting and preparing the

materia medica. Bonchai lists medicinal plants but no plant specimens collected as vouchers for identification. Most plants are identified only by common Thai or local name.

Songkoon (2001) completed a study on the indigenous knowledge of natural resources among a Kaloeng village. He described the village's traditional healers, which included *mo yao*, fortune teller, *mo soo kwun*, *mo paw*, herbal doctor, *mo tham*, and midwives. However, his descriptions focused on how healers learned the tradition and the taboos followed by the healer, rather than the treatment practices of the healer.

Bonchai's (2002a, 2002b) conducted two similar ethnomedicine studies among the Bru and Kaloeng ethnic groups. Both studies focused on the local herbal medicine wisdom among traditional healers (15 Kaleong healers from Sakon Nakhon province (2002a) and 5 Bru herbalists from Mukdahan province (2002b)). Bonchai described the cultural and historical details of each ethnic group, reported the illnesses that herbalists treat and remedies used for treatment, and provided information on all aspects of collecting, preparing and administering the herbal remedies. He discussed the problems facing medicinal plants and traditional medical knowledge and provided suggestions for conserving the groups' traditional medical system. Bonchai recorded 148 plant species, 19 animal parts and 7 minerals among the Bru and 158 plants species, 30 animal parts, and 9 minerals among the Kaloeng for medicinal use. However he did not collect any plant specimens and it is difficult to verify his results.

Brun and Schumacher (1987) organized a collaborative and multi-disciplinary (botanists, linguists, medical doctors and native language speaking assistants) research team to study Thai traditional medicine (TTM). The result was a highly comprehensive treatise on TTM. The first part of the manuscript analyses the royal variant of TTM and the second half, focuses on the rural TTM of North Thailand. Interviews with three traditional herbalists from northern Thailand provided information on traditions associated with learning knowledge, healers' perception of the human body, medical terminology of symptoms and human body, analysis of the prescription patterns, and detailed descriptions of the disease system, diagnosis system, and diseases characteristics. An appendix of medicinal plants with scientific names and voucher specimen numbers was also included.

Ethnomedicine studies in Thailand can be successfully conducted by focusing on specific healer types or ethnic group. While a study based on the type of healer may provide more specific data on the healers' methods of treatment, focusing on the group as a whole can obtain a more comprehensive picture of the groups' traditional medical system. All studies

focus on the knowledge of the healer, rather than the general knowledge or perspective of the community. Most studies are lacking specimen collection of *materia medica*, and this may be due to the background of the researchers, who are mostly trained as social scientists. Brun and Schumacher (1987) overcame this problem by incorporating a wide range of specialists in their research team. This collaborative design may have been the integral key to their successful study. Overall, it is clear that more research should be conducted on ethnomedicine of rural and Northeast Thailand.

The Kui tribe is linguistically associated with the Mon-Khmer group of the Austro-Asiatic language superstock family-- one of the oldest language groups in Southeast Asia with 147 languages (Gordon, 2005; Schliesinger, 2000). Mon-Khmer tribes are generally considered to be more primitive than other ethnic groups in Southeast Asia. Ethnically and racially, the Kui tribe is a mixture of Veddoid-Indonesian and Melanesian (Seidenfaden, 1952). Historically, the Kui were called Suay or Sui by the Siamese people, meaning ‘those liable to pay taxes’ or ‘tributary people’ (Mikusol, 1984) There are at least three different sub-groups of Kui (ꨀꨁ, ꨀꨂ, and ꨀꨃ/ ꨀꨄ) and this manuscript refers generally to this entire ethnic group as ‘Kui.’ Today, the Kui are still known as Suay/Sui by outsiders, but they refer to themselves as Kui (Schliesinger, 2000), meaning ‘human being’ (Seidenfaden, 1952). A plethora of names from different sources refer to this tribe as Suai, Suoi, Soai, Cuoi, Kui, Souei, Kuoy, and Khmen-boran. The Kui have no written language of their own, and their knowledge has been traditionally transmitted orally (Schliesinger, 2000). The following sections focus on literature pertaining directly to Kui ethnomedicine.

2.1 System of treatment

Many authors refer to the Kui medical system within cultural description of Kui, but the data is not comprehensive. Gosier (1970) provides only a brief reference towards health care habits among Kui women, Tienmee, Deepkung, and Buruput (1985) focus their efforts on a dictionary, which is aimed to provide better healthcare for the Kui community. A study by Polgurd (1998) offers the most extensive data on the system of treatment among Kui. Polgurd (1998), Buruput (1995), Van der Haak (1987), and Sodsung (2002) all include descriptions of spirits and beliefs among Kui which effect and relate to Kui health care. The content of these manuscripts are summarized in this section.

In 1970, Gosier produced an exhaustive summary of existing Kui data in response to the U.S. military’s need for practical data on ethnic minorities of Southeast Asia. He included only two paragraphs on Kui healthcare and the extent of this information can be quoted in two sentences, ‘a new mother abstains from eating certain foods and substantial amounts of

salt. She also must not perform any household tasks or engage in arguments.’ Additionally, this manuscript includes a useful section on ethno-sensitive suggestions for working among the Kui, which are still applicable today.

Tienmee, Deepkung, and Buruput (1985) produced a practical handbook and dictionary of Kui-Thai-English medical terms. This is one of the few manuscripts which recognize Kui ethnomedicine and the need for ethno-specific health care among the many minority groups of Thailand.

In 1987, Van der Haak conducted an in-depth qualitative study on the role of spirits in a village in Prangku district, Si Sa Ket province. While this is the first manuscript to focus on the spirits and associated ceremonies among the Kui, it offers only brief eye-witness accounts. A few ceremonies used to treat illnesses were described. These include ceremonies for dispelling misfortune, calming and returning a patient’s wayward personal spirit to the patient after a shocking accident, and making offerings to a healer to ask for treatment.

Polgurd (1998) published an anthropological study on a Kui village in Buriram province. This study included a section on the community’s health care practices. The author described the dangers of community medicine in which the villager is more likely to die, not from the illness, but from the treatment itself. For example, the patient may be physically beaten to chase away an evil spirit, subjected to unsanitary medical equipment, or given low quality herbal medicines to ingest. Nevertheless, she reported that patients continued to turn to local healers for emotional support and more financially affordable treatment. Polgurd included a brief description of the ceremony for passing on knowledge to a new healer. The relatives of the patient, rather than the patient him/herself, may approach the herbalist with offerings and describe the patient’s symptoms. Then the herbalist prepares the herbal medicine to suit the illness.

Polgurd (1998) recorded the presence of Kui masseuses, blowing doctors, and herbalists in the study village. Two community members were knowledgeable of massage techniques, but she attributed their skills towards their former role as midwives and practice of casual massage on family members. This mirrors conclusions on masseuses found by Brun and Schumacher (1994) in Northern Thailand. Polgurd (1998) also records that blowing doctors usually treat three times a day for 3-7 days. More details on blowing doctors and herbalist can be found in section 2.2 and 2.3.

Polgurd (1998) reported that both Buddhist temples and spirit altars may be found throughout Kui villages. Kui treatments may incorporate Buddhist beliefs and practices,

although the illnesses may be associated with spirits. Schliesinger (2000) supports these statements by describing Kui as practicing a syncretic folk Buddhism that integrates traditional animist beliefs, practices, and rituals with Buddhism.

Literature by Buruput (1995) and Sodsung (2002) both generalize the Kui's cultural and social system and within these descriptions include detail on Kui spirits and their effect on Kui healthcare. Buruput (1995) described Kui people in an 'Encyclopedia of the Kui' and Sodsung (2002) provided a descriptive study of the Kui communities in Surin and Si Sa Ket province. Although Sodsung's study does not include reproducible scientific methodology, he is a native of the Kui community and wrote from a lifetime of personal experience. Details on Kui spirits by Buruput (1995), Polgurd (1998), and Sodsung (2002) are described in the following paragraphs.

Sodsung (2002) refers to three types of spirits, ผีบรรพบุรุษ (*Pee Bam-pa-bu-rut*) as ยะจัวะ (*Yue-jue*) in Kui, ผีประจำสถานที่ (*Pee Pra-jum-sathan-tee*), and ผีปู่ตา (*Pee Bu-ta*) as เยื่อะจัวัย (*Yue-juai*) in Kui. The ceremonial leader associated with these spirits is called เยื่อะจัวัยเพรือม (*Yu-juai-prum*) in Kui. ผีบรรพบุรุษ (*Pee Ban-pa-bu-rut*) are spirits that are matrilineal and they only effect mothers and their children by offering protection or causing illness, usually headache and fever. Likewise, Polgurd (1998) describes that fathers can be affected only by spirits from their mother's side. Polgurd (1998) describes ผีประจำสถานที่ (*Pee Pra-jum-sathan-tee*) or ผีเจ้าที่ (*Pee Jao-tee*) as territorial spirits which occupy specific places and only affect the owners of the land which they occupy. Kui have separate altars for both of these spirits (Buruput, 1995; Sodsung, 2002) and households without these altars may pay their respects to the altar at households of close relatives (matrilineally). Kui households make offerings at these altars at least once a year or during other important occasions, such as childbirth (Buruput, 1995). ผีปู่ตา (*Pee Bu-ta*) are spirits that occupy the entire village. Altars are built for these spirits and are characterized by carved figurines that are placed on the altar to represent these ancestors (Sodsung, 2002). Respects must be paid to these spirits on a regular basis (Polgurd, 1998).

พระภูมิบ้าน (*Phra-phoom-ban*) or พระภูมิเจ้าที่ (*Phra-phoom-jao-tee*) protect households and are represented with a spirit house where villagers offer rice and water to the spirits on specific days of the year, such as วันพระ (*wan phra*). Symptoms of illness related to these

spirits are characterized by malaise, and villagers who feel ill often pay respects to the spirit house to remedy their symptoms (Polgurd, 1998).

ผีนา (*Pee Na*) or ผีตาแฮก (*Pee Ta-hak*) reside in rice fields and only affect the owners of the rice field. This belief is borrowed from the Lao, which accounts for the lack of Kui name (Sodsung, 2002). Owners must make offerings to these spirits at the beginning of the rice season (Polgurd, 1998).

ผีซันตำ (*Pee Chun-tam*) or ผีปอบ (*Pee Pob*) are called ปะนะ (*Pa-na*) or นะนะ (*Na-na*) by Kui. These are usually the evil spirits of deceased people. People with magical powers can call these spirits and cause illness among other people, and this action is called เอาผีใส่กัน (*ow-pee-si-kun*) in Thai. Evil spirits can also possess people of their own accord. Villagers who are affected by these spirits must be treated by a *Mo Tham* (หมอธรรมมา; officially known as หมอธรรม) (Polgurd, 1998) or a *Kru-ba* (ครูบา) (Sodsung, 2002) to exorcise the evil spirit.

รำผีมอ or *Rum Pee Mo* (Buruput, (1995) or รำสะเอง or *Rum Sa-ang* (Sodsung, 2002) is similar to รำผีฟ้า or *Rum Pee Fa* of the Lao ethnic group (Buruput, 1995). Sodsung (2002) includes photos and descriptions of the ceremony and specific ceremonial dance positions in his manuscript. In Cuasay's (2002) dissertation that was based in a Kui village of Surin province, he notes the existent of a *Mau Song* (spirit medium) who he observed conducting a divining ceremony.

ผีประจำ (*Pee Pa-gum*) are spirits associated with elephants, and mostly with the Kui of Surin. These spirits are believed to reside chiefly in the lassos that were once used to catch elephants (Chuengsatiansup, 1998; Sodsung, 2002). The Kui have long been known for their unique traditional knowledge as masters in capturing and training wild elephants for warfare, logging and other heavy labor. However, today's scarcity of forest has led to both rarity of wild elephants and poor food resources for existing village elephants (Weeradet, 2000). Because elephants are no longer part of Kui life, the tradition associated with the *Pee Pa-gum* is also fading (Chuengsatiansup, 1998; Sodsung, 2002). Even though elephants do not figure directly into most present Kui villages, symbols of the elephant can still be seen in their ceremonies, art, and traditions. Events in spirit and healing ceremonies, for instance, still

offer reverence to elephants, mahouts, and associated spirits.

According to Buruput (1995), incantation experts are known as ถัม (officially known as ธรรม or *Tham*) or อาจารย์ (Acharn). They are usually male healers who determine the origin and method for removing a curse Van der Haak (1987) recorded a *sot chekkhrao* (Kui) or *kae khrao* (Thai) in Si Sa Ket province that was conducted by a healer to cure misfortune. Sodsung (2002) defines *Mo Tham* (หมอธรรม) as healers who are knowledgeable of the Buddhist principles and ceremonies and treat all types of illnesses with methods of herbalism, blowing treatment, and spirit possession. The Kui's spirit possession ceremony is called *Kaal Aw* (เกล-ออ).

2.2 Health conditions and treatment range among healers

Few existing literatures focus on the health conditions treated by Kui healers. Mikusol (1988) and Polgurd (1998) provide brief examples of some treatment of health conditions. Mikusol (1988) studied the present characteristics and changes in social, economic and cultural livelihood in one Kui village of Maha Sarakham province. He briefly described some use of animals for the medicine. These include จิ้งจก (*jing-jok*) for โรคตับ (liver disease), ตุ๊กแก (Tok-kay gecko) for a type of children's fever called โรคตานขโมย (*tan-ka-moai*), and soaking earthworms in water to treat a specific type of fever called ซางขโมย (*sang-ka-moai*). He noted that patients who suffer from illness caused by 'eating wrong foods' or กินผิด (*gin-pid*) should avoid eating chicken and the meat of albino water buffaloes.

Polgurd (1998) recorded some health conditions treated by Kui herbalists and blowing doctors. Kui herbalists use herbal medicine to treat fever and illnesses caused by 'eating wrong foods,' which affects women with children as dizziness, loss of appetite, and malaise. They can also offer 'on the fire' treatment for new mothers. Blowing doctors treat mostly broken bones and sprained and twisted joints.

In 1999(b), Chuengsatiansup published the only study on Kui ethno-medicine. He identified an ethno-specific health condition found among young Kui women in Surin province. The symptoms range from loss of appetite to chronic fatigue, and are typically triggered by exposure to certain sounds, such as motorcycles, quarrelling neighbors or carousing drunkards. Chuengsatiansup concluded that this illness originates from deep-seated anxieties among the community. Unpredictable agriculture and income, inability to raise

elephants, and motorcycle culture among the teenagers are some concrete examples. But, Chuengsatiansup stipulated that the stem of the problem lies in the Kui vulnerable situation as a marginalized and voiceless minority group. Chuensatiansup has no suggestions for remedies which depend on a social, rather than physiological, cure. This article provided an insightful perspective on just one of the ‘mysterious’ diseases that afflict minority groups in Thailand.

2.3 Preparation methods

There are few existing literatures on the preparation methods used by the Kui to prepare materia medica for treating illnesses. Mikusol (1988) and Polgurd (1998) briefly mention some preparation methods. Mikusol (1988) recorded that earthworms were soaked in water as a remedy. Polgurd (1998) recorded that blowing doctors use topical oil, which is usually sesame oil, and they use bamboo as splints to stabilize broken limbs. These brief descriptions represent the extent of reference to preparation methods among literature on the Kui.

2.4 Materia medica

Few existing studies focus on materia medica used by Kui to treat human illnesses or Kui ethnoecology. Two studies by Seidenfaden (1952) and Gosier (1970) provide some description of the local natural environment of the Kui. Mikusol (1988) includes brief specific details on materia medica use among Kui. Neimanis and Thongnoppakun (1999) conducted a study on materia medica use for treating elephants. The content of these studies are described below.

Seidenfaden (1952) provided one of the earliest descriptions on the Kui and his manuscript is easily the most popularly cited paper. Seidenfaden’s descriptions were based on his travels through the Kui territory (present day Ubon Ratchathani, Si Sa Ket, Roi-et, and Surin) in 1917-1919. Seidenfaden stated that Kui were rich with traditional skills and knowledge, but relatively poor agriculturalists. This inferred that they relied heavily on harvesting and collecting wild forest products for survival. He referred to Levy’s (1943) work, which described the Kui country south of the Dong Rek range (present-day Cambodia) as poorer in natural resources than the land to the North (present-day Thailand). Seidenfaden provided descriptions that ‘the slopes of the Dong Rek hills are clothed in dense virgin forest’ and ‘much valuable timber and several kinds of precious wood are found in these forests.’

When the rail line from Khorat (Nakorn Ratchasima) to Ubon Ratchathani was opened in 1924, vast areas on either side of the railroad were cleared in anticipation for paddy cultivation. However, Seidenfaden was not a trained natural scientist, and his descriptions of the landscape are based on his own personal interpretations.

Gosier (1970) described this same area as savanna and drought resistant rolling grassland at a height of several feet above sea level, and containing scattered groups of pine trees and dominating Dipterocarpus forest. The highest levels of the forest were made up of isolated trees reaching 190 feet, the second level consisted of a thick, lower canopy of trees and vines at an average height of 60 feet, and the third level was composed of thinly scattered shrubs, saplings, and herbaceous plants.

Mikusol (1988) specified some use of materia medica by the Kui. This is listed in section 2.2. Polgurd (1998) listed a few remedies as examples of medicinal plant use among Kui. These included 1) Leaf of น้อยหน่า (*Noi Na*) that is crushed to treat lice; 2) Leaf of ขี้เหล็ก (*Kee Lek*) that is used to assist with digestion; 3) Bark of ฟรุ้ง (*Farung*) that is covered with salt and roasted, then soaked in water to treat diarrhea; and 4) ข่า (*Kha*) ตะไคร้ (*Ta Khrai*) กระเทียม (*Kra thiam*) มะนาว (*Manao*) are pounded to treat skin disease. She predicted that Kui traditional medicine and the local herbal trade are bound for extinction because there are ever fewer localities for collecting medicinal plants.

Neimanis and Thongnoppakun (1999) conducted a study on herbal remedies for Thai elephants in Chonburi and other villages across Thailand, including two villages in Surin province. While these Surin villages were not named, the well-known Elephant Village of the Kui at Ta Klang village, Tha Tum district was likely included in the study. The researchers interviewed fifteen mahouts, as well as other experts of elephant veterinary traditional knowledge. Their results present eighty-three different herbal remedies using seventy-eight species of plants were recorded.

2.5 Defining characteristics and socio-demographics of healers

Few literature sources exist which focus directly on the socio-demographics of Kui healers. The following literatures provide mostly information on the historical migration patterns and location of Kui.

Seidenfaden's (1952) study is still unique today, because of his detailed descriptions of the social, cultural, environmental and physical characteristics of Kui sub-groups by geographical region and district. The result is a broadly encompassing description of the Kui,

and his in-depth observations from almost a century ago make it possible to monitor and consider changes among the Kui of today.

Seidenfaden used Levy's (1943) archeological artifacts as supporting evidence that the Kui have inhabited primarily Northern Cambodia, Southern Laos P.D.R. and the southern half of Northeast Thailand for more than 3000 years. They preceded any other ethnic groups in the area, and Seidenfaden considered Kui as the original inhabitants of lowland parts of Northeast Thailand and Cambodia. The Kui often used the area north of the Dong Rek Mountain (present-day Northeast Thailand) for its abundant natural resources and as a refuge in times of floods or droughts.

Seidenfaden estimated that in 1917 there were about 300,000 Kui in Thailand of which about 118,000 Kui still spoke their mother tongue. At this time, Kui was the major ethnic group in the southern part of Northeast Thailand, and they populated present-day Ubon Ratchthani, Si Sa Ket, and Surin provinces and parts of Roi-et, Maha Sarakham, and Buriram provinces. Seidenfaden noted that the number of Kui speakers was rapidly falling, and the Kui language was endangered.

Smalley (1964) compares Seidenfaden's maps of 1917 with present-day maps of Kui communities to analyze the Kui population in Northeast Thailand. His detailed maps depict the extent of the Kui in Buriram, Surin, and Si Sa Ket provinces and intermingling of the Kui with other ethnic communities. Smalley identifies the Surin and Si Sa Ket border as the core area of the Kui, and that Kui villages in Ubon Ratchathani, Nakorn Ratchasima, and Maha Sarakham are most likely remnants of older settlements. In agreement with Seidenfaden, Smalley predicted that the Kui language (and culture) is heading toward extinction.

Gosier (1970) detailed the Kui local terrain and vegetation. He noted some of their practical ethnobotanical practices, such as the use of rattan, bamboo and other materials to make dwellings and necessary items.

In 1978, Sriwisad produced a dictionary of Kui terms. However, it is his comprehensive linguistic map of the Kui which claims most of the attention among researchers. He identified Kui sub-groups and specific locations of villages and districts in Surin, Si Sa Ket, BuriRam, Ubon Ratchathani, Maha Sarakham, and Nakhon Ratchasima provinces. In contradiction to Smalley's (1964) conclusions, Sriwisad noted that the small pockets of Kui settlements in Buri Ram and Nakorn Ratchasima are called 'new villages' by the Kui in Surin and Si Sa Ket.

Yantreesingh (1980) identified that there are Kui communities in Suphanburi

province. She conducted a comparative linguistic study and concluded that these Kui represent fairly recent migrations from Surin and Si Sa Ket provinces.

Mikusol (1984) provided the first and only in-depth account of the social and cultural history of Surin province. His comprehensive study incorporated official documents originating from the reigning eras of the Siamese empire and current research studies conducted in the region. Mikusol's results included a detailed history of Kui, Khmer, and Lao ethnic groups in the southern part of Northeast Thailand, and the effects of social and cultural overlap and influences caused by the Siamese/Thai jurisdiction. This study (with cited sources) is particularly useful for its detailed and comprehensive history on Kui origins in Thailand.

Tienmee (1994) updated and elaborated on the location data that was provided by Sriwisad in 1978. After conducting an exhaustive survey of Kui communities in Northeast Thailand, she mapped and listed each Kui province, district and village and indicated the degree of linguistic and ethnic purity of some villages. Tienmee found that most Kui reside in Si Sa Ket and Surin provinces but small pockets of Kui settlements may be found in Ubon Ratchathani, Nakorn Ratchasima, MahaSarakham, Buriram, and Suphanburi provinces. Communities in Nakorn Ratchasima, MahaSarakham, Buriram, and Suphanburi provinces are considered to be more recent migrations to the areas.

In a study that succinctly followed-up on Mikusol's previous studies of 1984 and 1988, Chuengsatiansup (1998) analyzed the socio-political problems that face the Kui in Surin province. Chuengsatiansup offered insightful perspectives into common misconceptions of the Kui by delving into a range of their cultural and social characteristics. Chuengsatiansup described some traditions and Kui belief system in regards to spirits, Buddhism, and traditional ceremonies, which indirectly relates to health care among the Kui. He does make some reference to Kui use of natural resources, in regards to elephant rearing which relies on abundant natural resources.

Schliesinger (2000) offered the most recent summary of Kui in Thailand, in English language, and provided a clear history on Kui migration patterns. Oral histories in northern Surin recorded that Kui began to migrate from southern Laos P.D.R. to Surin in the early 1600's. From 1656-1688, this grew to large numbers of Kui who sought more ample natural resources to support their traditions of elephant handling and to escape the present political regime in South Laos P.D.R. Presently, the Kui are found in Northeast Thailand, Southwest Laos and North Cambodia (Schliesinger, 2000). In Northeast Thailand, the Kui reside in an area that is geographically enclosed by the Mun River to the north, Dong Rek Mountains to the south, and Khmer dominated districts to the west (Seidenfaden, 1952).

Schliesinger (2000) described Kui as mostly self-sufficient. They foraged for local vegetables, raise small animals and cattle, and cultivate small vegetable plots. Crops of sugar cane, potatoes, chilies and jute are cultivated outside of the rice season and help to provide additional economic sustenance. Cotton and mulberry trees are cultivated for the purpose of making cotton cloth and raising silk worms for preparing and weaving silk. Kui practice wet rice farming common throughout lowland Thailand, Laos P.D.R. and Cambodia. While rice cultivation was once directed towards self-sustenance, most farmers now grow a surplus of rice in order to generate income. The basic social unit among the Kui is the nuclear family and the village and the clan are the only other social units. A council of elders and head of the village (who serves as the village representative for dealing with the governments) usually leads each village. Within the family, maternal authority is generally stronger than paternal authority. Most marriages are matrilineal and matrilocal.

Cuasay's (2002) anthropology study examined factors that marginalize the Kuay, based on ethnographic material from fieldwork in a Kuay village in Surin. This dissertation provided rare detail on Kui history and the challenges of their current social situation.

Personal communication with Pramsrirat (2003) provided the most recent update on Kui, based on linguistic studies. There are three recognized sub-groups, *ꨀꨂ* (*Kui*), *ꨀꨃ* (*Kuay*), and *ꨀꨄ/ ꨀꨅ* (*Nyeu*) who live primarily in the southern part of Northeast Thailand. The Kui community in Thailand numbers around 300,000 people, and they are the third largest ethnic group in Northeast Thailand after the Laotian (15-23 million) and the Khmer (about 1.5 million) (Isan, 2005; Pramsrirat, 2003). A map by Pramsrirat shows the population distribution of the Kui across Thailand by district (Figure 1).

Most ethnic groups feel pressure to conform to larger groups, and the Kui is no exception. Social factors, such as poverty, low education, and loss of land and identity, can marginalize and create feelings of inferiority and helplessness among minority groups (Chuengsatiansup, 1999a). Kui has been slowly enveloped by growing numbers of Laotian and Khmer populations, and continues to shrink. Over the past century, Kui has been identified as an endangered language and ethnic group and they still remain this way today (Seidenfaden, 1952; Smalley 1964; Pramsrirat, 2003). If the Kui are to survive as an identity, their past and present situation must be studied in more detail to construct effective social solutions (Chuengsatiansup, 1999a).

2.6 Conclusions of literature survey

Overall, there is little known about Kui ethnomedicine and use of materia medica. Only two papers by Chuengsatiansup (1999b) and Tienmee et al. (1985) directly address aspects of Kui ethnomedicine, and neither study provides reference to Kui use of materia medica.

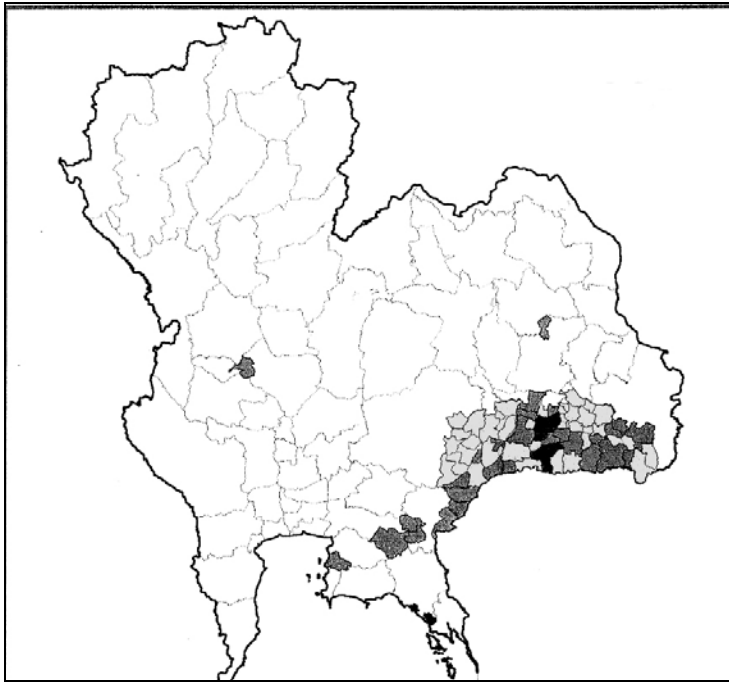


Figure 1 Estimated Kui populations by districts in Thailand. Different shades of gray depict the population of Kui people in each district. Light gray = 2000-10,000; Medium gray = 10,000-25,000; Black (two districts) = 25,000-38,000 (Pramsirat, 2003).

CHAPTER III

METHODOLOGY

3.1 Methodology Framework

The framework for this study was based on principles of ethnobotany (Cotton, 1996), ethnopharmacology (Etkin, 2001), and ethnomedicine. Social science methods were used to determine a population and sample which well represent the diversity of Kui traditional healers. A variety of research tools were used to generate data on 1) The system of treatment; 2) Health conditions; 3) Preparation methods; 4) Materia medica; and 5) Socio-demographics among healers. Data analysis methods were specific to each type of data that was collected.

3.2 Research team

I was born and educated in the U.S.A., and ethnically Thai. I lived in Khon Kaen, Thailand for two years prior to the research. During the field work, native Thai speaking field assistants were hired to interpret the culture, write vernacular names in Thai characters, and verify meanings of words which may vary by dialect, ethnicity and region. At least one field assistant accompanied me on each trip. Logistic problems led to eight different people filling this position—rather than one consistent field assistant. Field assistants were finishing or had finished an undergraduate degree at a Thai university. All spoke Central Thai and either Isan or Khmer, and we communicated together in Central Thai. Local Kui field assistants who spoke either Kui and Thai or Isan were often hired or recruited to help provide cultural links and interpret the language of healers. These Kui speaking assistants consisted of a student entering university, secondary school students, and adults from neighboring households of traditional healers. Also due to logistic problems, a Kui speaking assistant was not present throughout the entire field study.

3.3 Ethics

Ethical approval of the project and interview methods was obtained from the Human Research Ethics Committee, Khon Kaen University (Approval #HE470653, August 2004) (Appendix B).

Because medicinal plant field research can be a sensitive issue, a wide range of people were informed about the research throughout the course of the study. These people

included government officials at district hospitals, health clinics, police stations, and city halls and provincial offices of the Ministry of Public health, heads of the villages and traditional healers, their family members, and surrounding neighbors.

Abiding to Thai tradition, heads of villages were contacted soon after entering a new village and major points of the study were explained. After the healer was selected as part of the at-large sample, an introduction letter and informed consent letter were distributed to the heads of the villages and traditional healers and their family members (Appendix C). The introduction letter and informed consent was read, explained, and discussed with the healer and household members. The informed consent was approved verbally by the healers, rather than with a signature, in respect of local traditions. Both documents were left at the household for the family members to study in our absence. During the research, we were fortunate to meet patients who were visiting the healer for treatment. In these cases, we explained our research and asked their permission to interview and/or photograph them. Some of these results were included in Chapter 4 and Appendix A. Healers were compensated for giving up their time and accommodating us during the research. Section 3.8 provides details of these benefits and compensation.

3.4 Population and sample of healers

Three populations were studied. The first population consists of districts located in Surin, Si Sa Ket and Ubon Ratchathani provinces. A sample of districts and sub-districts known to have populations of Kui was randomly selected. A second population of 189 Kui villages was surveyed for traditional healers. A third population of 408 Kui traditional healers was identified and healers were interviewed from this population until a target number of 45 healers were reached. During the process of recording and documenting data, this number was reduced to 30 healers who participated in the in-depth study.

3.4.1 Population of Kui districts and villages

Estimate numbers and locations of Kui villages found in Nakhon Ratchasima, Maha Sarakham, Buriram, Surin, Si Sa Ket, and Ubon Ratchathani provinces were obtained from literature sources (Yantreesingh, 1980; Tienmee, 1994) (Figure 1, Table 2). This study focused on the population of Kui settlements located in 34 districts of Surin, Si Sa Ket and Ubon Ratchathani provinces.

Kui districts were selected to represent an even distribution across the provinces (Figure 2). From August to December 2003, sub-districts of these districts were opportunistically selected for surveying Kui villages for traditional healers. Kui communities

were homogenous; they were predominantly rice farmers with similar culture, traditions, languages, and village size. Only villages that were over 50% Kui or Kui speaking, according to the head of the village, were included in the study. There were 189 villages surveyed, out of the population of 593 Kui villages identified by Tienmee (1994) (Table 3)⁶. A list of these villages is included in Appendix D.

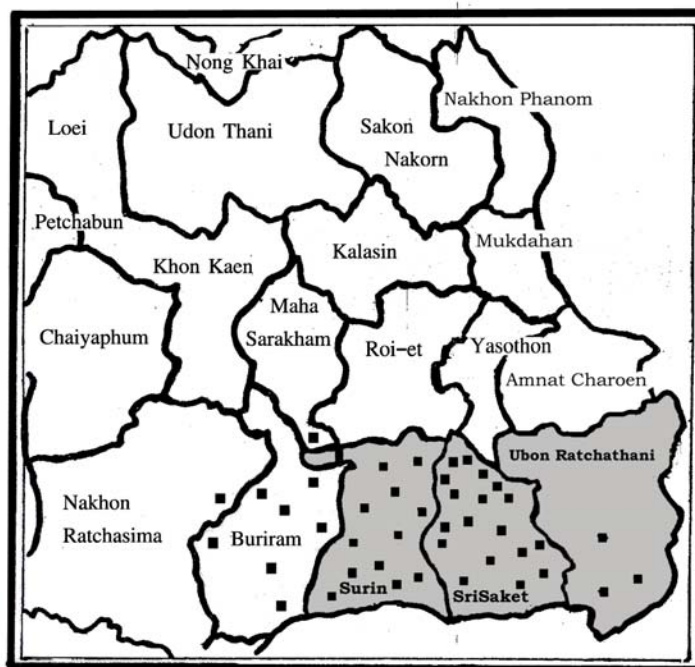


Figure 2 Districts with Kui communities in Northeast Thailand. Provinces selected for sampling are shaded gray; squares represent Kui districts.

⁶This sample number also ensures 90% confidence interval in the case of heterogeneity among Kui villages (Bernard, 2002).

Table 2 List of districts with Kui communities.

| Province | District |
|---------------------------------|---|
| Nakhon Ratchasima นครราชสีมา | 1. Huai Thalaeng ห้วยแถลง |
| Maha Sarakham มหาสารคาม | 1. Phayakkhaphum- Phisai พัยคณภูมิพิสัย |
| Buri Ram บุรีรัมย์ | 1. Satuk สะตึก 2. Ban Kruat บ้านกรวด 3. Krasang กระสัง 4. Nong Ki นongกี 5. Lam Plai Mat ลำปลายมาศ 6. Prakhon Chai ประโคนชัย 7. Muang Buri Ram เมืองบุรีรัมย์ |
| Surin สุรินทร์ | 1. Buachad บัวเชด 2. Tha Tum ท่าตูม 3. Rattanaburi รัตนบุรี 4. Chom Phra จอมพระ 5. Sanom สนม 6. Sangkha สังขะ 7. Prasat ปราสาท 8. Chumphon Buri ชุมพลบุรี 9. Samrong Thap ตำโรงทาบ 10. Sikhoraphum ศรีขรภูมิ 11. Kap Choeng กาบเชิง 12. Lumduan ลำดวน 13. Muang Surin เมืองสุรินทร์ |
| Si Sa Ket ศรีสะเกษ | 1. Nam Kliang นำเกลี้ยง 2. WangHin วังหิน 3. Rasi Salai รายี่ไศล 4. Prang Ku ปรางค์กู๋ 5. Phrai Bueng ไพรบึง 6. Khukhan ขุขันธ์ 7. Khun Han ขุนหาญ 8. Non Kun โนนคูณ 9. Sri Ratana ศรีรัตนะ 10. Uthumphorn Phisai อุทุมพรพิสัย 11. Huai Thup Than ห้วยทับทัน 12. Kantharalak กันทรลักษ์ 13. Pho Srisuwan โพธิ์ศรีสุวรรณ 14. Kanthararom กันทรารมย์ 15. Muang Chan เมืองจันทร์ 16. YangChumNoi ยางชุมน้อย 17. BuengBun บึงบูรพ์ 18. Muang Si Sa Ket เมืองศรีสะเกษ |
| Ubon Ratchathani อุบลราชธานี | 1. Det Udom เดชอุดม 2. Nam Yuen น้ำย้อย 3. Na Chaluai นาจะหลวย |

(Yantreesingh,1980; Tienmee, 1994)

Table 3 Number of villages surveyed in each province.

| <u>Province</u> | Estimated number of Kui villages* | Number of villages surveyed |
|------------------------|--|------------------------------------|
| Surin | 322 | 124 |
| Srisaket | 257 | 51 |
| Ubon R. | 14 | 14 |
| Total | 593 villages | 189 villages |

(Tienmee, 1994)

3.4.2 Population of traditional healers

Triangulation is conducted by posing a question in different ways and times to several informants (Alexiades, 1996). This method is effective for cross-checking and validating information.

Triangulation methods were used in this study to survey for herbalists, blowing doctors and spirit healers. In each surveyed village, three people or groups of local residents were selected by approaching people who were outside of their homes and available for a few minutes. Leaders of the village and shop owners were specifically targeted for interviews, because they are often quite knowledgeable of local current events. Interviewed residents were asked to list traditional healers in their village and neighboring villages. They were also asked to list Kui villages in their district to verify and add to our list of Kui villages.

Surveys among the general population in 189 villages identified 398 traditional healers, including herbalists, blowing doctors, spirit healers, midwives, and masseuses (Table 4). Some healers were identified as multi-skilled healers, and these healers are distinguished in the table. The number of midwives and masseuses are most likely under-estimated because these groups were not targeted during the interviews. For this reason, midwives and masseuses were excluded from the population. The final population of this study was 388 healers.

Table 4 Population of healers by provincial location and type of healers

| Type of healer | Surin | Si Sa Ket | Ubon R. | Total |
|------------------------------|--------------|------------------|----------------|--------------|
| herbal | 29 | 16 | 15 | 60 |
| blow | 81 | 51 | 28 | 160 |
| spirit | 28 | 18 | 2 | 48 |
| LPT | 26 | 8 | 11 | 45 |
| herbal/ blow | 22 | 21 | 15 | 58 |
| herbal/ spirit | 3 | 0 | 0 | 3 |
| blow/ spirit | 1 | 1 | 1 | 3 |
| spirit/ LPT | 1 | 2 | 2 | 5 |
| herbal/ blow/ spirit | 2 | 2 | 0 | 4 |
| midw | 3 | 2 | 0 | 5 |
| mass | 1 | 1 | 2 | 4 |
| herbal/ midw | 1 | 0 | 0 | 1 |
| blow/ midw | 0 | 1 | 0 | 1 |
| midw/ mass | 0 | 0 | 1 | 1 |
| Total | 198 | 123 | 77 | 398 |
| Total, excluding midw & mass | 194 | 120 | 74 | 388 |

Rows: herbal = herbalists; blow = blowing doctors; spirit = spirit healers; LPT = leaders of *Lum Pee Taan* ceremonies; midw = midwives; mass = masseuses.

3.4.3 Sample of traditional healers

Purposive sampling or judgment sampling, as described by Bernard (2002), is conducted by developing specific criteria for a study group and then locating individuals who fit these criteria. This method is often used to test a hypothesis with a representative sample in pilot studies and to describe cultural phenomena. Purposive sampling was used in this study to select sample healers according to established criteria (Table 5).

Quota sampling, as described by Bernard (2002), is conducted by identifying subpopulations of interests and then, establishing the proportion of these subpopulations that will be used for the final sample. Quota sampling was used in this study to determine a sample number of 45 healers, which was the maximum number of healers that the resources of this research could support. This sample number was equally proportioned into 15 herbalists, 15 blowing doctors, and 15 spirit healers.

Disproportionate sampling, as described by Bernard (2002), is often used to ensure

that a sub-population is represented in a random sampling of the population. The population is broken up into different strata and random sampling is conducted among these strata. Disproportionate sampling was used in this study to ensure that there were at least 5 leaders of *Lum Pee Taan* ceremonies represented within the 15 spirit healers of the sample group

Table 5 Criteria of the study group. The symbol ‘*’ marks the only criterion that determined from data generated during healer surveys among the community, in contrast to profile interviews which were used to determine the remaining criteria.

| Criteria | Method of determination |
|--|--|
| 1. Healer is ethnically Kui | Healer has parents who are ethnically Kui and speak Kui |
| 2.* Healer’s healing capabilities are respected among local people | Triangulation method: based on community members’ opinion of their local healers |
| 3. Healer is willing to share information and participate in study | Healer asked a direct question |
| 4. Healer’s knowledge has been obtained from ancestors | Healer gained main body of knowledge from a teacher of Kui ethnicity or spirits |
| 5. Healer is an active healer | Healer treats at least one patient a month |

All healers who were identified by villagers as traditional healers were considered to have healing capabilities that were respected among local people (criterion 2). Healers who were triangulated by village residents (identified by more than one villager) were considered more likely healers to pass criteria. These healers were interviewed using profile interviews. If a triangulated healer passed all criteria, different types of healers in the same village or sub-district were interviewed. In this way, clusters of healers were formed to reduce pressure on time and financial limitations. A total of 93 healers were interviewed between February-March 2004.

It was not always a straightforward process to determine if healers passed the criteria. Criterion 1 was challenged when healers stated that they had one Kui parent. In this case, the

healer passed the criteria if the healer had a Kui mother⁷, grew up in a Kui village, and learned from a Kui healer. Criterion 4 was challenged when healers reported they learned from Buddhist monks and spirits. Healers who learned from monks were not included in the study, because Buddhist temples often represent a unique traditional medical system which may be different from surrounding ethnomedicines. Healers who learned from spirits were included in the study because, as ethnically Kui people, it was assumed that spirits originate from Kui culture.

Multi-talented healers were another challenge in the sampling process. To overcome this, the healer's main area of expertise was determined by weighing perceptions of the healer from three different sources. This included other community members (data collected from survey and triangulation methods), the healer, and research team. In this way, most healers could be categorized into one type of healer. Two healers (**B13**, **P5**) were exceptions because they showed equal proficiency as two types of healers. Healer **B13** was counted once in the in-depth sample group and once again as part of the supporting sample group. Healer **P6** was considered as two types of healers in the supporting sample group (herbalist and spirit healer).

The quota of 45 different types of healers was represented with 41 actual healers. Figure 3 depicts the distribution of these healers. Three healers of the 41 healers were equally talented as two different types of healer and therefore were counted as two different healers. Another healer, **Y5**, was an informant for the recorded *Lum Pee Taan* traditions of her village and considered synonymous with a leader of *Lum Pee Taan*.

During the process of recording and documenting data, this group of 45 healers was whittled down to 30 healers according to personal rapport with the healer, logistic criteria, and supplemental criteria that was specific to the healer type. Logistic criteria included growing reluctance to share their knowledge with us, time confictions that made them unavailable, and quotes of exorbitant fees to share their knowledge. The supplemental criteria were developed during the interview process to increase the quality of data generated among the healers by identifying the most talented and knowledgeable healers. These criteria were based on basic definitions of the types of healers that were developed as the sample selection progressed. Herbalists were defined as healers who are able to specify the plant parts and names used to treat health conditions, method of using the plant, symptoms of health

⁷ Because marriages are often matrilineal and matrilocal, ethnicity of the mother, rather than the father, was used to determine the ethnicity of the child.

conditions, and the origin of medicinal plant. Among herbalists, supplemental criteria included (1) Healers who had practiced for more than ten years; (2) Healers who treated more than fifteen health conditions; and (3) Healers with the ability to evaluate (diagnose) diseases and prescribe herbal remedies. Blowing doctors were defined in this study as healers who rely on a blowing technique and incantation to treat patients who are afflicted with acute physical injuries and health conditions that are caused by spirits. Spirit mediums were defined as healers who have the ability to mediate and communicate with spirits. Two sub-types of spirit mediums, general spirit mediums and *Pee Taan* spirit mediums, were defined according to the types of spirits that they mediate. A general spirit medium was defined as a medium who mediates any types of spirit, such as ancestors or angels, outside of the realm of *Pee Taan* spirits. Criteria for leaders of *Lum Pee Taan* ceremonies included healers who conducted ceremonies to treat individual patients, in addition to annual village ceremonies.

In summary, the at-large sample group consisted of 41 healers which represented 15 herbalists, 15 blowing doctors, 8 spirit healers, and 7 leaders of *Lum Pee Taan* ceremonies. Thirty healers of the in-depth sample group are represented with 10 herbalists, 10 blowing doctors and 10 spirit healers, including 4 leaders of *Lum Pee Taan* ceremonies. Data from the remaining 11 sample healers was used as supporting data for the in-depth study sample. The three multi-skilled healers were included in both the in-depth and supporting sample group and the fourth multi-skilled healer was counted twice within the supporting sample group. As a result, the supporting sample group of healers consisted of 14 healers. The remainder of this manuscript will refer to the entire sample of 45 healers as the at-large sample group (Table 6), the 30 healers as the in-depth sample group (Tables 7-9), and the remaining 14 healers as the supporting sample group (Table 10). The thirty healers of the in-depth sample group are located in 22 different villages.

Each healer in the at-large sample has been coded to reflect the healer's group type. 'Y' refers to herbalist, 'B' refers to blowing doctor, 'P' refers to spirit healer, and 'Aj' refers to leader of a *Lum Pee Taan* spirit ceremony or *Acharn Lum Pee Taan* spirit medium. Each healer was given only one label code, even though the healer may be considered part of other groups. Tables 7-9 demonstrate the use of these labels. Table 10 includes an extra column which identifies the group type of the healer, and this does not necessarily match with the healer's label code. For example, **B13** is coded as a blowing doctor in Table 8 and identified with the supporting sample group for herbalists in Table 10. Healer codes are unique to each healer and are used as references throughout this manuscript to specify the source of the data.

Information on informant **Yai Bu**, who is often referred to in the text, may be found in section 4.1.

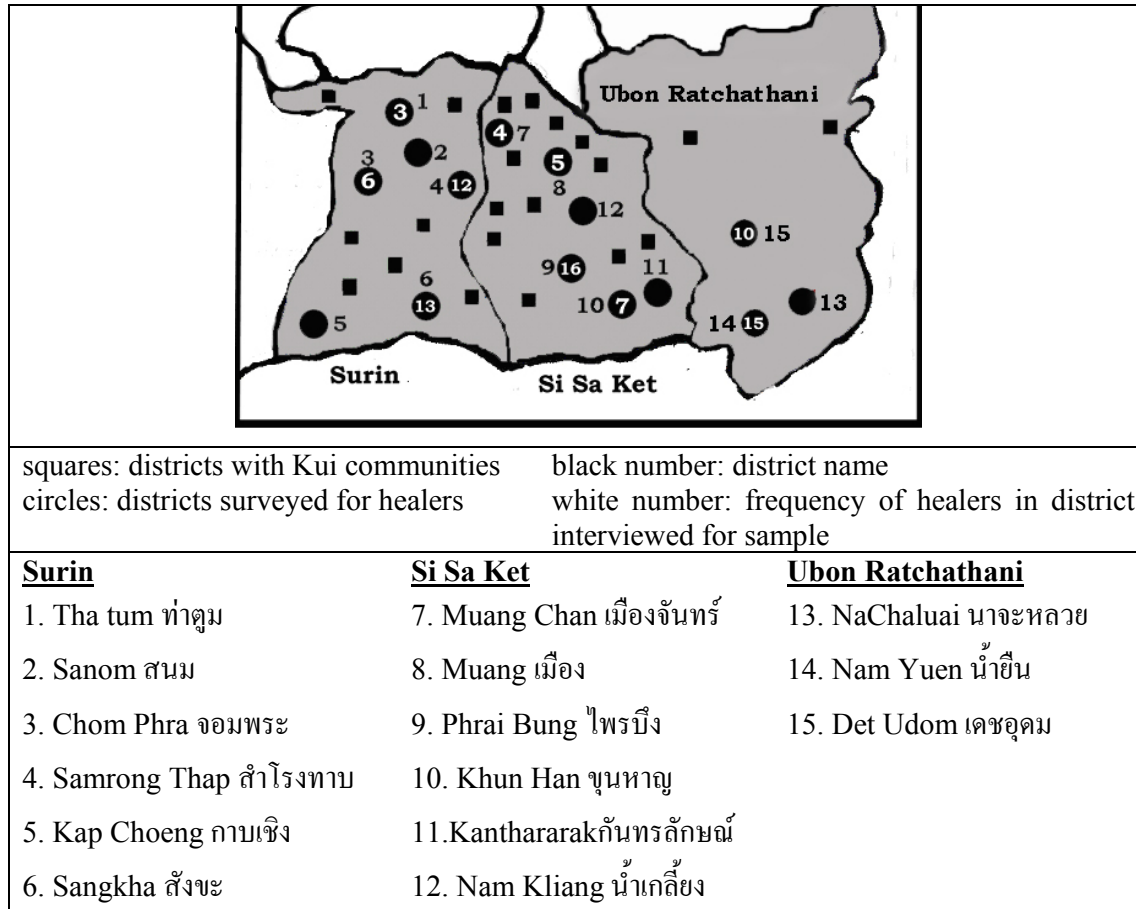


Figure 3 Distribution of surveyed districts and interviewed healers.

Table 6 Sample numbers of different types of healers and provincial distribution.

| | Herbalists | | | Blowing doctors | | | Spirit mediums | | | | | |
|-----------|------------|----|----|-----------------|----|----|-----------------|----|----|-----|----|----|
| | | | | | | | General mediums | | | LPT | | |
| | In | Su | At | In | Su | At | In | Su | At | In | Su | At |
| S | 3 | 1 | 4 | 5 | 1 | 6 | 2 | 1 | 3 | 1 | 1 | 2 |
| SS | 5 | 4 | 9 | 4 | 2 | 6 | 3 | 1 | 4 | 2 | 1 | 3 |
| UR | 2 | 0 | 2 | 1 | 2 | 3 | 1 | 0 | 1 | 1 | 1 | 2 |

Columns: In = in-depth sample; Su = supporting sample; At = at-large sample number of healers; LPT = leaders of *Lum Pee Taan* ceremonies. Rows: S = Surin province; SS = Si Sa Ket province; UR = Ubon Ratchathani province.

Table 7 Herbalists participating in the in-depth sample group. (H) = healers who were hosts for homestays.

| Code | Name | Address |
|-----------|-----------------|--|
| Y2 (H) | นายทา วงศ์ทอง | บ้านภูดิน ตำบลกะโป อำเภอน้ำขุ่น จังหวัดสุรินทร์ |
| Y3 | นายแทน วิวาสุข | 28/9 บ้านโพธิ์ศรีธาตุ ตำบลเกาะแก้ว อำเภอลำโรงทับ จังหวัดสุรินทร์ |
| Y5 (H) | นางคำ วันทา | 63/2 บ้านแปดอ้อม ตำบลโคมประดิษฐ์ อำเภอน้ำย้อย จังหวัดอุบลราชธานี |
| Y6 | ตามัด พลยา | 68/3 บ้านโนนสูง ตำบลโคมประดิษฐ์ อำเภอน้ำย้อย จังหวัดอุบลราชธานี |
| Y7 | นายเลื้อ โยธี | 74/10 บ้านประสาธเขอ ตำบลปราสาทเขอ อำเภอไพรบึง จังหวัดศรีสะเกษ |
| Y8 | นายเสา ภูหอม | 301/15 บ้านโคกสระแระ ตำบลพระแก้ว อำเภอสังขะ จังหวัดสุรินทร์ |
| Y11 | นายทอง นิยาย | 91/8 บ้านสร้างใหญ่ ตำบลดินแดง อำเภอไพรบึง จังหวัดศรีสะเกษ |
| Y12 | นายไบบ นุศลพล | 36/9 บ้านนาแปะ ตำบลตาโกน อำเภอเมืองจันทร์ จังหวัดศรีสะเกษ |
| Y13 | นายชัยศักดิ์ | 148/1 บ้านโพนปลัด ตำบลสุขสวัสดิ์ อำเภอไพรบึง จังหวัดศรีสะเกษ |
| Y14 | นายปุ่น ศรีเพชร | บ้านสะเต็ง ตำบลคูบ อำเภอน้ำเกลี้ยง จังหวัดศรีสะเกษ |

Table 8 Blowing doctors participating in the in-depth sample group.

| Code | Name | Address |
|-------------|--------------------|--|
| B1 | นางโต้ง สุภาวหา | บ้านหมื่นศรีใหญ่ ตำบลหมื่นศรี อำเภอสำโรงทาบ จังหวัดสุรินทร์ |
| B2 | นางป๊วย บุญกล้า | 63/12 บ้านตะเคียนพัฒนา ตำบลสำโรงทาบ อำเภอสำโรงทาบ จังหวัดสุรินทร์ |
| B3 | นายพัน กระสัง | 32/2 บ้านตางมาง ตำบลเกาะแก้ว อำเภอสำโรงทาบ จังหวัดสุรินทร์ |
| B4 | นายสุค ภูมิศักดิ์ | 159/2 บ้านเมืองจันทร์ ตำบลเมืองจันทร์ อำเภอเมืองจันทร์ จังหวัดศรีสะเกษ |
| B5 | นายมิตร ภูมิศักดิ์ | บ้านโนนสูง ตำบลเมืองจันทร์ อำเภอเมืองจันทร์ จังหวัดศรีสะเกษ |
| B10 | นายสมพร คำศรี | 87/3 บ้านประหูด ตำบลแก้ง อำเภอเดชอุดม จังหวัดอุบลราชธานี |
| B11 | นายลิน ไก่อแก้ว | 88/8 บ้านคูขาด ตำบลปราสาทเขย อำเภอไพรบึง จังหวัดศรีสะเกษ |
| B13 | นายวัง บุญเสโม | 3/8 บ้านป่าเวย ตำบลเกาะแก้ว อำเภอสำโรงทาบ จังหวัดสุรินทร์ |
| B14 | นางสุณา โยทา | 32/8 บ้านสร้างใหญ่ ตำบลดินแดง อำเภอไพรบึง จังหวัดศรีสะเกษ |
| B15 | นายดอน สับบรร | 36/2 บ้านหมื่นศรีกลาง ตำบลหมื่นศรี อำเภอสำโรงทาบ จังหวัดสุรินทร์ |

Table 9 Spirit healers participating in the in-depth sample. (H) refers to healers who were hosts for homestays.

| Code | Name | Address |
|-----------|------------------------|--|
| P1 | นางจวน แวนเงิน | 73/2 บ้านตางมาง ตำบลเกาะแก้ว อำเภอสำโรงทาบ จังหวัดสุรินทร์ |
| P2 | นางทองสี สมนาค | 19/8 บ้านป่าเวย ตำบลเกาะแก้ว อำเภอสำโรงทาบ จังหวัดสุรินทร์ |
| P3 | นายสิงห์ เฟ็งจันทร์ | 42/7 บ้านค้อ ตำบลโคมประดิษฐ์ อำเภอน้ำยี่น จังหวัดอุบลราชธานี |
| P4 | นางชนิษฐา พุทธรักษา | 59/8 บ้านคูสีแจ ตำบลปราสาทเขอ อำเภอไพรบึง จังหวัดศรีสะเกษ |
| P7 (H) | นางสมมด ศรีกะชา | 26/2 บ้านโคตรย ตำบลดินแดง อำเภอไพรบึง จังหวัดศรีสะเกษ |
| P8 (H) | นางคุ่น สระทอง | บ้านสะเต็ง ตำบลคูบ อำเภอน้ำเกลี้ยง จังหวัดศรีสะเกษ |
| A1 | นางม้วย บุลาคร | บ้านหมื่นศรีใหญ่ ตำบลหมื่นศรี อำเภอสำโรงทาบ จังหวัดสุรินทร์ |
| A2 (H) | นายผาย บุญยงค์ | 4/10 บ้านห้อง ตำบลตาโกน อำเภอเมืองจันทร์ จังหวัดศรีสะเกษ |
| A3 | นางพา กิลาณัน | 28/7 บ้านค้อ ตำบลโคมประดิษฐ์ อำเภอน้ำยี่น จังหวัดอุบลราชธานี |
| A4 (H) | ยายสั้น สุนันท์ | บ้านประออง ตำบลปราสาทเขอ อำเภอไพรบึง จังหวัดศรีสะเกษ |

Table 10 Healers included in the supporting sample group.

| Code | Type | Name | Address |
|------|------|------------------|---|
| Y1 | H | นายภู หอมหวล | บ้านกะโป ตำบลกะโป อำเภอท่าตูม จังหวัดสุรินทร์ |
| Y4 | H | นาย ดี สุขสังข์ | 38/13 บ้านสคำ ตำบลโพธิ์กะสังข์ อำเภอบุณฑุก จังหวัดศรีสะเกษ |
| Y10 | H | นายสี ดอนเหลื่อม | 16/12 บ้านผักไหม ตำบลขอนแดง อำเภอสังขะ จังหวัดสุรินทร์ |
| B6 | B | นายทูน โสดาโคตร | 196/1 บ้านเปือยใหญ่ ตำบลตะคอบ อำเภอเมือง จังหวัดศรีสะเกษ |
| B7 | B | นายมา โพธิสาร | 52/2 บ้านโพธิ์กะสังข์ ตำบลโพธิ์กะสังข์ อำเภอบุณฑุก จังหวัดศรีสะเกษ |
| B8 | B | นายเฉลิม มาสูง | 42/3 บ้านโนนสูง ตำบลโคมประดิษฐ์ อำเภอน้ำยืน จังหวัดอุบลราชธานี |
| B9 | B | นายพา โพธิ์ทัด | 2/5 บ้านบุงกล้า ตำบลแก้ง อำเภอเดชอุดม จังหวัดอุบลราชธานี |
| B12 | B | นายเล็ก ใจชื่น | 34/4 บ้านชำสมิง ตำบลบ้านขบ อำเภอสังขะ จังหวัดสุรินทร์ |
| B13 | H | นายวัง บุญเสโม | 3/8 บ้านป่าเวย ตำบลเกาะแก้ว อำเภอสำโรงทาบ จังหวัดสุรินทร์ |
| P5 | S | นางไข ทองใบ | บ้านพะเวะ ตำบลสุขสวัสดิ์ อำเภอไพรบึง จังหวัดศรีสะเกษ |
| P6 | H, S | นางเวส พิมพ์ทอง | ม.1 บ้านหนองสิง ตำบลเมืองสิง อำเภอจอมพระ จังหวัดสุรินทร์ |
| ---* | LPT | --- | บ้านหนองคูณ ตำบลน่านนวน อำเภอสนม จังหวัดสุรินทร์ |
| P7 | LPT | นางสมด ศรีกะชา | บ้านโตรย ตำบลดินแดง อำเภอไพรบึง จังหวัดศรีสะเกษ |
| Y5** | LPT | นางคำ วันทา | บ้านแปดอู่ม ตำบลโคมประดิษฐ์ อำเภอน้ำยืน จังหวัดอุบลราชธานี |

Type = type of healer group the healer is associated with in the supporting sample; H = Herbalist, B = Blowing doctor, S = Spirit healer, LPT = *Lum Pee Taan* ceremony. * = ceremony was observed without a main informant. ** = informant who provided descriptions of a ceremony in her village as the ceremony was being performed.

3.5 Research tools for collecting data

Field trips were conducted from February 2004 to July 2005 to collect data from the healers. Each healer was visited once every two or three months. Homestays were arranged with six healers throughout the study area and two *Pee Taan* spirit mediums from Murn Sri Yai village, Surin province (within 500 meters of blowing doctors **B1** and **B15** and *Acharn Lum Pee Taan Aj1*) (See Table 7-9). During the field trips these homes were used as a base for the few days that was spent visiting other healers in the district.

Healers were visited in rounds, and each healer was visited a minimum of two times. The number of rounds for each healer was determined by the need to collect more data with the healer. The least that a healer was visited was three times and the most a healer was visited (herbalist **Y5**) was 8 different times for a total of 20 days. In this way, interviewing methods and questions were tested and fine-tuned in the first round and the interview topics became more specialized and in-depth with each subsequent round.

Data was collected with profile and socio-demographic interviews, free-lists, health condition logs, observation and unstructured interviews, treatment interviews, plant specimen collections, and participatory observation. Each research tool is described below. Refer to Table 11 for descriptions of data generated by each research tool and methods for categorizing these data.

Profile interviews, Socio-demographic interviews, Health condition logs consisted of forms that were made prior to the field trip. These were handwritten on during the interview and later typed into a digital format. Results from free-lists, observation and unstructured interviews, and participatory observation were handwritten into Field notebook and later typed into a digital format.

3.5.1 Profile interview (Appendix E)

Profile interviews collected data which was used to determine if healers passed the established criteria to enter the sample group. These were structured interviews that were made prior to the field trip and were conducted during the surveying process.

3.5.2 Socio-demographic interview (Appendix E)

Socio-demographic variables were selected for this study based on factors identified in past ethnomedicine studies. Nolan (1998) analyzed the effect of socio-economic factors with the number of plant applications reported. He noted that community distance

from urban centers, county population density, and length of residence in a community and folk practice affected the number of plant applications reported. Do Thi (1994) conducted a study on the effect of socio-demographic characteristics on utilization of herbal medicine in Prachinburi province. Socio-economic status, age, gender, occupation, and family size were considered predisposing characteristics among patients who used herbal medicine. The results showed that factors such as age, occupation, education, socio-economic status and distance to the clinic significantly influence the patient's decision for selecting traditional medicine clinics over western clinics. Middle aged people with high education and better economical status preferred to use traditional medicine for the treatment of their illnesses.

The socio-demographic variables recorded in this study are 1) Obtaining and passing on knowledge; 2) Treatment activity among healers; 3) Birthplace and ethnicity; 4) Gender and Age; 5) Years practiced as a traditional healer; 6) Multiple treatment skills; 7) Languages and Literacy; 8) Household wealth; 9) Family size; 10) Population of village; 11) Ethnicity of village; and 12) Distance to district center and health clinic.

Socio-demographic interviews were made prior to the field trip. The interviews were conducted among two groups of people. Among leaders of the village, socio-demographic interviews were conducted as structured interviews at the same time that the introduction letter and informed consent was distributed. Among the healer and the healer's family, socio-demographic interviews were conducted as semi-structured interviews. Demographic interview questions with the healers were spread out through the course of the study or towards the end of the study period when the rapport with the healer was stronger.

3.5.3 Free-lists

Free-listing is often used to determine discrete linguistic domains, by asking informants to list items within a category, such as kin, animals, plants, and diseases (Bernard, 2002). The length of the list (Brewer, 1995) and the frequency that an item is mentioned by informants (Bernard, 2002; Weller, 1988) can be statistically analyzed. Informants can be asked to elaborate on or organize the items listed, for example, by ranking a list of health conditions according to its degree of life threatening (Weller, 1984). The salience, or psychological prominence, of the listed items can be quantitatively determined by analyzing the order of the listed items, since informants tend to list the most significant items first (Martin, 1995). One disadvantage is that the list may not be complete, as it relies on memory recall of the informants.

In this study, free-lists were used in-sync with the profile interview to generate baseline data on health conditions that healers could treat. Healers were asked, for example:

‘ตารักษาโรคอะไรได้บ้าง?’ (in Thai) ‘What kind of illnesses/diseases or symptoms can you (grandfather) treat?’ After listing some frequently treated illness, the healer was asked to elaborate on the symptoms, methods of treatment, and remedies for the illness. Free-lists provided a rough estimate of the healer’s treatment capability, and helped to determine if the healer was appropriate for the study. For healers who were included in the study, free-lists provided a starting point for the collection of data.

3.5.4 Health condition logs (Appendix E)

Health calendars were used successfully by Scott (1974) with ethnic groups in Miami to record the ways that families treated their health problems. With this method, families were asked to keep a health calendar describing their symptoms of illness and the action taken in response. Based on the records, further participatory observation and in-depth interviews were conducted to collect data on the etiology of health problems and the family’s reasons for engaging in certain health behaviors. These logs are useful for collecting data on current health treatment activities among both traditional healers and families and provide descriptions from their perspective.

This method was modified in this study to focus on the treatment behavior among Kui healers, rather than among patients. Each time a healer was visited retrospective treatment logs were collected by asking the healers to provide information on health conditions that the healer had treated previous to the field visit. Specifying time parameters such as, within the last month, week or few days was necessary to generate information. The health condition logs were used to gauge the activity of the healer, stimulate new data on treatment practices and medicinal plant use, and verify collected data.

A typical interview began with asking the healer, ‘During the last month did you treat any health conditions of patients?’ If the healer answered, yes, then the healer was asked, ‘How many patients came to see you?’ This number was recorded and then, the healer was asked ‘What kind of illness or symptoms did the last patient who visited you have?’ The healer was asked to think back to each health condition that they treated until the number of patients had been fulfilled. In the case that healers did not treat any health conditions during the past month, the healer was asked to recollect the month before. If the healer treated numerous health conditions during the month (more than they could remember), then the time parameters were narrowed to a lesser interval, such as a week or a few days.

Leaders of *Lum Pee Taan* ceremonies, and often with the assistance of surrounding household and community members, were asked to recollect health conditions that were treated via *Lum Pee Taan* ceremonies. However, *Lum Pee Taan* ceremonies are usually conducted at specific times of the year (around the 3rd or 4th month) and oftentimes the healers were not prepared to recollect so far into the past. As a result, it was also necessary to supplement this method by recording future ceremonies that were planned to take place for patients. Ceremonies that were going to take place during the *Lum Pee Taan* season were often noted on a calendar. This calendar was used as a health condition log by discussing the health conditions that would be treating in these upcoming ceremonies with the leaders of *Lum Pee Taan* ceremonies.

Among most healers, health conditions were recorded until at least 6 months of recollected health conditions had been documented for each healer. However, among very active healers (treating more than one patient a day), it was not realistic to reach this quota. During each field trip, these healers were asked to recollect the health conditions that they had treated day by day, until the healer could not remember farther back. After the healer had been part of the study for over 6 months (over multiple field trips), this data collection was considered complete.

3.5.5 Observation and unstructured interviews

Observations and unstructured interviews with healers were conducted throughout the field study to record data on treatment methods and their role as healers. This method was especially valuable for studying the treatment methods used by spirit mediums. During the process of recording *Lum Pee Taan* ceremonies, for example, we discussed the ceremony multiple times with many different people (leader of the ceremony, other mediums and surrounding villagers) to gain a more comprehensive picture of the ceremonies and beliefs.

Data generated from these methods were documented as handwritten field notes, and later reviewed and typed into a digital format. These notes were used to identify distinctive characteristics among the healer types, which were tested on following field trips with the healers (see section 3.5.6).

3.5.6 Treatment methods interviews (Appendix E)

These interviews were developed mostly from observations and unstructured interviews with the healers. This method relied heavily on diversity of healers, high sample number of healers, and multiple visits with healers in order to generate the topics. Distinctive

treatment characteristics were identified and developed into an outline of variables that was specific to each type of healer. The topics in the outline were covered with each healer, so that standardized data was collected with the healers.

As an example, during an interview with one blowing doctor, it was noted that he only practiced his blowing treatment before eating. This was identified as a possible defining characteristic among blowing doctors. Following interviews with blowing doctors confirmed this, and this characteristic was included in the treatment interview. Throughout the course of the study, each blowing doctor was interviewed to collect data on this characteristic.

Interviews with blowing doctors focused on the practical aspects of the blowing method(s). No effort was made to document their blowing incantations, as these are usually highly guarded by the healer (or required a high monetary fee in exchange). Occasionally, healers volunteered to give their incantations and these were recorded.

3.5.7 Participant observation

This technique requires the researcher to participate in tasks with the community of study and observe the community members' interactions and daily life. Data may be collected by recording observations and asking questions (Alexiades, 1996). Participatory observation is considered a highly reliable technique. It reduces the possibility of behavior change among the people of study and offers the researcher an intuitive understanding of the culture which improves his/her ability to formulate more sensible questions (Bernard, 2002). However, it often requires a lengthy study period to form rapport with the community, which is necessary to gather valid data. This method can be quite useful within studies of ethnomedicine. Traditional medical knowledge can be highly guarded by healers and a lengthy correspondence using subtle and unobtrusive methods, such as participant observation, is often necessary to document knowledge. Voeks (1995) used this method successfully to examine the plant pharmacopoeia and healing concepts used in spiritual healing ceremonies by traditional specialists in Brazil.

Participant observation was used in this study to generate, collect and confirm data on treatment methods among all types of healers. But, this method proved most invaluable among spirit healers. In substitution of an authentic spirit ceremony with a patient, general spirit healers were asked to conduct fortune-telling ceremonies for us, so that we could experience and observe a spirit ceremony. Participant observation was used to record multiple *Lum Pee Taan* ceremonies and associated ceremonies.

3.5.8 Specimen collection

Voucher specimens of materia medica were collected as dried specimens and photographs. Dried specimens consisted of plant material. These were fertile and infertile herbarium specimens that were usually collected from a site with the healer and raw materia medica (plant parts) that was purchased or given to us by the healer. We rarely collected raw materia medica. Healers often keep very limited supplies of medicine. Even though a healer was often willing to give us the raw material, we usually preferred to take a photograph, out of respect to the healer's trade. In the case that the healer had large quantities of a medicine or it was a common material, we purchased the raw materials from the healer as voucher materials. Photographs were taken of plants in the natural habitat as supplements to the herbarium specimens and raw materia medica that could not be collected, such as rare and valuable material, animal parts, and minerals. We did not seek out specimens of material which could not be found in the local area or were no longer used by the healer. Information on collected dried plant specimens were recorded into a Plant specimen notebook (see section 3.6.1.3 for description).

Complete and fertile specimens of each plant species were optimal. When infertile specimens were collected, healers were asked to detail the time of year when the plant flowered and subsequent collections were attempted to collect a fertile specimen. Specimens were often verified with other villagers and healers to confirm the plants' identity and generate more information on the medicinal plants.

When a new name of a materia medica was generated, the healer was asked to describe the item. If the material was common, the scientific name was recorded. If the identity of the material was uncertain, we usually remarked 'I don't know this plant. I wonder what it looks like?' and usually, the healer would volunteer to show us the material, if it was convenient (dried and collected in the house or growing near the house), or proceed to describe the material in more detail. If the identity of the plant was still uncertain and it was located far from the house or not visible at the time of year, the healer was casually asked to show us the plant the next time that we visited or at the time that the plant was growing or blooming.

Plant collecting ventures were usually planned prior to the trip, by making an appointment with the healer at least a day before. Healers are often very busy and sometimes it was necessary to take short and direct trips. For example, a healer may only have time to take us into a forest in the morning before the healer took the cattle out to graze or in the late afternoon after the healer had returned. Tuesdays were targeted as plant collecting days, because healers preferred to collect plants on this day of the week, and in this way healers

could collect plants while we collected specimens. A few healers, such as herbalist **Y5**, were avid plant collectors and little notice was necessary for a plant collecting trip. Healers were always compensated monetarily for the time that they spent accompanying and teaching us the identity and use of the plants during the plant trip collection.

Vernacular names of the material were recorded according to the name that the healer used with us, which will be referred to as the ‘Response’ name throughout the remainder of this manuscript (refer to section 3.6.2). We did not attempt to record the Kui names of all the materials, although these names were documented if the information was volunteered.

On some occasions, plants with similar names were collected with other healers. In this case, plant vouchers (as dried specimens or photographs) that were collected with one healer were verified with another healer (who did not accompany us to collect the plant) to determine if it was the same species that the healer used.

The scientific names of plant specimens were identified using a variety of resources: Chaweerat, 2005; Chaweerat, 2005; Gardner *et al.*, 2000; Lekagul, Round, 1991, Bumjob *et al.*, 2003; McClatchey, 2005; Mokkamul, 2005; Picheansoonthon, 2005; Picheansoonthon *et al.*, 2003; Picheansoonthon and Jirawong, 2003; Bonchai, 1997; Chalermglin, 2002; Smitinand, 2001; Majchacheep, 1999; Thai traditional medicine, 2004; Songwonsombut, 2002; and Songwonsombut, 2002. The identity of some specimens was confirmed at the Thailand National Forest Herbarium in Bangkok (BKF). Smitinand’s ‘Thai plant names’ (2001) was used as the main source for scientific names of the plants, including family, genus, species, and plant habit. Author names of plants are according to www.tropicos.org and www.ipni.org.

The primary set of specimens was deposited at the Thailand National Forest Herbarium (BKF) in Bangkok, Thailand. The secondary set was deposited at the teaching herbarium of the Faculty of Pharmaceutical Sciences, Khon Kaen University, Khon Kaen, Thailand. The label data and photos are stored on the Virtual Herbarium database of New York Botanical Gardens and available through the internet (www.sciweb.nybg.org/science2/).

3.6 Organizing data

3.6.1 Organizing collected data

Data generated from the research tools was collected in three separate collections called Field notebook, Healer data collection, and Plant specimen list. Data from

Field Notebook was later dispersed into Healer data collection. As a result, Healer data collection and Plant specimen list formed the main collections of data.

3.6.1.1 Field notebook

The field notebook was made up of notes taken from the field. These included data from the free-lists, participatory observation, observation, and observations and unstructured interviews with the healer and community members and a record of all events and activities occurring with the healer and surrounding community members. Notes were coded by the date and healer we were visiting when the note was taken. At the end of the day, this information was typed into a notebook computer as a digital copy and additional observations were added. After returning from the field, this information was copied and filed into the relevant Notes categories of the Healer data collection.

3.6.1.2 Healer data collection

Healer data collection was organized into three separate collections titled Herbalists, Blowing doctors, and Spirit mediums. Each collection was further organized by healer codes. After each visit with a healer, data was added, re-organized and evaluated to identify activities and the direction for interview topics that should be covered on the following round with the healer. After the second or third visit with a healer, this document became fairly detailed and was used directly to guide interviews and verify previously collected data.

Table 11 describes the outline of data that was included under each healer code. The columns of the table identify the Notes category, Source/Method, Description, and Dispersal site. The Notes category is the category of information that is included for each healer. The first four Note categories (Name and location of healer, Check-list of things-to-do, Field notes, Gifts and compensations) are chiefly logistic information that was used to monitor the research study with each healer. The remaining seven categories represent the data collection that analyzed in the study. The Source/Method identifies the origin of the information that is included under the Notes category or the method that was used to generate this information. The Description column describes the information that is included in the specified Note category. The Dispersal site identifies other Note categories where information from the original Note category was dispersed.

3.6.1.3 Plant specimen notebook

This was a record of all the dried plant specimens that were collected on the field. This document was organized by specimen number and included such data on the specimen as number of specimens collected, local name of the plant, collection date, healer or person who showed us the plant, location of specimen, morphological, ethnobotanical, and other associated information on the species, and parts of the plant included in the specimen. This information was later transferred to labels for herbarium plant specimens and to the List of Materia medica in Appendix G.

3.6.2 Multi-lingual data collection

Discussions with Kui community members were usually conducted in Thai and Lao (Isan), as intermediary languages. During the interviews, the first responses (R) of the healers to our inquiries of health conditions and materia medica were recorded first. These were the names that were used in throughout following interviews and discussions with the healers. Later, healers were asked for the Kui or Yuh names of these health conditions and materia medica and these are noted with a ‘K’ or ‘Y,’ respectively in the data collection. If healers specifically noted that a name was Lao (Isan) or Khmer, these were listed and noted with an ‘L’ and ‘Kh,’ respectively. During the data collection, Kui, Yuh, Lao (Isan), and Khmer words were documented in Thai characters. English approximations of Thai, Lao (Isan), Kui and Khmer words are written in italics and parenthesis in this manuscript for the convenience of Thai language illiterate readers.

Table 11 Outline of healer data collection notebook. Notes category: category of information included for each healer; Source/Method: origin of the information from Notes category or the method used to generate this information; Description: information that is included in the specified Note category; Dispersal site: other Note categories where information from original Note category was dispersed.

| Notes category | Source/ method | Description | Dispersal sites |
|--|--|--|--|
| Name and location of healer | Profile interview method | ----- | ----- |
| Check-list | ----- | Check-list of activities to be conducted with healer to complete research study. | ----- |
| Field notes | Field notebook | Records of activities conducted during each visit with healer | Profile and socio-demographic interview, Treatment interview |
| Gifts and compensations | Field notebook | Records of gifts and compensations given to healer and community | ----- |
| Socio-demographic interview with head of village | Socio-demographic interview method | Socio-demographic data of community | ----- |
| Profile interview | Profile interview method, Field notebook | Healer's basic personal history and defining characteristics as a healer | Socio-demographics interview with healer, Treatment methods. |
| Socio-demographic interview with healer | Socio-demographic interview method | Healer's personal historic background and socio-demographic | Profile interview |

Table 11 Outline of healer data collection notebook. (Cont.)

| Notes category | Source/ method | Description | Dispersal sites |
|---------------------------|--|---|---|
| | | data of healer. | |
| Treatment methods | Treatment methods interview method | General treatment methods and beliefs of healer. | ----- |
| List of health conditions | Free-list, Observations, Unstructured interviews, Participant observation, Health condition log methods | Names of health condition in Thai and Kui, symptoms, treatment method, records from health condition log | ----- |
| List of materia medica | Free-list, observations, Unstructured interviews, Participant observation, Health condition log, Specimen collection methods | Parts used in the medicine, origin or current location, photos or specimen collection number, preparation method, and use details | ----- |
| Health condition log | Health condition log methods | List and descriptions of health conditions treated by healer | Treatment interview, List of health conditions, List of materia medica. |

3.7 Data verification and analysis

The treatment and medicinal plant data was verified on two different levels, the individual and consensus level. On the individual level, data was verified with each healer by repeating methods and using different methods to collect the same data. Collected data was reviewed with the healers to verify that it was documented correctly. Among individual healers, results of free-lists, patient logs, and unstructured interviews were compared to generate data on healers' treatable health conditions, medicinal plants and treatment methods. Cross-checking data with more than one person, such as the healer, healer's family, neighbors, village leader and other healers and community members helped to verify the identity of collected plants and socio-demographic data of the village and healer.

On the consensus level, the medicinal plants and health conditions were compared and evaluated for similar use and treatment by same and different types of healers and groups of healers. In this way, it was possible to determine valid data on medicinal plant use and identify the most potentially useful and important plants.

Information that was organized into the Healer data collection and Plant specimen list were analyzed into five parts: 1) System of treatment, 2) Health conditions, 3) Preparation methods, 4) Materia medica, 5) Socio-demographics. The methods used to analyze each of these parts are described below.

3.7.1 Analysis of system of treatment

This data was obtained from Treatment methods category of the Healer data collection. Because information in the Treatment methods category was organized into standard outlines between same type healers, it was possible to collate data together so that each variable included details from each individual healer. Generalizations under each variable in the outline were made, based on these compilations. Healer codes were used to reference sources for data to conserve details. These methods ensured a valid, verified and comprehensive picture of the treatment system of the healers.

3.7.2 Analysis of health conditions and range of treatment

Data from the List of health conditions and Healer data collection was compiled to form a Glossary of Health conditions (Appendix F). Descriptions of health

conditions were evaluated to group the health conditions into categories based on information given by the healers. Criteria used to group health conditions together include the following:

1. Origin of illness: Health conditions that share similar origins were determined to be closely related.
2. Affected body parts: Health conditions that affected the same body parts were determined to be closely related.
3. Symptoms: Health conditions that share similar symptoms were determined to be closely related.
4. Treatments and remedies: Health conditions for which the healer used the same remedy and method to treat the illness were determined to be closely related. Among blowing doctors, specific incantations were used to treat groups of health conditions, and these groupings were used to categorize health conditions. A shared purpose of the remedies was also used to categorize health conditions together, for example, the category Tonics.
5. Health condition metamorphosis: Health conditions which the healer noted as more or less severe types of other health conditions were determined to be closely related. For example, health conditions grouped into the category 'Pain and febrile illnesses' demonstrate this well. Healers stated that if health condition 5.1 was left unattended, it could lead to health condition 5.2. This health condition, in turn, could lead to more severe illnesses.

3.7.3 Analysis of preparation methods

Data for this section was obtained from the List of Health conditions, List of materia medica, and Treatment methods. The total frequency of observations of preparation methods used by healers was categorized to depict more to less popularly used preparation methods among healers. Different vehicles and application methods associated with preparation methods were quantified according to frequency of use. Descriptions of the preparation methods and application terms were made by generalizing the data collected from healers who used the methods.

3.7.4 Analysis of *materia medica*

Data from the List of *Materia medica* in the Healer data collection for each healer is summarized into a List of *Materia medica* of Appendix G. This list is based primarily on data generated from the in-depth sample of healers, although data from supporting sample of healers was added if there was a matching material used for medicine. No specimens were collected of fungus, animals, and minerals. Specimens were not taken of all plant materials, and labeling techniques were developed for the scientific names listed in Appendix G in order to identify between certain and less certain *materia medica* identifications. There are three levels of certainty and these are:

- A) Scientific names without any labeling have an associated voucher specimen and are considered valid.
- B) Scientific names in brackets identify plants that were not confirmed (no voucher specimen), although the species name is likely correct. These identifications are based on the healers' verbal descriptions of the material or were identified by the researcher and field assistants on the field and not collected as a specimen.
- C) The label 'c.f.' and 'unknown' is used to identify plants with voucher specimens for which the scientific name is uncertain or unknown.

Plant-use knowledge was analyzed by Gomez-Beloz (2002) using a cross-sectional questionnaire among forty adults from two villages in Venezuela. He calculated five types of use values (Table 12): reported use (RU), plant part value (PPV), specific use (SU), intraspecific use values (IUV), and overall use values (OUV) (Table 1). ΣRU is the total sum of uses reported by all the respondents for each plant, and this value is divided into the number of reported uses for each plant part ($RU_{[plant\ part]}$). Plant part value is calculated using the equation: $PPV = RU_{[plant\ part]} / \Sigma RU$. SU refers to the number of times a specific reported use is reported by a respondent. IUV allows for the ordering of use importance within a specific plant part by using the equation: $IUV = SU_{[plant\ part]} / RU_{[plant\ part]}$. OUS allows comparisons of use importance within a group of plants with the equation: $OUV = (SU_{[plant\ part]} / \Sigma RU)$.

Table 12 Plant-use knowledge analysis by Gomez-Beloz (2002). ΣRU = total sum of uses reported by all the respondents for each plant; $RU_{[plant\ part]}$ = reported use of a plant part; PPV = plant part value; SU = frequency of specific use; IUV = intraspecific use values; OUV = overall use values (OUV).

| $\Sigma RU = 82$ | | | | | |
|----------------------|-------|-----------------------|----|-------|-------|
| $RU_{[plant\ part]}$ | PPV | Specific reported use | SU | IUV | OUV |
| 26 (lf) | 0.317 | | | | |
| | | string for hammock | 11 | 0.423 | 0.134 |
| | | roof-morichal | 7 | 0.269 | 0.085 |
| | | fever | 3 | 0.115 | 0.037 |
| | | folk basket | 3 | 0.115 | 0.037 |
| | | headache | 1 | 0.038 | 0.012 |
| | | bow | 1 | 0.038 | 0.012 |

This analysis method was modified in this study to measure medicinal plant importance of ‘identified plants’ used by herbalists and blowing doctors, based on informant consensus of medicinal plants use to treat health conditions. Informant consensus frequency (IC) is the number of healers who stated a medical use for the plants. The number of use reports (UR) is the total number of health conditions which healers stated the plant could be used to treat. The health categories represent different grouping of health conditions which the plants were used to treat. The intraspecific use-value (IUV) was calculated by dividing the frequency of UR for the specific health category. As a result, higher IUV demonstrates greater importance of a plant for treatment in a specified health category.

These values were used to analyze plant importance among healers, and this is depicted as two levels of healer consensus. Each level is a magnification of the preceding level. The first level is healer consensus among materials used to treat the same health categories and the second level is healer consensus among materials used to treat specific health conditions.

The List of Materia from Appendix G is used to analyze the frequency of observations for 1) Different types of materials (plant, animals, minerals) are used among different types of healers; 2) Different types of collection origins of materia medica, based on data from

column labeled 'CO,' or Collection Origin, 3) Different plant parts that are used for medicine; 4) The relationship between plants parts and plant habit; and 5) The relationship between plants parts and preparation methods used to make medicine. A higher frequency of observations was determined as more popularly used or important.

Two aspects of analysis did not depend on the List of Materia from Appendix G Plant use importance was analyzed among materials used in *Lum Pee Taan* ceremony by determining the frequency of that materia medica was observed throughout *Lum Pee Taan* ceremony (Table 29). A higher frequency was determined higher use importance of materials. Beliefs and restrictions associated with collecting materials and collection sites of materia medica were described by compiling data from the Treatment methods category from the Data collection notebook.

3.7.5 Analysis of socio-demographic data

Data from the Socio-demographic interview with head of village, Profile interview, Socio-demographic interview with healer, Treatment methods, and Health condition log were used to analyze the socio-demographic characteristics of the healers. One-way ANOVA was used to measure variance and significance among different factors by using Statgraphics and STATA software. The specific analysis methods used for each factor that is included in this section are described below.

Obtaining and gaining knowledge factor was based on data generated from the Profile interview and the Treatment methods. The healer was asked to relate how they became healers, and where the majority of their treatment knowledge had come from. When a healer named a teacher, the healer was asked to provide some information on the teacher, such as teacher's ethnicity, languages, spoken, relation to the healer and present location.

Treatment activity was determined from the Profile interview and health condition log. Because the treatment activity was not homogenous among different healers, it was not possible to calculate quantifiable data.

Birthplace and ethnicity was determined from the Profile interview. The healer was asked what languages they spoke and what languages their parents spoke, in order to determine their ethnicity. The healer was asked to name the place of their birth and how far it was from their current residence.

Years practiced as a traditional healer was determined from the Profile interview.

The healer was asked to estimate within a ten year interval how long they had been practicing as a healer, in other words, been treating patients.

Multiple treatment skills were determined from the survey interview among villagers and from the Profile interview. Healers, who were knowledgeable of only 1-2 treatments, were not considered proficient in this skill. ‘Skills’ were considered acting as a different healer role, such as Herbalists, Blowing doctor or Spirit healer.

Languages spoken by the healer were determined from the Profile interview, and correlates directly with the healer’s Birthplace and ethnicity.

Household wealth was determined from the Socio-demographic interview with the healer. Household wealth was rated on a scale of 1-5; poor to wealthiest. This was qualitatively estimated by the researcher according to a number of factors including the number of family members, working adults, and younger members in school in the household, ownership of land, vehicles, livestock and other material items, overall state of the house, and general statements made by the healer and family regarding their financial situation.

Population of village was determined from the Socio-demographic interview with the leader of the village.

Ethnicity of village was determined from the Socio-demographic interview with the leader of the village, and was based primarily on the perspective of the leader of the village.

Distance to district center was determined from the Socio-demographic interview with the leader of the village. The district center is also the location of the hospital.

Distance to health clinic was determined from the Socio-demographic interview with the leader of the village

3.8 Benefits, compensation, and reciprocity

It is widely recognized that research which has benefits for the community has higher potential for success. Northeast Thailand has only recently entered the economic network, and villagers continue to practice traditions of giving, taking, and trading goods and services, rather than money (Phongphit, Hewison, 2001). We attempted to fairly compensate the participants for giving their time and effort in the study. Gifts were often presented to the healers upon each visit. These consisted of a range of items including, fruit, clothes, silk cloth, school supplies for children, jewelry, and bags. Healers who made small requests, such

as household supplies and medicinal plants, were usually granted these on subsequent field trips. Photos were taken of the healer and family members, and all of these photos were printed and presented to the healer and family. Hosts and hostesses of the homestays were compensated with money, material gifts, and food, for each visit.

Monetary compensation that was given at the beginning of a relationship with herbalists, was considered a 'teacher's fee.' All types of healers who had spent a considerable amount of time (half to full day) leading a plant collecting trip were compensated financially. At the end of the study, healers who had invested a lot of their time into the research as a whole (judged by researcher) were presented with another 'teacher's fee.'

Herbalists were offered an extra benefit for their participation in the study. Herbalists not only contributed considerable time and energy towards interviews and plant collecting trips, but they also generously offered their valuable knowledge of medicinal plants, which is usually highly guarded. Healers were given a copy in Thai of all of the data which had been recorded from them, with the scientific names included of the identified plants. Herbalists could make use of this to share knowledge with others. Herbalists were encouraged to make their own changes and additions to the record. This data was presented to each healer individually. It was initially proposed to group all of the knowledge together to encourage sharing among the healers, but it became apparent during the field research that herbalists preferred not to share their knowledge with other herbalists.

Recorded ceremonies of *Lum Pee Taan* included the co-operation of many villagers, who graciously acted as guides, translators, and hosts during the ceremonies. Photos of the ceremonies were printed and made into a photo book with detailed descriptions of the entire ceremony. Before the final copy was made, the descriptions were edited with a number of people including the leader of the ceremony and often large groups of people. Upon completion, the book was presented to the leader of the ceremony who then accompanied us to a decided public center, such as the village head, district head, or healer's house. Then the book was presented to a leader of the public center. Villagers were encouraged to make their own corrections and additions to the book after our exit from the field. This presentation of the book also served to mark the closing of the research (Appendix A: Photos 3.1-3).

3.9 Definitions of terms

The terms listed here are commonly used throughout the manuscript. The definitions of these terms are relative to this research study.

Health condition: illnesses and diseases (โรค), symptoms (อาการ), symptoms occurred from accidents (อาการที่เกิดจากอุบัติเหตุ), and ‘un-wellness’ (ความรู้สึกไม่สบาย) that effects the physical body of a person.

Lao: the language and ethnicity of Lao descendents in Northeast Thailand. This word is used in the text to reflect the perspectives of the community members who were interviewed in the study. In contrast, Laotian refers to the language and ethnicity of Lao descendents in Laos P.D.R.

Patients: people who are diagnosed by the healers and/or visit the healers over a period of time to check on their symptoms and ask for advice. This term may also refer to family members who stand in for the patient, especially for divinations and when the patient is too ill to come.

Remedy: A method used to treat a specified health condition. Herbal remedies consist of a collection of materia medica that is prepared in a specific way to treat a health condition.

CHAPTER IV

RESULTS

This chapter is designed to examine the four objectives of the study. The outline for the study is described in Table 13.

Table 13 Outline of Chapter 4

| Objectives of study | Associated results section |
|--|---|
| 1. Describe the health conditions treated and method of treatment by each type of healer and define their role as a health practitioner. | 4.1 System of treatment 4.2 Health conditions 4.3 Preparation methods |
| 2. Identify plants and plant parts used in treatments and evaluate their importance as a medicine. | 4.4 Materia medica |
| 3. Examine the relationship between traditional healers and local natural resources. | 4.4 Materia medica |
| 4. Determine the effect of socio-demographic factors on materia medica knowledge. | 4.5 Socio-demographics |

4.1 System of treatment

Kui names for healers can vary across the Kui community, which is demonstrated in Table 14. This data was collected from three Kui community members who are ethnically Kui, fluent in Kui, over 48 years old, respected members of the community and hostesses for homestays during the research study. **Yai Bu** of Surin province is an elder practitioner of a recorded *Lum Pee Taan* ceremony. Spirit healer **P7** is from Si Sa Ket province and herbalist **Y5** is from Ubon Ratchathani province. More information on these informants can be found in Tables 7 and 9.

Table 14 Types of healers in MurnSriYai village in Surin province, Throi village in Si Sa Ket province, and Baad Oom village in Ubon Ratchathani

| English | Thai | Yai Bu (Surin)* | P7 (Si Sa Ket)* | Y5 (Ubon)* |
|----------------------------------|----------------------|----------------------|-----------------------|----------------------|
| 1. Herbalist | หมอยา | คลูอะแจ | คลูแจะ | หมอแจ้ |
| 2. Blowing doctor | หมอเป่า | คลูปองแจ | คลูปอง | หมอปรอง |
| 3. Masseur | หมอนวด | ยะ | เงียะ | หมอบีบ |
| 4. Mid-wife | หมอดำแย | เจาจารย์ส | จะมอบ | แม่มอบ |
| 6. Medium | หมอทรง | มอ / ออ | ยะจู้ญุ่น | หมอทรง |
| 5. Practitioner of LPF | หมอรำผีฟ้า | มอ / ออ | หมอรำยะจู้ | หมอสะเอง |
| 7. Diviner | หมอส่อง | เนาะคำแฮ | หมอส่อง | หมอส่อง |
| 8. Fortune teller | หมอดู | -- | หมอเนาะเขียยะยะจู้ | หมอดู |
| 9. <i>Mo Tham</i> / 'Oil' doctor | หมอธรรม/ หมอน้ำมันต์ | ปองอ่อน/ หมอน้ำมันต์ | หมอธรรม / หมอน้ำมันต์ | หมอธรรม / วอเดือมนต์ |
| 10. Exorcist | หมอผี | ชำระ | คลูเบ่า | หมอกะมด |

4.1.1 Procedure for gaining traditional medical treatment

The basic steps associated with gaining treatment from traditional healers are as follows:

1. The patient brings offerings to a healer to begin the treatment process
2. The healer offers a diagnosis and then recommends a treatment.
3. The patient follows through with the treatment.
4. Upon recovery, the patient returns to make offerings to the healer.

The following sub-sections provide detailed descriptions from the ethnographic results among herbalists, blowing doctors, and general spirit mediums. A *Pee Taan* ceremonial treatment also follows a similar system, but with variations, and this is detailed in section 4.1.6.

4.1.1.1 Offerings before treatment (คำถวาย)

Across all healers, the most typical offered items include flowers and/or leaves of the flowering plant, *sui* with flowers, incense, a bottle of rice wine and a specified amount of money. Flowers are usually white or bright colored and/or good-smelling and do not wilt easily (Table 15). One healer (Y7) stated that yellow flowers were inappropriate. These plants are easily substitutable and often depend on the season, or when plants have leaves and flowers. One of the only exceptions may be *Seriococalyx schomburgkii* (ต้นไถ่) which made its appearance frequently as an offering during the spirit mediating ceremonies. *Sui* (ซวย) are made of banana leaves which are twisted into a cone and pinned into shape with a sliver of bamboo. Decorative flowers or leaves are placed within the *sui*. Some healers identify a diversity of *sui*, for example, spirit healer P7 recognizes large *sui*, tubular-shaped *sui*, ‘crow’s feet’ (ขากา), and ‘ears of rabbit’ (หูกระต่าย) in the spiritual ceremonies that she leads (Photo 4.1). Photos 4.2-3 depict examples of typical offerings for treatment from spirit healers and an herbalist.

The number of each type of item varies among the healers. Items of botanical origin were most often presented in paired sets, and the specific number of pairs depends on the tradition of the healer and immediate community. Flowers and/or leaves, incense, and candles

were usually offered as one pair. However, up to 13 clusters of flowers and/or leaves, 5 sticks of incense, and 5 pairs (one pack) of candles could be presented. *Sui* were offered most often as a *khan 5 khan 8* (ขัน 5 ขัน 8) or 13 pairs.

Many other types of items can be included in the offerings. Herbalists can be offered fruit, an item of layered banana leaves that is twisted into a cone (บายศรี), silk and/or white cotton cloth, uncooked rice, sweet dessert made of sticky rice (ข้าวต้ม), rolled tobacco, and a boiled egg. All blowing doctors must be offered blowing materials from a patient for each treatment, and these materials are used in the treatment. Supplemental offerings for the blowing doctors include silk and/or white cotton cloth, uncooked rice, a sweet dessert made of sticky rice (ข้าวต้ม), and rolled tobacco. Spirit healers often require other special offerings for divining ceremonies to entice spirits and ease their entry into the physical world. These offerings are candles and incense for lighting during the ceremony, uncooked rice kernels; dry roasted uncooked rice kernels; cooked rice kernels; sweet dessert of sticky rice (ข้าวต้ม); tobacco rolled into cigarettes; white cotton cloth; bananas or other fruit; cotton string; chicken egg (boiled or fresh) as a divining object; ‘Dress-up’ material for the spirit (mirror, comb, powder, jewelry, silk cloth); betel quid (*Areca catechu* nut, *Piper betle* leaf and slaked lime); bracelet & ladder made of *Jatropha gossypifolia* L. (ต้นสบู่ขาว); banana leaves shaped in cone (บายศรี); banana leaves shaped into *sui* and other similar shapes; and cotton string to tie around patients’ wrists to finalize the ceremony.

Another important part of the offerings is the amount of money, which is determined according to tradition. Herbalists specified 5, 12, 20, or 600 baht. Blowing doctors usually specified 24 baht, but 112 baht and multiples of 10 baht were also listed. Spirit healers specified 1, 24, 36, 39, 124, and 199 baht. All healers accept donations on top of these required prices. Patients may also ‘promise’ (บนไหว้) a certain amount of money to the healer after recovery. Herbalist **Y14** stated that the more money a patient promised, the more quickly the patient could recover.

Some patients approach herbalists for a remedy to treat a specific illness that has been

diagnosed by a previous doctor, usually from the hospital. In this case, the patient does not make an offering to ask for treatment, and simply pays the healer for the remedy according to the healer's specified price. The patient either pays for each remedy separately upon retrieval or pays the herbalist in entirety after their recovery. This type of patient is often considered more of a customer than a patient by the healer.

Table 15 Plant species and types of flowers selected by healers and patients as offerings; listed alphabetically by Thai characters.

| Response name (R); Kui name (K); description | Scientific name |
|---|--|
| (ต้น) ไม้ | <i>Seriococalyx schomburgkii</i> (Craib) Bremek. |
| (ต้น) ทองพันชั่ง (R) เสียม (K) | <i>Rhinacanthus nasutus</i> (L.) Kurz |
| พุด | <i>Tabernaemontana divaricata</i> (L.) R.Br. ex Reem & Schult. |
| มะลิ | <i>Jasminum sambac</i> (L.) Aiton |
| ลำควน (R) ปิ่นต้น (K) | <i>Melodorum fruticosum</i> Lour. |
| Any plants with red, pink, yellow flowers | --- |
| Any plants with white flower | --- |
| Any plants with aromatic flowers | --- |

4.1.1.2 Diagnosis of health conditions

Herbalists and blowing doctors both use a physical diagnosis. Herbalist **Y2** examines the color of the skin of a patient's hands and feet to diagnose the health of the blood and touches the patient's head to check the body temperature. Herbalist **Y14** examines the skin coloration of the bottom lid and blood veins in the eyes and applies pressure to the skin under the eyes to measure firmness. He uses his finger and flashlight to look into the mouth and under the tongue, and thumps on the stomach to listen to differentiation in sound. Blowing doctors determine most injuries by observation and physical probing.

Spirit mediums divine to determine the origin of the patient's illness (Photo 4.4). The healer uses the offering items provided by the patient to enter into a trance and call upon spirits. During possession, the healer may sing and dance to reflect the spirit's personality. The healer receives advice and insight and relays the information to the patient, and the patient also has the opportunity to direct questions towards the spirits. If a patient is too ill to make a visit to the spirit healer, a family member can come instead. The spirit healer is told the patient's address, and the spirit healer can 'look' in on the patient and determine the origin of the illness.

After leaving the possession, the healer can use an item, such as a raw or boiled egg, bottom bill of a chicken, rice millets, and *sui* to determine the seriousness of the patient's illness. The type of item and method of using the item depends on the healer's tradition. Spirit healer (P7), for example, sprinkles rice on top of an egg. Any millet left balanced on the egg is a sign that the patient will recover. In other traditions, a boiled or raw egg can be cracked open to examine the color and texture of the contents (Photo 4.5). An egg or *sui* standing upright on the healer's palm or the floor can be a positive indication to other healers. If the diviner determines that the patient will recover, they offer advice for recovery. If the spirits determine that nothing can be done to help the patient, then the patient will die. In this case, the spirit healer returns all of the offerings to the patient.

4.1.1.3 Patient follows through with treatment plan

After completion of initial formalities, the healer provides a plan of treatment for the patient, and the patient chooses whether or not to follow the healer's advice. Herbalists either provide the patient with an herbal remedy from their stock of raw materia medica or ask the patient to return later for the remedy after the healer has collected and prepared the necessary materials. In both cases, the patient eventually returns home with a remedy and instructions on how to prepare and administer the medicine. The patient is given a time frame to self-administer the medicine and an estimated recovery date. If the patient has not recovered, he/she is expected to return to the herbalists for a different or extended treatment. Herbalists may try different remedies because 'each patient is different and some medicines may be more effective than the others' (Y5).

Blowing doctors begin the blowing treatment with the patient immediately, because the more quickly that a patient is treated the more quickly their recovery will be. After the

treatment, the patient is told to return for another blowing session, which is usually the next day. Most blowing doctors treat patients both morning and evening and the patient is expected to return for each treatment session. The treatment is finished when either the blowing doctor or patient determines that the injury has healed. Spirit healers usually provide the patient with advice on how to remedy their illness, and it is the patient's responsibility to follow through with the advice.

4.1.1.4 Offerings after treatment (กำจุก)

If the treatment is successful, the patient returns to make offerings to the healer. Items of high value, such as silk and cotton cloth, can be presented representatively, but these are returned to the patient if a monetary donation is offered. On the other hand, a patient who does not recover from an illness does not return to give offerings to the healer. In this way, the healer is rewarded only if they provide a successful treatment and not punished for an unsuccessful treatment. If a recovered patient has visited multiple healers, the patient often makes offerings to all of the healers who may have contributed to their recovery.

Herbalists are offered a pair of candles, incense and flowers, and *sui*, if the herbalist was not offered *sui* before the treatment. Blowing doctors are usually offered *sui*, rice whisky and sometimes flowers, candles and incense. *Sui* are presented to both types of healers as 5 pairs (จัน 5) or 13 pairs (จัน 5 & 8). Herbalists may be offered other items such as sweet dessert of sticky rice (ข้าวต้ม), bananas, dry roasted uncooked rice, cooked rice, and beeswax candles. Blowing doctors may be offered additional items such as, sweet dessert of sticky rice (ข้าวต้ม), bananas, uncooked rice, rolled tobacco, and silk cloth. Spirit healers are rarely given offerings after a successful treatment. However, a patient who wins a lottery based on a healer's advice is expected to share the winnings with the healer (See section 4.1.2 on Restrictions). In contrast to herbalists and blowing doctors, spirit healers are often unaware of the results of their advice. But the healer may hear of the patient's status via other community members, because the patient is often a member of the immediate community.

Most healers state that they do not require a monetary reward after a patient's recovery. In the case that a patient makes a promise to give a specific payment, then the patient is expected to keep their word. Patients who do not make the promised payment compromise their ability to ask the healer for future treatments (Y12), can become sick again, and spiritually, collect bad merit which leads to bad luck (B15). Some healers accept partial payments from patients.

Some blowing doctors and herbalists have fixed prices according to the remedies and diseases. The highest prices quoted among blowing doctors was 3000B for treating health conditions 2.6 and 3.6 (B14). Among herbalists, the most expensive treatments were used for chronic and highly life-threatening diseases, such as health conditions 5.1, 13.11 and 13.12. The highest value was quoted by herbalist Y6 at 9000B for treating health condition 5.1. However, prices for treatment were usually around 300-500 B for a successful treatment.

Some healers must donate all or part of their money to a Buddhist temple. Spirit healers must often leave all or most of their donations in front of the spirit altar for a certain period of time, as an offering to the spirit, before they are able to use it personally.

4.1.2 Restrictions คະລຳນຳທ້ວ (Kui) ຄະລຳ (Lao)

Restrictions are often associated with taking on the role of a healer. The specific restrictions depend on the tradition of knowledge for each healer and often affect the diet and actions of almost all types of healers in some way. Disobeying these restrictions is called *Pid Khru* (ພິດຄຽ) and may result in the healer becoming mentally ill.

All types of healers were unable to treat some kinds of animals. For example, cows and water buffalos can be treated by herbalists and blowing doctors or divined by spirit healers, but they cannot treat dogs or other 'lower' animals.

4.1.2.1 Herbalists and blowing doctors

Herbalists and blowing doctors share similar restrictions. Healers are prohibited from eating certain meats, which can include beef (cow and water buffalo), duck, chicken, eel, snake, the 10 kinds of animals associated with Buddha's reincarnations (human being, tiger, elephant, tiger, lion, dog, cat, snake, bear, gibbon and monkey) and animals that are found dead. Only herbalists mentioned that they were not allowed to drink alcohol. One

blowing doctor (**B14**) must cut all meats into bite sized pieces before eating.

A healer can be prevented from certain actions, such as walking under a line of hanging clothes or below a container of drinking water, drinking water directly from a well, entering the ceremonial area of a *Lum Pee Taan* ceremony, allowing saliva to fall into water, sitting on equipment that is used for pounding rice and eating food from dishes from which other people have eaten already. Some healers are not able to smoke.

One herbalist (**Y12**) taught his younger relatives all of his knowledge of materia medica. However, he has not yet taught them any incantations because he did not want to burden them with the restrictions associated with the knowledge. He is also prevented from teaching his daughters the incantations because, as women, their bodies would become very ‘hard’ (stricken) with the knowledge. Herbalist **Y7** stated that he was unable to treat a close relative, such as his son, for illness. In this case, he explained the treatment to another person, so that they could sand the medicine into water to treat the patient.

Blowing doctors are able to treat all types of human patients, and one healer reported treating herself. When blowing doctor **B1** first became a healer, she was challenged with *long cong*. She broke a bone in her chest and blew on it herself until she recovered.

4.1.2.2 Spirit mediums

Restrictions among all types of spirit mediums are often based on the personal likes and dislikes of the spirit who they mediate. General spirit healers **P1** and **P2** are not allowed to read or write without asking permission from the spirit first, mediate on the day that their lottery numbers come out, or buy lottery tickets (although family members may buy the lottery ticket instead). Spirit healers may be restricted in their diet and eating habits. For example they may not be able to eat beef, frogs, duck and wild birds and the ‘10 kinds of meat’ (see section 4.1.2.1 for details) or eat at funerals and drink after someone has drunk out of a bowl of water. Spirit healer **P1** must ask for permission from the spirits before leaving the house to treat patients. She is also required to leave money offered by a patient at the household spirit altar for three days before she can use it, and when she takes money she must leave some of it at the altar.

Some foods that *Pee Taan* spirit mediums can not eat include pork, frogs, eel, duck, water buffalo meat, rat, rabbit, แตน (wasp larvae), ด้วง (like a wasp but larger), and bees or

anything that has died on its own. Unlike the general spirit mediums, these foods are not restrictions—the *Pee Taan* spirit mediums are physically unable to eat the foods. During the *Lum Pee Taan* ceremony while they are mediating the spirit, the taboos of eating and drinking may be heavier or the spirit may want to eat certain things that the medium would not normally eat, such as alcohol or chilies.

Healers may be exempted from restrictions by asking for permission from the spirits. The spirits of **P2** told her to stop chewing betel nut and work in the rice fields, because the spirits had never worked in the rice fields during their physical life. But, she told the spirits that both requests were impossible. Spirit healer **P4** is supposed to be a vegetarian, but the spirits allowed an exception during the time that she was pregnant and breast-feeding.

Pee Taan spirit mediums must exist under an initiation period of restrictions when they first accept a spirit. This usually lasts for one week and can include (1) Cannot go into a pond; (2) Cannot talk to strangers; (3) Cannot curse at people; (4) Cannot wash clothes, cook or clean; and (5) Cannot cross the road (travel). They must also prove to the *Acharn Lum Pee Taan* that they can indeed mediate the spirits. To complete the initiation period, they have a wrist-tying ceremony. It is taboo for *Pee Taan* spirit mediums to curse or become irritated and angry.

4.1.3 Treatment by herbalists

Some herbalists believe that a patient can use herbal medicines simultaneously with Western medicines, while others disagree. Other healers state that if a patient seeks treatment with more than one traditional healer at a time, then the treatments will become void. Herbalist **Y3** will not treat patients with cancer who are receiving radiation treatment, because he believes that the patient is near death and recovery is impossible. Box 1 gives an example of an interaction between a patient and herbalist.

Some herbalists use spiritual and blowing treatments with incantation to supplement the herbal remedy. Herbalists can recite incantations as they are preparing or collecting the medicine. They can also recite an incantation and blow over the patient to assist with their recovery. Herbalist **Y14**, for example, splashes holy water on the patient and recites incantations as he is giving the remedy to the patient. However, two herbalists (**Y5**, **Y6**) stated that they do not use or have very limited knowledge of incantations for direct use as a treatment.

Box 1 Excerpt from field notes with herbalist **Y14**: Patient obtaining a remedy from the healer (Photos 4.6)

The patient presents an offering plate of decorative leaves, incense, candles and money (150B) to the healer. Then she describes the symptoms of her aching knees to the healer. According to this description, the healer determines the remedy. This consists of the heartwoods of more than five species of plants, which have been pre-collected by the healer as surplus raw materials. He organizes the medicines into a few bundles and uses a rubber band to tie the medicines together. The healer details how the patient should prepare (boil) and consume the medicine. Then, he places the bundles into a plastic bag and onto the plate of offerings. The healer recites Thai Buddhist chants while they hold the plate between them with both hands. The healer has prepared a ceramic jar of water (holy water) and a tied bundle of sticks that is used to disperse the water. They both place their hands on the jar and he chants again, as the patient bows her head respectively with her eyes closed. The healer then uses the sticks to sprinkle and shake water over the patient. To conclude, the healer conducts a string tying ceremony, in which the patient holds out one hand and the healer chants and ties a white cotton string around her wrist.

Herbalist **Y14** also uses a blowing treatment to support his herbal medicine in a unique way. During the treatment, the healer blows on the afflicted area of each patient with an incantation. After the patient leaves, the healer continues the blowing treatment by blowing on representative parts of his own leg; his knee to ankle represents the body of the patient. The healer blows on his own knee, for example, to treat a patient with a headache and on his calf to treat a patient's stomachache. He blows three times for each patient in the morning and evening. Herbalist **Y14** uses a blowing treatment to accompany all of his remedies, with the exception of hemorrhoids, aching arms and legs, diabetes, and asthma. These health conditions are treated only with herbal remedies.

Herbalists can deviate from their herbal treatments. Herbalists use spiritual treatments to treat health conditions 9.7 and 12.3 (See Appendix F) and cursed with foreign objects. These treatments consist mostly of ceremony, holy water, charms, and incantation.

Herbalists can act as incantation and magic experts. Exorcists provide patients with protection from evil spirits by making or advising patients on methods for making magical

amulets or plant parts. Herbalists **Y5**, for example, recommends patients to use the stem or root of a plant (unknown) to ward against evil spirits (Refer to Appendix F, 12.9 for more details on these treatments).

Only a couple of herbalists (**Y3** and **Y11**) were recorded with skills as *Mo Sa-ne*, but it is likely that other healers in the study group have these skills. During one field visit, healer (**Y3**) was observed making an amulet for a woman who sought to keep her straying husband at home. The amulet was in the shape of a man with incantations written on it. The patient was instructed to keep this amulet with her and in the house. While only one *Sadohchro* ceremony was recorded with one healer (**Y3**), it is expected that other healers have the skills and knowledge to conduct this ceremony.

Some herbalists use a blowing treatment of *Areca catechu*, *Piper betel* leaf and slaked lime to treat such illnesses as health conditions 2.1, 2.5, 4.1, 5.4, 6.5, 12.1, and 13.7. It is likely that these skills are borrowed from the tradition of blowing doctors. This blowing method is discussed in more detail in the following section.

4.1.4 Treatment by blowing doctors

Almost all blowing doctors incorporate betel nut (*Areca catechu*) and betel leaf (*Piper betle*) into their treatment by chewing these plants, reciting an incantation and blowing on the injury. This treatment process is repeated multiple times at specific intervals, until the patient has recovered. Herbal medicine, massage and body manipulation may be used to compliment the blowing treatment. The healers and patients believe that the success of this treatment is dependent on the strength of the incantation.

Patients should visit the blowing doctor as soon as possible after an injury occurs in order to expedite their recovery. If the patient intends to visit the hospital, he/she should be treated by the blowing doctor before going to the hospital. A healer may refuse to treat a patient who comes for a blowing treatment too long after the accident. Blowing doctor **B2**, for example, described a patient who had been injured in a motorcycle accident over a month ago and was still in pain. The healer advised the patient to go to the hospital, because he believed that a blowing treatment would not be productive so long after the accident. However, other blowing doctors may choose to treat old illnesses. Blowing doctor **B4** successfully treated a patient with *gnu-sawat* who had been inflicted for more than a month.

Blowing doctors, who often specialize in injuries to the musculo-skeletal system,

state that older patients heal with more difficulty than children. Blowing doctor **B11**, for example, stated that only 3-4 days is needed for the broken bones of children to begin to knit together, while adults could take more than a week. Blowing doctors also agree that knees and other joints are the most difficult to heal. Some healers state that if the patient is wearing a cast (from the hospital), it must be removed to conduct a successful treatment. Other healers are able to blow ‘through’ the cast, but it compromises the strength of the treatment. Blowing doctors can also treat spiritual illnesses with blowing treatments, and this is described in more detail later in this section.

4.1.4.1 Description of a *cum*

Most blowing healers use a betel quid in their blowing treatment and this is made up primarily of *Areca catechu* fruit, *Piper betle* leaf and slaked lime. The basic unit of this mixture is called a *cum* (ค้ำ) (Table 16; photo 4.7).

Some healers, such as blowing doctor **B10**, do not place importance on the *cum* and conduct a treatment based on incantation. Other healers add other plants to their *cum*. Blowing doctors **B4** & **B5**, who are father and son, add the bark of ฅูน (*Cassia fistula*), blowing doctor **B1** adds the bark of มะหาด (*Artocarpus lacucha*), and another healer (**B15**) adds the bark of พระยอก (*Shorea roxburghii*). One healer (**B11**) once used the root of a plant called พลับ, but today he can no longer find it. This same healer only uses *Piper wallichii* leaf in his treatments, rather than the typical *Piper betle* that other healers use.

A specialized *cum* can be used to treat some specific health conditions, for example, health condition 11.1 (Appendix F). Blowing doctor **B2** chews seven pieces of ต้นก้นไก่ (*Urena lobata*) with *Piper betle* leaf, *Areca catechu* nut and slaked lime and blows it into the patient eyes. Blowing doctor **B4** chews a clove of garlic and blows through a rolled up *Piper betle* leaf into the patient’s eyes.

4.1.4.2 Description of a treatment round

For a typical treatment, the healer chews a *cum*, recites an incantation and then blows on the injury or afflicted part of the body. The number of *cum* is specified for each individual treatment, so that it follows a pattern or round that can be replicated until the patient has healed. For each *cum*, an incantation is recited and the healer blows about three times on the patient. Then the healer spits out the *cum* and chews the next *cum* to repeat the process until the appropriate number of *cum* has been reached.

Most blowing doctors treat patients in rounds, by following a patterned number of *cum* that change through the round. They most often reduce the number of *cum* that they use for each treatment. The first treatment begins with 7 *cum*, and this is reduced by 1 *cum* for each treatment until only 1 *cum* is used during the 7th treatment. Only one healer (**B3**) begins with 3 *cum* and reduces to 1 *cum*. Another blowing doctor (**B5**) stated that if the betel *cum* begin to ‘eat his gums’ then he will use three *cum* and less throughout the entire round. If the patient has not healed within the first round of treatment, then healers will begin the same round again.

Some healers do not use a pattern of rounds. One healer (**B1**), for example, alternates the number of *cum*, starting with 3 *cum* and alternating with 4 *cum* for each treatment until the patient has recovered. After treating a patient for two weeks, she will rest for one day before beginning the round anew. Another healer (**B10**) uses a different number of *cum* according to the day of the week. On *wun khaeng* (วันแฉิ่ง), or Tuesday, he uses 7 *cum* and on *wun oon* (วันอ่อน) he uses 3 *cum*. Blowing doctor **B14** uses 1 *cum* for each treatment.

Most healers state that most patients recover after one round of treatment and the overall treatment never exceeds three rounds. Blowing doctor **B3** states that a patient usually recovers in 1-2 weeks. Blowing doctor **B15** believes that a patient improves with each treatment, but it is not possible for a patient to recover from an injury or illness after only one day of treatment.

4.1.4.3 Number of treatments per day

Eight blowing doctors specified that patients were treated twice a day. They believed that patients could also be treated once a day, but the injury would heal more slowly. Only two healers (**B13**, **B15**) stated that they treated patients once a day. Blowing

doctor **B11** treats patient twice a day for the first three days of treatment, and then reduces to one treatment a day.

Healers treated in the morning and evening, and considered morning the best time for treatment. Blowing doctor **B15** stated that patients should come at the same time each day for their treatment. If a patient first came for treatment in the evening, then the patient should continue to return in the evening for further treatments. Most healers could not treat at any other time of day outside of the morning and evening. Blowing doctor **B14** was the only exception to this rule and could treat a patient at any time of day.

Six of the healers treat only before eating meals. This prevents foods, such as garlic or chili, from being accidentally blown onto the patient. Blowing doctors **B3** and **B10** state that before meals is best, but after meals was possible as well. The two remaining healers (**B2**, **B14**) can blow before and after meals.

One healer (**B5**) stated that blowing treatments were best conducted just after first waking up, before washing or preparing for the day. In contrast, blowing doctor **B11** stated that it was important for him to bathe and wash before conducting the treatment.

Table 16 Plants used in a blowing *cum* and frequency of use by healers; listed by frequency.

Refer to Appendix G for plant name codes.

| Code/ Thai name | scientific/common name | plant part | frequency of use |
|-------------------|---------------------------|-----------------|------------------|
| PL363 / หมาก | <i>Areca catechu</i> | fruit/endosperm | 10 |
| AN30/ บูน | <i>Anadara troscheli</i> | -- | 10 |
| PL216 / พญู | <i>Piper betle</i> | leaf | 9 |
| PL84 / กูน | <i>Cassia fistula</i> | bark | 2 |
| PL217 / พญูกะต๋อย | <i>Piper wallichii</i> | leaf | 1 |
| PL221 / พะยอม | <i>Shorea roxburghii</i> | bark | 1 |
| PL261 / มะหาด | <i>Artocarpus lacucha</i> | bark | 1 |
| พลับ | sp. | root | 1 |

4.1.4.4 Language of incantation

Six healers (**B1**, **B2**, **B10**, **B11**, **B13**, **B15**) use an incantation that is in Lao. One healer (**B3**) used Lao and Khmer incantations and another healer (**B4**) used incantations in both Kui and Lao. One healer (**B5**) stated that his incantation was Thai mixed with a foreign and ancient language, like Pali-Sanskrit. Only one healer (**B14**) reported that her incantation is in Kui.

4.1.4.5 Number of incantations used for treatment

Four blowing doctors (**B1**, **B11**, **B13**, **B15**) use one incantation to treat all diseases, which can range from 1-14 different types of health conditions. One healer (**B3**) uses two incantations to treat five health conditions. Two healers (**B4**, **B10**) use four incantations to treat 9-15 health conditions. Three healers (**B2**, **B5**, **B14**) use five incantations to treat 6-9 health conditions. However, blowing doctor **B5** mentions that incantations are slightly different according to the part of the body that is injured.

4.1.4.6 Associated treatments and deviations

Blowing treatments are often complimented with other forms of treatment. Herbal remedies, such as topical sesame oil, can be employed during or after the blowing treatment. Massage (ပိဏ) is used to push bones back into place and heal muscles and bamboo and cotton string can be used to construct a splint. Spiritual treatment can also be used. For example, blowing doctor **B10** divines the origin of patient's illness before progressing on to a treatment. As a multi-skilled healer, he also accompanies all of his spiritual and herbal treatments with a blowing treatment.

Blowing doctor (**B1**) incorporates herbal remedy, massage, and spiritual remedy into her blowing treatment. At the beginning of a treatment, she smears a *Piper betle* leaf with slaked lime, then rolls it into a tube and ties it into place with a white cotton thread. This is given to the patient to keep during his/her recovery. Her use of herbal remedy and massage during treatment is demonstrated during a patient-healer interaction in Box 2 (Photo 4.8).

Blowing doctors may deviate from their blowing treatments. Herbal treatments were used to treat health conditions 3.1, 4.3, 6.3, and 13.1 (Table 17). Spiritual treatments were

used to chase away evil spirits and call back missing *kwun*⁸. Kui exorcists can rely on incantations and a blowing method to chase away the evil spirits. During a *Lum Pee Taan* ceremony any villager (considered an exorcist by the community) can use gasoline and fire to ‘blow’ the bad spirits out of the village (Photo 4.9). In the village of spirit medium **P7** the local exorcist is also a *Mo Tham* (Box 3). The exorcist uses practices that are more closely associated with a blowing doctor, and indeed, may be considered a blowing doctor. The patient sits with his/her legs stretched out in front and at the feet of the patient is a ‘raft’ (ແຟຣ) with items (betel nut, tobacco, etc) for attracting spirits. The exorcist stands at the head of a patient and an assistant, in this case **P7**, stands at the feet of the patient. The exorcist ‘blows’ the spirit out of the patient, while the assistant calls the spirit to leave through the feet.

Box 2 Excerpt from field notes with blowing doctor **B1**: A blowing treatment for a patient with an acute injury (Photo 4.8)

The patient is a young male with a broken leg, caused by a fall when he was carrying water while he was in Bangkok. The patient prefers not to be photographed, but accedes to being observed. The healer runs a feather dipped in sesame oil along his leg to apply the oil topically. At the same time, she massages the patient’s leg. She chews one piece of betel nut and blows along his leg by alternating her blowing both hard and loud and then softly. She massages again, and blows hard and then soft. She moves up his hip and massages and blows some more. Then continues the treatment to the small of his back. She places a *Piper betel* leaf in her mouth and chews. Then blows on the patient’s head. She massages his head and then back of his neck to complete the treatment. A second patient arrives to be treated by the healer. I ask for the patient’s for permission to take photographs of his treatment and he agrees.

⁸ *Kwun* (ຫວັງ) is a guardian or personal spirit which is unique to every person. A person’s *kwun* can be lost, as a result of a shocking or terrifying event, and the person will become ill as a result. A missing *kwun* must be called back ceremonially.

Box 3 Excerpt from field notes with spirit healer **P7**: A blowing ceremony with a patient to chase away evil spirits (photos 4.10).

The male patient has suffered from pain in his legs for over a month. He has been receiving blowing treatment for 5-6 days by a *Mo Tham* (healer). The patient's wife prepares 1 *cum* on an antique brass dish, as well as a plate of leaves. The blowing doctor takes the plate of leaves upstairs into the house and conducts a short ceremony for the house spirits. He returns downstairs, where the patient is sitting with his legs stretched out in front of him. The healer chews the betel nut chew that was offered on the dish. Then, rolls a chicken egg on top of the patient's head and along his body. At the same time the healer blows over the patient in a fine mist. At the end of the ceremony, the egg is placed at the base of the patient's feet and the healer blows at the patient's feet. Lastly, the healer breaks open the egg, by first cracking the top of the egg. He examines the egg through the hole and then pours it out into a bowl. He declares that the egg is not good, because it has developed partly into a chick. The healer will have to return later on in the evening to repeat the treatment.

4.1.4.7 Evaluating a successful treatment

Blowing doctor **B11** states that if a patient feels pain during a blowing treatment, then the treatment is working well and when the injury begins to heal, it feels itchy. If the patient does not feel pain, then the healer stops treating because the treatment is not working. Blowing doctor **B15** determines that a patient is recovering by 'looking in their eyes'.

Table 17 All recorded herbal treatments used by blowing doctors to accompany blowing treatments. Refer to Appendix F for health conditions and Appendix G for materia medica. Rice beer = commonly known as rice “whisky.”

| Healer | Health conditions | Materia medica | Preparation | Application | |
|------------|-------------------|------------------------|----------------------|---------------------|---------|
| B2 | 2.2 | PL99 : heartwood | PL100: heartwood | Sand into rice beer | Consume |
| | | PL101 : heartwood | PL102 : heartwood | | |
| | 6.5 | PL28 : root | Sand fresh | Topical | |
| B4 | 6.5 | PL228 : bark | Pound fresh | Topical | |
| | | PL287 : leaves | Pound fresh | Topical | |
| B13 | 1.1 | AN9 : poison from skin | Fresh | Topical | |
| | 6.5, 2.3 | PL79: roots | PL28: roots | Boil | Consume |
| | | PL122: roots | PL323: roots | | |
| | | PL130: roots | PL331: roots | | |
| | | PL209: bark and wood | AN31 : shell | | |
| | 2.2 | PL38: bark and wood | PL137: bark and wood | Sand into water | Consume |
| | | PL41: roots | PL169: roots | | |
| | | PL100: heartwood | PL233: root | | |
| | | PL101: heartwood | PL234: root | | |
| | | PL130: roots | PL364: roots | | |
| | | PL136 : bark and wood | | | |

Table 17 All recorded herbal treatments used by blowing doctors to accompany blowing treatments. (Cont.)

| Healer | Health conditions | Materia medica | Preparation | Application |
|------------|--|--|-----------------------|-------------|
| B15 | Supplemental remedy for slow healing and very painful injuries | PL30 : wood PL207 : stalk PL318 : seed | Boil | Consume |
| | Breathing with difficulty, cannot speak (12.6) | PL273 : root | Sand into ducks blood | Consume |

4.1.5 Treatment by general spirit mediums

General spirit mediums and *Pee Taan* spirit mediums share similar treatment methods. In this section, the *Pee Taan* treatment system is treated apart from the general spirit mediums (see section 4.1.6).

The items used in a spiritual treatment itself are those that were offered to the healer at the beginning of the treatment system (see section 4.1.1). The healer uses these items to conduct a mediating ceremony in front of a household altar.

Mediums are most often asked by patients to divine an illness, offer advice to remedy a situation, and fortune-tell. Within one ceremonial treatment session, a spirit healer can fulfill all of these duties. The ceremony for mediating a spirit is demonstrated in a fortune-telling ceremony (see Box 4).

The spirit medium usually advises the patient to change an action in the family or organize spirit offerings or a ceremony to appease a disgruntled spirit. For example, spirit healer **P4** determines that the source of a small child's frequent crying and unhappiness was a spirit who had been reborn into the new life. The healer advised the child's family to make offerings to the spirit and give the child an ancient coin of the spirit's time period to mollify the spirit. Another example was an elderly woman who fell ill. Spirit healer **P1** determined that the spirits were displeased with quarreling in the family, and the two feuding siblings were recommended to make offerings to the spirits and amends with each other. In both cases, the patient recovered quickly after the actions were carried out.

4.1.5.1 Household spirit altars (Photo 4.11)

All spirits require an altar as a place of residence and this altar is where spirit mediums conduct their ceremony to mediate the spirits. The spirits dictate the items and figures and setup of the altar, type of offerings and intervals for cleaning and making offerings to the spirit, which can range from everyday to once a month or year. Altar offerings are similar to those that are offered to a spirit healer for a treatment (See 4.1.1 Offerings before treatment). Banana leaves layered and twisted into a cone (บายศรี) and flowers of marigold, rose and lotus are common additional offerings.

Box 4 Excerpt from field notes with spirit healer **P1**: A fortune-telling ceremony for field researchers to record the healer's methods of mediating spirits (Photo 4.12).

A field assistant (FA) and I ask the healer (**P1**) for a fortune reading in order to experience a mediating session. We are told to organize the following items: 3 pairs of leaves, which the healer suggests we collect from a nearby *Seriococalyx schomburgkii* (ต้นไถ้); 1 pair of incense and candles; and 36 B per person. We go into her house and sit in front of the spirit altar. **P1** lights the candles and incense at the altar and we *glarp*³ three times before the altar. **P1** arranges a white cloth over one shoulder. FA makes her offerings to **P1**. The healer sings in Thai and after finishing, she asks FA to put her hands palm up and flat onto **P1**'s outstretched hand. With her eyes closed, **P1** tells FA's fortune, beginning with love and then health. FA asks the mediums to look into the health of her parents. **P1** asks for FA's address and then takes some time to meditate and look. **P1** says that FA's parents are in good health. FA disagrees and says that her mother is sick. **P1** asks to look again, because the house is very far and it is not clear. **P1** states that she must first gain permission from the *Jao Tee Jao Tang* (house/land spirit guardians) at FA's parents' house in order to look into the house. Then **P1** meditates for a minute. She asks again, if her mother has been sick for a long time. FA says, No. **P1** asks her spirit to look again more clearly and closely. After a minute, **P1** asks few more questions to verify that she is getting a correct reading. Was there a large tree in the garden? Was there someone there with a fever for a long time? FA agrees and says, Yes. FA asks about work, and the medium tells her that she will be successful in her work. It is a detailed reading lasting about 20 minutes.

4.1.5.2 Descriptions of mediated spirits

The process of becoming a spirit healer is described in detail in Section 4.5.1. Spirit healers usually begin with a preliminary number of spirits or *Ohng* (องค์) and later, more spirits may come to join via their own accord or invitation from the preliminary spirits. Spirits are female or male and have different names and personalities. Spirit healer **P1** began with three spirits and currently mediates 6-7 spirits, spirit healer **P2** started with seven spirits and now mediates nineteen spirits, and spirit healer **P4** has progressed from one to now

(1) Participants

Among the more than five *Lum Pee Taan* ceremonies that were observed, almost all participants were female. Almost all mediums are female. The only observed exceptions were two ceremonial leaders and a patient who mediated a spirit during a ceremony held to treat his illness. Although leaders of the ceremony and participating villagers recognize that a medium is usually female, they maintain the opinion that participants can be both male and female. It is notable that during the ceremony mediums mediate both male and female spirits and male villagers had other important and specific parts to play which appeared limited to males. The musicians are all male and male members of the family often have specific assistant duties during the events in the ceremony

There are four main types of participants that are integral to the ceremony. These are the leader of the ceremony, medium participants in the ceremony, non-medium community members, and musicians. All of these participants are described below.

The leader of the ceremony or *Acharn Pee Taan* (อาจารย์พี่แต่น) is called *Khru Ba* (ครูบา) and less often, *Phu-num* (ผู้นำ), by the Kui. There is one recognized leader of the ceremonies for each village or community, and these leaders are considered the most knowledgeable expert of the ceremony and traditions. They are chosen according to high age, level of knowledge and aptitude to prepare and lead the ceremonies (P7), and in this case there can be more than one leader in a village. In some villages, there is a leader spirit who chooses a medium and thus, selects the *Acharn Pee Taan* (Aj2). The tradition that the *Acharn Pee Taan* follows determines the logistic variables of the ceremonies, such as the events in the ceremony and the time of year and day of the ceremony. The leader's main duty is to moderate the ceremony and they can be considered the expert of the *Lum Pee Taan* ceremonies. The leader oversees the preparation of the offerings and materials in the ceremony and must memorize many specific songs and incantation. The leader is the first medium to enter the trance for the ceremony and the last to leave.

Acharn Pee Taan are also considered the keepers of the overall *Pee Taan* spirits of the village. A very sick community member, for example, might take *sui* from their own *Pee Taan* altar to place on the *Acharn's* altar and/or vice versa. The *Acharn Pee Taan* can be asked to lead a ceremony for the family of an ailing patient to make offerings to the *pa-gum*

(ປະກໍາ) and *Bpu-tha* (living elders) of the family. Two different sets of offerings are made to each type of spirit, and are relatively the same, although the offerings for the *pa-gum* (ປະກໍາ) include double or more of most of the items. These items include *sui*, a pair of *Areca catechu* nut, *Piper betle* leaf with slaked lime, candles, a square shaped *sui* called a ไตรยตรู which represents a fishing basket, white cloth, flowers, 24 B, two bottle of alcohol and plates of food. These items are representatively given to elders in the household and then placed in the altar inside the house, as offerings to the *pa-gum* (ປະກໍາ). The objective of both ceremonies is to help the patient to recover more quickly.

Medium participants in the ceremony are known as *luk sit* (ลูกศิษย์) or students and followers of the *Acharn Pee Taan*. They include the invited *Pee Taan* mediums and other *Pee Taan* mediums who wish to join in the ceremony. In the case that the *Acharn* is unavailable for the ceremony, the next most qualified *luk sit* can substitute.

Non-medium community members include family members of the patient and medium participants, and other community members of the village. Family members of the patient prepare most of the items used in the ceremony and are responsible for bearing the financial costs of the ceremony. One of these family members is the sick patient, who has little participation in the ceremony and spends of their time observing or bedridden. At one point in the ceremony, the patient makes offerings to the spirit, but only on some occasions do they actually mediate the spirits.

Family members of the medium participants will stand by during the ceremony in case they need to make offerings to the spirits, such as when the medium is violently possessed by the *pa-gum* (ປະກໍາ) spirits. They also help to organize and prepare the items that are used in the ceremony and assist directly in specialized parts of the ceremony.

Son-in-laws of both the patient's household and the spirit mediums are restricted from taking a direct part in the ceremony. Other community members of the village and surrounding villages often gather to watch the ceremony, join in some of the festivities, and visit with each other.

Musicians are hired by the household and can be paid as much as 3500 Baht per

ceremony. There are specific parts of the ceremony which recognize the importance of the musicians. The household must offer the musicians a meal before and after the ceremony, although other villagers usually share in the food as well. In most ceremonies, the spirits (through the mediums) bring offerings to the musicians. The musicians use their music to entice the spirits to the ceremonial area and enter the mediums. If a medium is particularly having trouble attracting a spirit, then the musicians, usually the can player, will focus on this medium and play next to her until the spirit enters her body. All ceremonies must at least have one Isan panpipe or *caan* (แคน). Other instruments include a drum or *glong* (กลอง), gong or *kong* (ฆ้อง), Isan mandolin or *soong* (ซุง), and chime or *ching* (ฉิ่ง).

(2) Logistics of the household ceremony

MurnSriYai village of *Acharn Pee Taan Aj1* conducts a day and night ceremony consecutively. They consider these ceremonies separate and call the day ceremony *kaal mo* (แค้น-น้ำ ฆ้อง) and the night ceremony *kaal aw* (แค้น-น้ำ ฆ้อง). Both have different *acharn*, *luk-sit*, and activities.

The time of year of the ceremonies differ according to the tradition of the community or *Acharn Pee Taan*. Most ceremonies are restricted to certain times of the year. February is the most common month to hold ceremonies, but March and May are common as well. In the case of emergencies, ceremonies can be conducted outside of these months.

The financial burden of organizing a *Lum Pee Taan* ceremony can range from 7000-40,000B, depending on the traditions of each village. The household organizing the ceremony is responsible for paying these expenses, but other community members help to shoulder the cost. Some villages are very organized with sharing the costs of the ceremony. *Acharn Pee Taan P7*, for example, records how much each household donates to the household holding the ceremony before the ceremony begins. Each household is expected to donate close to the amount that the household with the ceremony had donated at their previous ceremony.

There are three types of *Lum Pee Taan* ceremonies and these include the annual village ceremony, household ceremony, and other special days and events for paying respects to spirits.

The annual village ceremony or *So-pa-taan* (สออะผาแทน) is usually held at the house of the leader of the ceremony and is considered a village ceremony. This ceremony is conducted as the first ceremony of the year, although some villages only conduct this every few years or so. All of the *luk-sit* to an *acharn* are expected to attend, and there can be as many as 100-200 *luk-sit*.

Household ceremonies should be conducted at a minimum of every 3-4 years to maintain good relationships with the *Pee Taan* spirits. Some households push the limits and will not hold a ceremony until it is necessary, which is when a family member becomes ill, and this can be up to 25 years. If a household does not hold an annual ceremony, then they make a yearly offering, such as *ka-nom cow tom* (ขนมข้าวต้ม) and bananas, to the *Acharn's* spirit altar and to their own spirit altar.

Other special days and events for paying respects to spirits include *Cow Pansa*, *Auk Pansa* and *Wan Phra* (วันพระ). On these days, community members make offerings of *sui* and flowers to their spirit altars. In the case that the household plans to hold a *Lum Pee Taan* ceremony, the *Pee Taan* spirits must be notified of the ceremony's date. Household members must also make offerings to the spirit altar in the event of changes in their household, such as when household members leave or return home after a long period and the occurrence of marriages, deaths, and visitors in the house.

(3) Preparing for the *Lum Pee Taan* ceremony

The ceremonial area is called ละ ศาล แกะ-ล มอ-ล (*la saal kaal mol*) in Kui. It is usually located in a large area outside of the house that is open to the sky, so that the spirits are not be impeded from coming down to the ceremony. However, in some traditions the ceremony is conducted in front of the household altar inside the house. An outside ceremonial area must be built by the family, and consists mainly of a roof and floor. Some traditions require a wall of หน้้าคา, *Imperata cylindrica*, with a low bench which acts as an altar for placing offerings (Photo 4.15). The materials must be collected just before the ceremony, so that the materials remain fresh. Likewise, the ceremonial area is built just before the ceremony to prevent animals from crossing into the ceremonial area before the

ceremony begins. The roof is very important, and is almost always made of coconut leaves. The floor is usually made of mats, and serves more of a functional purpose. Any material that is thin and straight, like bamboo, can be used to build the frame for the roof. The entire area should be decorated as attractively as possible, by tucking in colorful and good-smelling flowers wherever possible.

The Costuming of the mediums represents their most valuable and beautiful silk clothes (Photo 4.16). It would be highly offensive to the spirits if a medium were to attend a ceremony in old, dirty clothes. The silk shirt is black with a unique woven pattern that is characteristic of the Kui, and often elaborately embroidered and decorated for the ceremony. Women wear a silk skirt that often has a decorative pattern sewed at the foot and a bright colored breast cloth. Men wear the same black shirt, but with a traditional silk wrap-around cloth that is often associated with the Khmer groups. Women often paint their hands and faces with tumeric (*Curcuma longa*) as a perfume.

The Altars (Photo 4.17) are the center pieces of the ceremony and all ceremonies have at least one main altar. This is placed as centrally as possible in the ceremonial area or, if the ceremony is in a house (**Aj2**), can be a household spirit altar that is attached to the wall. A centrally placed altar is almost 2 meters tall and constructed of any type of straight wood. Center altars can also be around knee height and in this case, is usually a covered basket or box.

Some ceremonies include a second altar that is located outside of the ceremonial area. This altar is used to protect the people outside of the ceremony, while the altar in the ceremonial area protects the practitioners of the ceremony (**Aj3**).

Most altars are constructed with two shelves and decorated with coconut leaf rachis (*Cocos nucifera*), colorful and good-smelling flowers, and other items. A center bowl is often the centerpiece of the altar or ceremony and is filled with items or offerings to attract the spirits to the ceremony. This bowl can also be represented by four bowls holding identical material. This bowl is called by a variety of names including *Kun dok baeng* (ขันดอกเบ้ง), *Kun ba see* (ขันบาสี่) or *Pan sri* (พานศรี) (**Aj2**), and *Kun Bi Si* (ขันใบสี่) or *Kun muk baeng* (ขันหมากเบ้ง) (**Aj4**) (See Appendix H, 1.1). The altar also serves to hold other loose items are used to attract the spirits to the ceremony and/or fill a functional purpose during the ceremony (See

Appendix H).

A plate of bowls with food for the spirits ‘to eat’ is often located close to or on the main altar (See Appendix H). Its purpose is to attract the spirits to the ceremony.

The offering bowl for *Pee Taan* spirits that is used to attract the spirit to the mediums are brought to the ceremony by each invited medium (See Appendix H). This bowl is placed on the altar at the ceremony, and the household hosting the ceremony add fresh *sui* to the bowl as well. When the medium returns home after the ceremony, she deposits *sui* from the ceremony onto her household *Pee Taan* spirit altar, and they remain there until the next *Pee Taan* ceremony (See Appendix H). The *sui* include *sui* from her own offering bowl in the ceremony, *sui* that was offered to her as an invitation from the family to attend the ceremony, and old *sui* from her altar, which she keeps with her in a bag during the ceremony. This old *sui* is taken to the ceremony to symbolize *Pee Taan* spirits that the medium brought with her to the ceremony to help the patient recover.

(4) Beginning the ceremony and entering possession

The ceremony begins with a ceremonial leader making a small blessing at the main altar. Then, the musicians begin to play. The main dancers and the *Acharn Pee Taan* line up along or around the main altar. The mediums hold onto their bowls of offerings for entering possession (See Appendix H), which hold a lit candle, and meditate. The *Acharn Pee Taan* enters possession and dances around the ceremonial area. After this, *luk sit* follow suit.

When a *luk sit* enters into possession, her relatives ask her to identify herself. The spirit, through the medium, takes this time to unload her grievances on the family and examines the bowl that has been prepared for her on the altar (see Appendix H). If the spirit is unhappy with either of these, it shows displeasure by crying, shouting, and/or throwing things. The relatives will try their best to make the spirit happy by making offerings and dressing the spirit, as the medium, in nice clothes. After all the spirits are appeased, the mediums dance together around the center altar piece, usually clockwise.

(5) Events during the ceremony

Throughout the ceremony, the spirit may leave the medium periodically and the medium must repeat the possession process to bring the spirit back into

their body. Numerous events occur during the ceremony and are relative to the tradition of the particular village. The events often require elaborate preparations and special items. Examples of some of these events are described in this section.

Chasing bad spirits out from the village. A pyramid made of banana stalks is built for each medium in the ceremony. These stand about 1.5 meters tall and have shelves with items used to attract evil spirits (Appendix H, 4.1). Each medium sits on the ground in front of their respective pyramid, and a ceremony is conducted to attract evil spirits to the pyramids. Then the pyramids are ‘cut down’ by the *Acharn Pee Taans*, and outside men and male children drag the pyramids off and throw them away. The mediums are bathed and all turn around to turn their backs on the pyramids and face the ceremonial area—leaving the evil spirits behind. A male villager blows fire by blowing petrol from his mouth and igniting it, and at the same time commands the spirit to leave (Photo 4.9).

Re-enacting the tradition of catching elephants (เล่นปะกำ) (Photo 4.19). In the ceremony led by *Acharn Lum Pee Taan Aj1*, The mediums carry items representing gongs, canoes, and bows and arrows (See appendix H, 1.2). They use these items to ‘travel’ and ‘hunt’ in the forest in search of elephants, which are represented with wooden *mi yaw* (ไม้ยอ, *Morinda citrifolia*) elephants and horses (both are generally referred to as ช้าง which means elephant, so it may be safe to assume that the elephants are the dominant figure). After the mediums ‘capture’ the elephants, they parade with their trophies around the ceremony area while holding a rachis of a coconut leaf (*Cocos nucifera*) to ward off thieves. Then, outside family members (mostly male) steal the elephants and chase and fight over the animals proceeds. Eventually the ‘thieves’ steal all the elephants and the mediums must negotiate to ‘buy’ the animals back with money and other items. Finally, the elephants are brought back to the ‘village’ (ceremonial area). A further ceremony is conducted to complete the elephants’ capture and new residence in the ‘village’. A wooden ‘house of the *pa-gum* (ปะกำ)’, which refers to elephants, is arranged with items and the elephants (see Appendix H). It is set up in a circle around the altar and each set is monitored by an outside family member. The mediums gather into a line, with *Acharn Pee Taan* at the head. The *acharn* stops at each set to sprinkle it with tumeric water and inform the spirits that the set will be taken to the house. Then the

leader steps carefully in the center of the box, and all the other mediums follow. After this ceremony, the ‘houses’ and wooden elephants are stacked together, blessed, and returned to their respective household altars.

In another ceremony led by *Acharn Pee Taan* (Aj4), the *pa-gum* (ປະກຸ່ມ) mediums dress-up like male mahouts and dance around the ceremonial area. They select ‘elephants’ (non-*pa-gum* (ປະກຸ່ມ) mediums) out of the outer circle and tie a cotton string around the ‘elephants’ wrists. Then dance around the ceremonial area three times to celebrate. The mahouts bring the elephants to a group of male elders who are sitting on a bench. The elders ‘measure’ the elephants’ height and size, and offer gifts of ‘food’ (bananas, ພ້າວຕຸ້ມ, orange soda) according to the elephant’s size.

Trading for valuable forest products (Photo 4.20). Within the traditions of *Acharn Pee Taan Aj1*, a ‘bee’s nest’ (ຮິ່ງຜິ່ງ) (see Appendix H) represents a valuable forest product. One male family member acts as a hermit or ‘queen bee’ (according to participants) and guards the ‘bee’s nest.’ The mediums approach the hermit/queen bee and make offerings to buy the honey. By the third offering, the hermit/queen bee gives up the ‘bee’s nest’ and the mediums celebrate by dividing it amongst themselves and dancing around the altar.

Within the traditions of *Acharn Pee Taan Aj2*, a *pwng-ma-lai* (ພວງມາລີ້ຍ) represents a valuable forest product (see Appendix H, 4.3). The *pwng-ma-lai* is hung from the top of the entryway into the ceremonial room. The mediums must negotiate to purchase the *pwng-ma-lai* with silk cloth, different species of flowers, *Kanom cow thom*, bananas, and other items.

(6) Ending the ceremony

Circling the outside altar. Within the traditions of *Acharn Pee Taan Aj3*, the mediums are led by the musicians and circle around the outside altar to signify the end of the ceremony. Within the traditions of *Acharn Pee Taan Aj4*, the best dancers in the ceremony are handed ‘horses’ made of banana stems and long metal swords and the other mediums are given ‘rockets’ (ນິ່ງຟຸ) (See Appendix H). All the mediums are led by a male elder outside of the main altar area and towards the outside altar. When all the mediums

surround the outside altar, they throw their ‘rockets’ into the air to celebrate.

Bringing the items into the house. All *Lum Pee Taan* ceremonies conclude with bringing the items into the house, but some traditions are more elaborate than others. In some traditions, the items are brought into the house while the mediums still under possession and in other traditions the mediums leave possession before bringing the items up to the house. Within the traditions of *Acharn Pee Taan Aj4*, for example, mediums that are still under possession follow the male elder and *Acharn Pee Taan* up into the house. Here, the elder inspects the bottom bill of a chicken to divine whether the patient will recover after the ceremony. Then, ceremonies are conducted to place the items on the altar. Finally, the mediums leave possession to end the ceremony.

Leaving possession. The *luk sit* must leave possession first, and then the *Acharn Pee Taan* will follow. Sometimes, the spirits will not leave the medium because they have not ‘played’ enough. In this case, the medium must dance more and/or be given more offerings of drink and food. All ceremonies are officially over when the *Acharn Pee Taan* leaves possession.

4.2 Health conditions and treatment range among healers

A total of 100 health conditions in 15 health condition categories (refer to section 3.7.2 for description of analysis methods for categorizing) were recorded among the sample of healers.

Appendix F is a detailed glossary of these health conditions, including definitions, details and specific treatments of each health condition. Details on the materia medica listed in Appendix F can be found in Appendix G. Table 18 shows the most commonly treated health conditions among healers and Table 19 lists the health conditions that are treated by the different types of healers. Table 20 is a categorization of the health conditions into the health conditions categories. The criteria that were used to create these categories are described below.

1. **Physical trauma secondary to animals** category was determined by Origin of illness and Treatments and remedies. These are all illnesses that are caused by animals or represent remedies that are used to protect the patient from illnesses that are caused animals.
2. **Acute and accidental injuries** category was determined by criteria Origin of

illness and Treatments and remedies. There are illnesses that are caused by accidents or represent remedies that are used to protect the patient from illnesses caused by accidents.

3. **Gynecological health conditions** category was determined by criteria Origin of illness, Symptoms, and Treatments and remedies. These are illnesses that relate specifically to women and women's illnesses.
4. **Fevers** category was determined by criteria Symptoms and Treatments and remedies. These are illnesses that are often share the identifier '၂၅' (R).
5. **Pain and febrile illnesses** category was determined by criteria Treatments and remedies and Health condition metamorphosis. These are illnesses that are characterized by the physiological pain that they cause the patient.
6. **Dermatological disorders** category was determined by criteria Affected body parts, Symptoms, and Treatments and remedies. These are illnesses that were characterized as affecting the patients' skin. The sub-types of health condition 6.4 were arranged from easiest to more difficult to treat, according to the healer. There were four sub-types of health condition 6.5 identified among healers. It is likely that upon more direct interviews with other healers who treat this health condition, that they would have identified similar sub-types.
7. **Respiratory system disorders** category was determined by criteria Affected body parts, Symptoms and Treatments and remedies. These are illnesses that were characterized as affecting the patients' respiratory system.
8. **Gastro-intestinal disorders** category was determined by criteria Affected body parts, Symptoms, and Treatments and remedies. These are illnesses that were characterized as affecting the patients' gastro-intestinal system.
9. **Otolaryngeal disorders** category was determined by criteria Affected body parts, Symptoms, and Treatments and remedies. These are illnesses that were characterized as affecting the patients' oropharynx region.
10. **Illnesses associated with seizures** category was determined by criteria Symptoms and Treatments and remedies. These are illnesses that were characterized by the patient having seizures or '၂၆' (R).
11. **Sensory System Disorders** category was determined by criterion Affected body

parts. These are illnesses that affect the patients' sensory system.

12. **Spiritual illnesses** category was determined by criteria Origin of illness, Symptoms, and Treatments and remedies. These are illnesses originating from spirits.
13. **Unclassified health conditions** category consists of illness that could not be associated with other health conditions according to the criteria.
14. **Tonics** category was determined by criteria Treatments and remedies. This category is characterized by remedies that were used as supplements to increase patients' quality of health.
15. **Veterinary medicine** category affects only animal patients.

4.2.1 Herbalists

Individual herbalists treat 13 to 52 health conditions; average 24 health conditions per healer. Some herbalists were unable to treat health conditions 5.11, 6.5, 8.7, and 13.11 and heart disease (โรคหัวใจ) and common cold (หวัด).

4.2.2 Blowing doctors

Individual blowing doctors treat 1-15 health conditions; average 7 health conditions per healer. Some blowing doctors were unable to treat health conditions 5.9 and 6.5 and internal or chronic diseases such as, health conditions 5.2, 8.1, and 7.1 and heart disease (โรคหัวใจ). Two blowing doctors (**B1**, **B11**) treated only injuries to the skeletal system, such as health condition 2.1. Some blowing doctors specialize in illnesses which are more difficult to treat, for example, such as health condition 6.5 (**B4**).

Blowing doctors may also use their skills for spiritual treatment. Blowing methods can be used to ward and chase off evil spirits. For example, young children who are irritable and cry often can be diagnosed as 'hard to raise' (See Appendix F, 12.1). The child's mother may 'give' the child to the blowing doctor, who can protect the child from the spirits that are causing the illness. Regularly and often on *Wan Phrat* ('day of the monk'), the healer conducts a blowing treatment for all of his/her 'children' and their mothers. A blowing doctor can have as many as fifteen children under his/her protection at one time. The child is treated until the symptoms are relieved, and this can take from days to years. In some villages, every

child may visit the blowing doctor at least once in their young life. As a result, the blowing doctor can hold a well-respected position in the village that is akin to that of an elder or parent to the entire community. Spirit healer (P7) reports that the blowing doctor in her village is an integral part of their community. Their community pays respects to the blowing doctor during special holidays throughout the year and upon the healer's death, they hold a ceremony to honor the new blowing doctor to the community.

4.2.3 Spirit mediums

Individual spirit mediums treat 2-12 health conditions; average 5.5 health conditions per healer. Spirit mediums treat long term and recurring physical symptoms that are caused by spirits. Symptoms caused by *Pee Taan* spirits often include stomachache, headache, lack of energy, and sleeplessness. Spirit mediums also address the emotional and psychological needs of the community, but these were not recorded in this study.

Table 18 Top ten most commonly treated health conditions by healers; listed by frequency.

Refer to Appendix F for descriptions of health conditions.

| Health condition | Frequency | Details of frequency |
|------------------|-----------|---------------------------|
| 4.1 | 18 | H: 11; B: 3; S: 2; LPT: 2 |
| 2.1 | 11 | H: 2; B: 9 |
| 13.1 | 11 | H: 8; B: 3 |
| 13.11 | 11 | H: 9; B: 1; S: 1 |
| 8.1 | 11 | H: 7; B: 3; S: 1 |
| 1.2 | 10 | H: 5; B: 5 |
| 5.1 | 10 | H: 10 |
| 6.4 | 10 | H: 5; B: 5 |
| 6.5 | 10 | H: 4; B: 6 |
| 12.1 | 10 | H: 2; B: 4; S: 4 |

H = Herbalists; B = Blowing doctors; S = Spirit healers; LPT = *Acharn Lum Pee Taan*;

Details of frequency: frequency of healers, by types, who treated the health condition.

Table 19 Diseases and health conditions treated by healers. Refer to Appendix F for descriptions of health conditions. Health conditions highlighted in bold are unique to the type of healer.

| Categories of disease | Herbalists | Blowing doctors | Spirit healers |
|---|--|--|---------------------|
| 1. Physical trauma secondary to animals | 1.2, 1.3, 1.4, 1.6 1.8, 1.9 | 1.1 1.2, 1.4, 1.5, 1.6, 1.7 | ----- |
| 2. Acute and accidental injuries | 2.1, 2.2, 2.5, 2.8 2.7, 2.9 | 2.1, 2.2, 2.5, 2.8 2.3, 2.4, 2.6 | ----- |
| 3. Gynecological illnesses | 3.1, 3.7 3.2, 3.3, 3.4, 3.5, 3.10 | 3.1, 3.8, 3.9 3.6 | 3.7, 3.8, 3.9 |
| 4. Fevers | 4.1, 4.2, 4.3 4.4, 4.5 | 4.1, 4.2, 4.3 | 4.1 |
| 5. Pain and febrile illnesses | 5.1, 5.2, 5.3, 5.5, 5.6, 5.9, 5.10 5.4, 5.7, 5.8, 5.11 | 5.4, 5.7 | 5.4, 5.7, 5.8, 5.11 |
| 6. Dermatological disorders | 6.1, 6.2, 6.6 6.3, 6.4, 6.5 | 6.3, 6.4, 6.5 | ----- |
| 7. Respiratory system disorders | 7.1, 7.2 | ----- | ----- |
| 8. Gastro-intestinal disorder | 8.1, 8.2, 8.5, 8.6 8.3, 8.4, 8.7 | 8.1, 8.6 | 8.1, 8.2, 8.5 |
| 9. Otolaryngeal disorders | 9.1, 9.4, 9.5, 9.6, 9.7, 9.8 9.2 | 9.2, 9.3 | ----- |

Table 19 Diseases and health conditions treated by healers. (Cont.)

| Categories of disease | Herbalists | Blowing doctors | Spirit healers |
|--|--|------------------------------------|---|
| 10. Illnesses associated with seizures | 10.1, 10.2 | 10.1 | 10.2 |
| 11. Sensory system disorders | 11.1 11.2, 11.3 | 11.1 | ----- |
| 12. Spiritual illnesses | 12.1, 12.2, 12.3, 12.7 | 12.1, 12.2, 12.3, 12.5, 12.6, 12.7 | 12.1, 12.2, 12.3, 12.5, 12.6,12.7 12.4, 12.8 |
| 13. Uncategorized health conditions | 13.1, 13.7, 13.11 13.2, 13.3, 13.4, 13.6, 13.9, 13.10, 13.12 | 13.1, 13.7, 13.11 | 13.8 13.11 |
| 14. Tonics | 14.1, 14.3, 14.4, 14.5, 14.6, 14.7 14.2 | 14.2 | ----- |
| 15. Veterinary medicine | 15.1 | ----- | ----- |

Table 20 Health conditions treated by Kui healers and proposed Western medical synonym. This table lists the Kui (K), Yuh (Y), and Khmer (Kh) names, name noted as a first response during the interview techniques (R), and a potential Western medical disease synonym of the health condition. The Western medical disease synonym is based on the ‘R’ name and description of the symptoms.

| | Kui (K), Yuh (Y), Khmer (Kh) names | Response | Western medical synonym |
|-----|---|---|---|
| 1.1 | กะเอนกัน, กะเฮบกับ, กะเห็บ | ตะขาบต่อย/กัด | Sting from centipede |
| 1.2 | กะสันจอก, ไล่กับ, ชังจอด, โป่งวายกับ, กะชั๊กกัด (K) ชังจอด (Y) | งูกัด | Snake bite |
| 1.3 | กาสะกันบรือไต | ปลาดุกปัก, แผลโดนแขนงปลาดุกตำ | Catfish sting |
| 1.4 | อึ่งเถาส้อย, กาวเหียว | แมลงป่อง | Scorpion sting |
| 1.5 | --- | แมงมุมกัด | Spider bite |
| 1.6 | เถา | แมลงกัดต่อย | Various insects sting or bite |
| 1.7 | --- | สัตว์กัด | Any kind of animal bite |
| 1.8 | แจะดั่งะเลียบ | กันแมลง | Protection against insects |
| 1.9 | กันชังจ็อค | กันงูกัด | Protection from snake bites |
| 2.1 | a. อางตะติ / ห้างตะติ b. ต้อยตะติ จั้งตะติ c. แบลงตะติ | a. กระดูกหัก b. แขนหักและขาหัก c. --- | a. broken bones b. broken arms and legs c. broken arm |

Table 20 Health conditions treated by Kui healers and proposed Western medical synonym. (Cont.)

| | Kui (K), Yuh (Y), Khmer (Kh) names | Response | Western medical synonym |
|-----|--|---|---|
| | d. ยื่นตะกิกิ e. กำด้อยตะกิกิ f. ช่องทะและ g. เกรีย, ห่างคิ h. --- i. อางเคล็อน | d. --- e. --- f. ขาเคล็ด g. --- h. เคล็ดขัดยอก i. กระดูกเคล็อน | d. broken leg e. broken finger f. twisted joints in leg g. twisted ankle h. twisted joints i. dislocated bones |
| 2.2 | a. ยำยำ, อีนากะหนอง b. โบ-ล, อ้าง, อะ c. --- | a. ช้ำใน b. บวม c. ฟกช้ำ | a. Internal injury b. Swollen c. bruised |
| 2.3 | เด็ยะกะต้่วลั่ว | น้ำร้อนลวก | Scalded by hot water |
| 2.4 | อุกาด | ไฟไหม้ | Burns from fire |
| 2.5 | --- | แผลสด | Skin laceration |
| 2.6 | ซ่าอะกาเด็ยมอากอง, อางเก็ยม ตะกอง | ก้างติดคอ | Fish bone stuck in throat |
| 2.7 | จามาหลอ | คนที่กินพิษ, ูกยาพิษ ยาสั่ง | Ingested poison |
| 2.8 | บุดคอบบรอง | เมาเหล้า | Alcohol intoxication |
| 2.9 | --- | กันเจ็บขัดยอก | Prevent aching and inflamed joints |
| 3.1 | หมาดขาว (Y) | ตกขาว | ---- |
| 3.2 | --- | ตกเลือด | Irregular menstruation |
| 3.3 | --- | ปวดท้อง เวลา มีระดู | Menstrual cramps |

Table 20 Health conditions treated by Kui healers and proposed Western medical synonym. (Cont.)

| | Kui (K), Yuh (Y), Khmer (Kh) names | Response | Western medical synonym |
|------|---|---|--|
| 3.4 | --- | มดลูกเคลื่อน | Displaced uterus |
| 3.5 | ลอคกอน, อีคฺสะโบน | มดลูก, ชักมดลูก | Tonic for rejuvenating the uterus after delivery |
| 3.6 | เถาะกอนกรอ | คนที่คลอดลูกยาก | Difficult vaginal delivery |
| 3.7 | กูอุ | อยู่ไฟ | 'On the fire' treatment |
| 3.8 | --- | เด็กไม่ยอมกินนมแม่ | Infant refuses to nurse |
| 3.9 | --- | เลี้ยงลูกไม่ได้ | Frequent miscarriages |
| 3.10 | --- | ทำให้ผู้หญิงเป็นหมัน | Induce female sterility |
| 4.1 | a. ตะอี, ตะเกาะ (K) ตะเก๊ะ (Y) b. --- c. ตะกอใจ, อีไปรลอง, ตะเกาะใจ d. ตะโก๊ะเรือรัง e. ไข้ไทฟอยด์ f. ตะเกาะ ทัมระดู | a. ไข้ b. --- c. ไข้จับสัน, ไข้ป่า, ไข้มาลาเรีย, ไข้หมาป่า d. ไข่อักเสบ e. ไข้ไทฟอยด์ f. ไข้, ไข้ทับระดู | a. fever b. malaria c. --- d. Typhoid e. --- f. --- |
| 4.2 | a. เจเทียง, เกรียง b. เกรียงบู้ด / เกรียงแก้ด, เเทียง | a. ชาง, ชางเด็ก, ไข้เด็ก, ไข้หวัดเด็ก b. ชางตานขโมย | a. --- b. --- |
| 4.3 | a. อะแรบ | a. อีสู่อีไฮ | a. --- |
| 4.4 | กะเตาหนึ่งกะดี, จะกะตา (K) ตัวกะเตา (Y) | ตัวร้อน, ร้อนใน (R) | --- |
| 4.5 | จะกะเงด, จะแก็ด, ตัวจะแงะ (K) ตัวจะแงะ (Y) | ตัวเย็น, ยาร้อน | --- |

Table 20 Health conditions treated by Kui healers and proposed Western medical synonym. (Cont.)

| | Kui (K), Yuh (Y), Khmer (Kh) names | Response | Western medical synonym |
|------|--|--|--|
| 5.1 | ไมเอี่ยม | เบาหวาน | Diabetes |
| 5.2 | a. ปานดง b. ปันดวกะยาล c. --- d. --- | a. ประดง b. ประดงข้อเข่า c. ประดงเส้น d. ประดงข้อ | a. --- b. effecting the knee c. effecting the tendons d. effecting the joints |
| 5.3 | กะยัย (Y) | กัยัย | --- |
| 5.4 | a. อีกอง, อีเยิง, อีจะวง b. มีปะก้อ c. อัมพาดะ, อียั้งอีดอง d. อีแบลง | a. ปวดขา b. ปวดข้อเข่า ปวดเข่า ปวดหัวเข่า c. ปวดขาปวดแขน d. ปวด/เจ็บแขน | a. leg myalgia b. knee myalgia c. myalgia of arms and legs d. arm myalgia |
| 5.5 | อิ่งแกง, อีแกน, อีอั้งโกะ, อีแก้ง | ปวด/เจ็บหลัง, ปวดหลัง | Lumbago |
| 5.6 | บาดค้อ | บาดข้อ | Arthritis |
| 5.7 | อีแก้ง, อีเส้น | ปวด/เจ็บ เส้นเอ็น | Tendonitis |
| 5.8 | --- | โรคชรา, เหน็บชา | --- |
| 5.9 | อัมพาด | อัมพาด | Paralysis |
| 5.10 | กลอมพน | โรคนิ้ว, ใदनิ้ว | Nephrolithiasis |
| 5.11 | --- | ไตวาย, ไตอักเสบ, โรคไต, ไตพิการ | Kidney diseases |
| 6.1 | บาง | กลากเกลื่อน, โรคเรื้อน, โรคผิวหนังกลากเกลื่อน | --- |
| 6.2 | --- | โรคผิวหนัง | --- |

Table 20 Health conditions treated by Kui healers and proposed Western medical synonym. (Cont.)

| | Kui (K), Yuh (Y), Khmer (Kh) names | Response | Western medical synonym |
|-----|--|--|---|
| 6.3 | ทุดลม, มุนมาน, ปรี, เกิดมูมิ, มูเมะ | ลมพิษ, ไข้ทูต | --- |
| 6.4 | a. แคนกา, มะม่วง, อะแสดง, ตะรอยปี, แอะ (K) อาก (Y) b. อะแสดงเอียน c. จากะทง d. ปกตะกอง | a. ฝี, ฝีหนอง, ฝีอักเสบ, แผลฝี b. ฝีหัวเอียน, ฝีปลาไหล c. ฝีปะอาก ฝีปลาต่อ d. --- | a. Skin abscess b. --- c. --- d. --- |
| 6.5 | กะใส-น อะเทือ-ล, เอาหวัด, อาวัด | งูสวัด | <i>Herpes zoster</i> |
| 6.6 | --- | เท้าเปื่อย | Keratolysis of the feet |
| 7.1 | a. วัณโรค | a. โรคปอด | Lung disease |
| 7.2 | หอบหืด, หืดะ | หอบหืด, หืดะ | Asthma |
| 8.1 | a. กระเพาะ b. อีปุง | a. กระเพาะ b. ปวดท้อง | a. Indigestion b. stomachache |
| 8.2 | แซงพุง, ลกปุง | ท้องร่วง, ท้องปิด, ถ่ายท้อง | Dysentery |
| 8.3 | กลางฮาม | ไข้เป็นเลือด | --- |
| 8.4 | --- | ไข้หมากเหลือง | --- |
| 8.5 | --- | อาเจียน | Vomiting |
| 8.6 | กลารู, โดระกา, กานตรู (K) กลารู (Y) | ไส้เลื่อน, ไส้ลงห้า | Hernia |
| 8.7 | สะดวง (Y) | ริดสีดวง, ริดสีดวงทวาร, ริดสีดวงดำไส้ | hemorrhoids |

Table 20 Health conditions treated by Kui healers and proposed Western medical synonym. (Cont.)

| | Kui (K), Yuh (Y), Khmer (Kh) names | Response | Western medical synonym |
|------|---|--------------------------------------|--------------------------------|
| 9.1 | ทะมะหล่า / พะมะลา | คอตีบ | --- |
| 9.2 | ตะกองโปล, กองปี้วะ | คอพอก | Goiter |
| 9.3 | อีตะกำ | คางค่อม / คางท่อม, ปวดคอ, เป็นสารพาก | --- |
| 9.4 | เป็นกลาง | ปากเปื่อย | Mouth ulcers |
| 9.5 | อีกะเนง | ปวดฟัน | Gingivitis |
| 9.6 | กะเนง (K) ทะเนง (Kh) | รำมะนาด | --- |
| 9.7 | กะเนาะเฮาะ | ปากเบี้ยว | --- |
| 9.8 | ตะเนาะมะนะ | ปากเหม็น | Halitosis |
| 10.1 | มองละ | โรคลมบ้าหมู, ลมชัก | --- |
| 10.2 | ชัก (K/Y) | ชัก | Seizures |
| 11.1 | มาดกะเซา, มัดตะเวา | ตาแดง, เจ็บตา | --- |
| 11.2 | ไสมีองแกะ | ตาสั้น | Myopia |
| 11.3 | อีกะตอ-ล | ปวด/เจ็บหู | Earache |
| 12.1 | เยียม (K) ยาม (Y) | เด็กร้องไห้ | --- |
| 12.2 | กลัดโมง, โมง | ประสาท, บ้า, ประสาทหลอน, ความดัน | Mental illness |
| 12.3 | กันก๊ะมด | กันผีกันพราย | Spirit possession |
| 12.4 | --- | เวียนหัว เวียนตา, เป็นลม | --- |
| 12.5 | | ป่วย, ไม่สบาย | Malaise |
| 12.6 | วาวปูป็น | พูดไม่ได้ | -- |

Table 20 Health conditions treated by Kui healers and proposed Western medical synonym. (Cont.)

| | Kui (K), Yuh (Y), Khmer (Kh) names | Response | Western medical synonym |
|-------|--|--|---|
| 12.7 | --- | --- | Unable to perform activities of daily living (ADLS) |
| 12.8 | --- | --- | Personality change |
| 13.1 | a. จามาเลาะ / ลอ, เตื่อ, จาลอ, จาลัวะ , จานอั้งเตะจาโดย (K) จามาเลาะ / ลอ, ลัว, เลาะสมอด (Y) b. สะมอด, สะบูน, สะโบน (K) เลาะสมอด (Y) | a. กินของผิดสำแลง, อาหาร แสลง/ สำแลง/ พิด, ของ แสลง/ สำแลง, กินอาหารพิด b. ผิดสำบูน / สะบูน, กะบูน | a. --- b. --- |
| 13.2 | ตะกั่ว | ความอ้วน | Obesity |
| 13.3 | พรุน | พยาธิ, พยาธิตัวจิ๊ด, พยาธิใบไม้ | Intestinal parasites |
| 13.4 | ครดลอม | โรคตับ | Liver disease |
| 13.5 | กลอมพรี | ขับปัสสาวะ | Dysuria |
| 13.6 | สดวงม้อก (K) สดวงม้อะ (Y) | ริดสีดวงจมูก | --- |
| 13.7 | อีปรอ | ปวดหัว | headache |
| 13.8 | --- | --- | Coma |
| 13.9 | ครู้ฮาม | เลือดตก | --- |
| 13.10 | ความดันเตือม, เส้นเลือดฟอยอุดตัน | ความดันต่ำ | Low blood pressure |
| 13.11 | แมง | มะเร็ง | cancer |
| 13.12 | เอดส์ | เอดส์ | AIDS |
| 14.1 | a. เป็ยะจา b. บำรุงกำลัง | a. เจริญ/บำรุง อาหาร b. บำรุงกำลัง | a. Appetite stimulant b. Energy tonic |

Table 20 Health conditions treated by Kui healers and proposed Western medical synonym. (Cont.)

| | Kui (K), Yuh (Y), Khmer (Kh) names | Response | Western medical synonym |
|------|---|-----------------------|--------------------------------|
| | c. --- | c. บำรุงเลือด | c. Blood tonic |
| 14.2 | บำรุงเค็ยะตอ, บำรุงเค็ยะเตาะ (K) บำรุงเค็ยะเต๊ะ (Y) | บำรุงน้ำนม | Tonic to increase breast milk |
| 14.3 | --- | บำรุงหัวใจ, โรคหัวใจ | Heart tonic |
| 14.4 | --- | บำรุงผิว | Skin tonic |
| 14.5 | เสาะโรย | ผมร่วง, ผมคก, บำรุงผม | Hair tonic |
| 14.6 | --- | แก้เกิดหมัน | Female fertility tonic |
| 14.7 | --- | บำรุงชูกำลังผู้ชาย | Male virility tonic |
| 15.1 | --- | --- | Aching feet of cattle |

4.3 Preparation methods

This section defines and describes preparation methods that are used by Kui healers. These results are based on 1216 observations of preparation methods used to prepare materia medica to treat health conditions. Table 21 identifies the main categories of preparation methods and lists the specific preparation methods that are included under each category. Table 22 lists each specific preparation method, the frequency of observation for each preparation method, vehicles associated with the method, and application. Table 23 provides definitions of the applications that are listed in Table 22.

The following sub-sections list the preparation methods in descending order by the frequency that each was used (Table 22). Preparations often involve combinations of different methods (Table 23). Some specific remedies used to treat health conditions are mentioned in this section, and the reader should refer to Appendix G for more details.

4.3.1 Boiling (608 observations) (Photo 4.21)

Materia medica (usually plants) are often boiled just after they are collected, although herbalist **Y13** recommends using plant material dried and using a fresh plant part only if the patient requires a stronger dose. In general, plants are chopped into smaller pieces, added to a pot of potable water, and boiled until the water becomes colored.

Boiled medicines are most often consumed by the patient rather than being used in other ways. After the medicine has been boiled, a cup of the medicinal water is decanted from the top and consumed by the patient as one dose. The materia medica is left in the water and may be boiled or reheated again to be given to the patient as another dose. Depending on the instructions of the healer, the patient may drink just one to a few cups at specific times of the day or drink the medicine ‘in place of water.’

A single mixture of plants may be boiled more than once, until the mixture becomes ‘bland’ (จืด) or the water ceases to take on a strong color or taste. Eleven observations were recorded among herbalists **Y3**, **Y13** and **Y14** for remedies that were consumed hot to treat health conditions 3.1, 8.1, 13.1, 14.2, and 14.4. Four observations were recorded among herbalists **Y13** and **Y14** for remedies that were consumed cool to treat health condition 4.1.

Boiled medicine can also be applied as steam, compress, or directly to the skin. With steaming application, the medicine is boiled and the afflicted body part is placed above the

boiling water to be steamed. This is most often used to treat gynecological afflictions or skin abscesses. For a compress, the boiled raw materials are wrapped in cloth and pressed onto aching or paralyzed parts of the body. The water of the medicine can also be used topically to treat health condition 6.1. One unique remedy for health condition 13.3 called for the foam of the boiled medicine, which is dried and rolled into pellets, and then consumed by the patient. Some boiling medicines can alternatively be soaked in alcohol, pounded into a powder for fresh consumption, or sanded into fresh water.

4.3.2 Sanding (355 observations) (Photo 4.22)

A sanding technique requires dry and hard raw material, a rough stone for sanding the medicine, liquid vehicle for the medicine, and a pot to hold the finished remedy. First, the raw materials are selected and laid out by the healer and a bowl of fluid is prepared. The stone is used to sand each raw medicine one by one at a consistent pressure, speed, and time and the resulting sanded material falls into the body of fluid. If a remedy calls for some raw materials to be used more or less than others, then the healer varies the time that the material is sanded.

Sanding stones can come into the healer's possession via a variety of ways. They may be passed down from older generations, collected in the local area, purchased at the market (sharpening stone), and received as a 'gift from the angels' (auspicious events leading to the discovery of a stone). Most healers do not specify the characteristics of the stones. However, herbalist **Y2** uses a stone created by lightning hitting the ground and herbalist **Y7** uses a stone that is *hin din dan* (หินดินดาน), a type of hard stone which does not erode into the vehicle during the sanding process. Stones that are normally used to sharpen household knives must be cleaned thoroughly before being used to make medicine.

Drinking water is the most common vehicle for sanding medicines. These medicines are usually consumed, although they may be used to bathe afflicted parts of the body. If the medicine is consumed, usually about one liter is prepared. A few remedies use rice water, which is water that has been used to steam glutinous rice or was decanted from boiled non-glutinous rice. Herbalist **Y12** cautions that the vehicle of water should be a natural temperature and not too warm. These medicines are usually used topically, but can also be consumed. Lime juice can also be used for topical medicines. Topical medicines are used

mostly for illnesses affecting the skin, such as injuries caused by animals, health condition 6.5, and blisters from high fevers. Health conditions 5.4 and 8.1 were also treated using topically applied sanding medicines.

During the sanding process, some healers stress the importance of limiting the contact of items with the water. Healers who use mostly sanded medicine state that the raw materials must not be dipped in the water because it causes the medicines to become 'bland' (จืด). Instead, the medicine should be released into the water by dipping or washing the stone into the water. In contrast, healers who usually boil medicine state that the stone should not be dipped into the water and only the raw plant materials. These same healers often use a sharpening stones for sanding, and it is possible that they do not consider this stone to be sanitary. Also, in contrast to sanding medicine healers, these healers usually collect plants as they are needed and do not intend to keep the materials for long-term use. To prevent contamination, herbalist **Y7** warned that fingernails should be kept clear of the sanding stone and herbalist **Y12** states that the hand should not be soaked into the medicine.

4.3.3 Soaking (108 observations)

Fresh or dry raw materials are chopped into smaller pieces and left to soak for half to a full day in a body of fluid. The vehicle is usually water (82 observations), although a few remedies called for alcohol (26 observations).

Remedies soaked in water are usually consumed (65 observations). There were 24 observations of materia medica that were applied topically for health conditions 1.2, 1.3, 1.4, 1.6, 1.7, 2.5, 4.3, 6.2, 6.5, and 10.2 among herbalists **Y2**, **Y3**, **Y5**, **Y7**, **Y11**, and **Y13** and blowing doctor **B6**. There were 15 observations of materia medica that were used by bathing to treat health conditions 4.1, 4.2, 4.3, 8.1, and 6.3 among herbalist **Y2**, **Y3** and **Y5** and blowing doctor **Y13**. Twelve of these observations could be consumed or used by bathing.

There were 24 observations of materia medica soaked in alcohol and consumed. These were used in treatments for health conditions 2.3, 5.2, 5.7, 5.8, 5.9, 5.10, 5.11, 8.7, 13.1, and 14.7 among herbalists **Y4**, **Y5**, **Y7**, and **Y8**. Two observations of materia medica were applied topically to treat health conditions 5.8 and 14.5 among herbalists **Y3** and **Y7**.

4.3.4 Fresh: herbal (106 observations) (Photo 4.23)

These medicines are usually prepared without any vehicles. Freshly collected plant parts, such as the leaf or rhizome, can be pounded and used as a poultice for areas of the body that are afflicted with health conditions 5.4, 6.4, and 9.2. Plant parts can be chewed fresh to treat afflictions in the mouth, drunkenness and blood in feces. To treat health condition 11.3, the water is squeezed out of a plant root and dripped into the ear. Blowing doctor **B13** recommends patients with injuries caused by animals to topically apply the venom off the back of the toad. Dried plants parts are most often pounded or ground into a fine powder and then made into capsules for consumption. This method is used to treat mostly internal illnesses and symptoms, such as health conditions 3.4, 8.7, and 13.11. However, one remedy was pounded so that it could be packed into a skin laceration (health condition 2.5).

In the event that a vehicle is needed, water, oil, saliva, honey and alcohol are used as vehicles. Water is used by pounding hard parts of plants and crumpling and scrubbing leaves together into the water. Three remedies using scrubbed leaves were consumed for internal illnesses, such as health conditions 2.8, 8.1, and 8.2, and one remedy treated health condition 11.1 by applying the medicine to a rolled banana leaf and then blowing through the leaf it into the patient's eyes. Oil was used as the vehicle for three remedies among herbalists. These were applied topically to treat health conditions 4.1, 6.5, and 13.11. Saliva was used via blowing methods, without the use of incantation. Healers chew the medicine and blow it onto the patient to treat health conditions 1.2 and 6.5 and to chase evil spirits away. Honey was used as a vehicle by herbalist **Y5**, although she stated that water could also be substituted as a vehicle for these same medicines. Alcohol was used as a vehicle by blowing doctors to treat patients with treat internal injuries via consumption.

4.3.5 Fresh: Blowing treatment (92 observations) (Photo 4.24)

This preparation method is based on fresh raw materials that are chewed in the healer's mouth and then blown onto the patient's injury. In comparison to the fresh preparation described in the previous section, the blowing action is accompanied with an incantation, as an integral part of the method. There is a highly developed system of treatment associated with this method and this is described in detail in section 4.1.4.

4.3.6 Fresh: Spiritual treatment (31 observations)

This preparation method is based on fresh raw materials that are used fresh and whole and symbolically within ceremonies. It is not important for the material to make direct contact with the patient. The materials are plant based, with exception of some minerals such as salt, charcoal, and slaked lime. The plants are decorative and products of staple crops. This treatment is used mainly by spirit healers, although herbalists and blowing doctors integrate some spiritual treatment into their typical treatments. This type of preparation may be demonstrated most clearly in section 4.1.6.

4.3.7 Roasting (11 observations)

This method of treatment was usually used with plant bark, which is roasted with salt, then soaked or boiled in water, and consumed by the patient. It can be used to treat health conditions 4.2 (fever), 8.2, and 8.3. The kernels of one species, *Oryza sativa*, were prepared as a medicine by roasting and then mixing it with other materials in the remedy.

4.3.8 Burning (9 observations)

Raw materials can be burned so that the smoke or the ashes of the materials are used to treat health conditions. Two remedies for cancer were prepared by mixing the ashes of raw materials with rice water and applying this topically. Ashes mixed with oil can also be applied topically to afflicted areas to treat health condition 6.3. A remedy by herbalist **Y5** uses ashes of raw medicines mixed with honey. The medicine is rolled into pellets and consumed by the patient to treat health condition 8.4. The raw materials could be burned to use the smoke to treat patients for health conditions 6.3, 11.1, 13.6, and 13.7.

4.3.9 Steaming (6 observations)

This method differs from the boiling method described in section 4.3.1 because the materia medica does not make direct contact with the boiling body of water. Also boiling medicines rely on water as the main vehicle for application, while steaming medicines rely on the prepared materia medica in the application. The raw materials can be wrapped in a cloth, steamed over water, and used as a compress against the skin. Paralysis, for example, was treated by steaming by spirit healer **P6**). Herbalist **Y5** recommends women to steam and consume the ‘fruit’ of a male papaya for increasing their fertility (health condition 3.10)

Table 22 Preparation methods and associated frequency of observation (Freq), vehicles and application. Vehicles: ‘none’ = raw material applied without a vehicle. Numbers in parentheses indicate frequency of observations.

| Preparation method | Freq | Vehicles | Applications |
|---------------------------|-------------|---|--|
| Boil | 526 | water | consume (484); consume/bathe (15); steam (14); topical (10); bathe (2); consume, steam, or topical (1) |
| Sand | 303 | a. water (274) b. rice water (23) c. lime juice (5) d. ducks blood & alcohol (1) | a. consume (219); consume/bathe (36); topical (14); bathe (4) ; consume, soak, or topical (1) b. topical (22), consume/bathe (1) c. topical (4), consume (1) d. consume (1) |
| Soak | 45 | a. water (41) b. alcohol (3) c. water & slaked lime (1) | a. consume (22), topical (12), bathe (2), consume & bathe (5) b. topical (2), consume (1) c. topical |
| Fresh: herbal | 94 | a. none (35) b. water (34) c. oil (2) d. rice water (2) e. urine (1) | a. consume (19), topical (15) b. topical (21), consume (13), blow (1) c. topical d. topical e. topical |

Table 22 Preparation methods and associated frequency of observation (Freq), vehicles and application. (Cont.)

| Preparation method | Freq | Vehicles | Applications |
|---------------------------|-------------|--|--|
| | | f. saliva (20) | f. blow (20) |
| Fresh: Blowing treatment | 92 | saliva | Topical |
| Fresh: spiritual | 31 | none | spiritual/ ceremonial |
| Roast, then boil | 2 | water | consume |
| Roast, then soak | 9 | water | consume (7), topical (1), consume/bathe (1) |
| Burn | 9 | a. rice water (1) b. oil (1) c. honey (1) d. none (6) | a. topical b. topical c. consume d. topical (1), smoked (topical) (5) |
| Steam | 4 | none | topical (4) |
| Soak, then boil | 2 | water | consume |
| Steam, then boil | 2 | water | consume |
| Boil or sand | 31 | water | consume |
| Boil or fresh | 11 | water | consume |
| Boil or soak | 21 | a. soak (alcohol) (17) b. soak (water) (4) | a. consume (17) b. consume or bathe (3), consume (1) |
| Sand or soak | 18 | water | consume (7); consume/topical (7); consume/bathe (3); bathe (1) |
| Sand or fresh | 1 | water | consume/bathe |
| Steam or fresh | 2 | water | consume |

| Preparation method | Freq | Vehicles | Applications |
|---------------------------|-------------|-----------------|---------------------|
| Sand or soak, then boil | 10 | water | consume |
| Boil to collect foam | 1 | water | consume |
| Boil, sand or soak | 2 | water | consume |

Table 23 Definitions of application terms

| Application | Definitions |
|--------------------|---|
| 1. consume | remedy is ingested by the patient |
| 2. topical | remedy is applied directly to the skin |
| 3. steam | steam emitting from the boiled medicine makes prolonged contact with the patient's body |
| 4. bathe | afflicted body part is washed or soaked in an ample amount of the remedy |
| 5. blow | raw materials are chewed by the healer and blown onto the afflicted body part(s) |
| 6. smoked | smoke from the burning raw materials is allowed to make prolonged contact with the patient's body |
| 7. compress | raw materials are wrapped in cloth and pressed onto the afflicted body part(s) |

4.4 Materia medica

Materia medica is defined as natural occurring materials that are used directly in the treatment process or ceremony. This does not include materials used as vehicles of medicine, offerings for healers before and after treatments, diagnosing tools, nor for materials used for logistic purposes during *Lum Pee Taan* ceremonies. Among *Lum Pee Taan* ceremonies, materials used for logistic purposes included miscellaneous straight and thin sticks of wood used to construct the frames of the altars and ceremonial area, grasses used to weave mats covering the ceremonial floor, silk and cotton that made up dancers' costumes, ingredients of pre-packaged foods offered to the spirits during the ceremonies, and cotton string and bamboo used as minor supporting materials for important material medica items.

Appendix G lists the materia medica that is recorded from healers. These materials are grouped into 'identified' and 'unidentified' materials, based on the definition established in section 3.7.4. The analysis in this section focuses only on the identified materials.

4.4.1 Diversity of materia medica

There are 374 identified materia medica (Appendix G) and these consist of 333 plant species (89.0%), 33 animal species (8.8%), 7 minerals (1.9%), and 1 fungus (0.3%). The majority of this information was generated from interviews with herbalists (Table 24). Table 25 identifies the type and diversity level of materia medica used by different types of healers.

Table 24 Frequency of materia medica generated by interviews with different types of healers.

| Type of healer | Types of materia medica |
|--|-------------------------|
| Herbalists | 294 |
| Blowing doctors | 19 |
| Spirit healers | 9 |
| Herbalists and blowing doctors | 13 |
| Herbalists and spirit healers | 28 |
| Blowing doctors and spirit healers | 2 |
| Herbalists, blowing doctors and spirit healers | 10 |

Table 25 Diversity of materia medica used by different types of healers. Spirit mediums: Values in parentheses represent the frequency of items used in LPT ceremonies which contributed to the overall frequency for spirit mediums.

| <u>Types of materia medica</u> | Herbalists | Blowing doctors | Spirit healers (LPT ceremonies) |
|--------------------------------|------------|-----------------|---------------------------------|
| Plants | 309 | 38 | 39 (26) |
| Animals | 29 | 3 | 3 (2) |
| Minerals | 6 | 1 | 3 (3) |
| Fungus | 1 | 0 | 1 (1) |
| Total | 345 | 42 | 47 (32) |

4.4.2 Materia medica importance

4.4.2.1 Herbalists and blowing doctors

There were 82 types of materials (Table 26) on the first level of healer consensus and 46 types of materials on the second level of informant consensus (Table 27). All plant names in Tables 26-27 are first response names by the healers (R), unless otherwise noted. These tables list the following information of the materials:

- 1) IC = Informant consensus frequency is the number of healers who stated a medical use for the plants.
- 2) UR = Frequency of use reports is the total number of health conditions which healers stated the plant could be used to treat. The health categories represent different grouping of health conditions which the plants were used to treat.
- 3) The intraspecific use-value (IUV) was calculated by dividing the frequency of UR for the specific health category. As a result, higher IUV demonstrates greater importance of a plant for treatment in a specified health category.

Materials used in a betel quid were used to treat many different health conditions, but these were not included in the calculations of materia medica because it would heavily bias the data. All blowing doctors use หมาก (*Areca catechu*), พลู่ (*Piper betle*), and ปูนขาว (white slaked lime), with exception of blowing doctor **B11**, who uses PL217 (*Piper wallichii*) in place of PL216 (*Piper betle*) to treat health condition 2.1. Health conditions that were treated using these materials for blowing treatment are listed in Table 28. Herbalist **Y2** reported using miscellaneous pieces of material that is often found at the bottom of a betel nut basket to treat health condition 6.4A but this use of material is not included in the analysis or Table 28 because the materials were not specifically recorded.

4.4.2.2 Spirit mediums

General and *Pee Taan* spirit mediums are treated separately in this analysis. The plant use among general spirit healers is not quantified. Table 29 shows the use and frequency of materia medica used in *Lum Pee Taan* ceremonies. This data is detailed further in Appendix H.

Table 26 Materia medica importance: first level of healer consensus. This data also includes some ‘unidentified’ materials. Table is sorted in descending order by IC frequency; life form of materia medica (plants, fungus, animals, then minerals); and by code (refer to Appendix G). IC = Informant consensus frequency; UR = Frequency of use reports; Health category: Refer to Appendix F for details. * = health categories with specific diseases that share informant consent. Table 27 details these health conditions and remedies; IUV = Intraspecific use-value.

| Code | Scientific name | IC | UR | Health category | IUV |
|-------|--|----|----|-----------------|------|
| PL394 | <i>Saccharum chinensis</i> Nees ex Hook. & Arn. | 10 | 20 | 3 | 0.1 |
| | | | | 5 | 0.25 |
| | | | | 8* | 0.15 |
| | | | | 13 | 0.2 |
| PL100 | <i>Dracaena loureiri</i> Gagnep. | 8 | 31 | 2* | 0.13 |
| | | | | 4* | 0.32 |
| | | | | 5 | 0.13 |
| | | | | 8* | 0.06 |
| | | | | 12 | 0.06 |
| | | | | 13* | 0.23 |
| PL292 | <i>Smilax glabra</i> Roxb. | 8 | 13 | 5 | 0.31 |
| | | | | 8* | 0.23 |
| | | | | 13* | 0.23 |
| PL103 | <i>Mansonia gagei</i> J.R. Drumm. ex Prain | 6 | 19 | 2 | 0.11 |
| | | | | 4* | 0.26 |
| | | | | 5 | 0.16 |
| | | | | 12 | 0.11 |
| | | | | 13* | 0.26 |
| PL223 | <i>Cladogynos orientalis</i> Zipp. ex Span. | 6 | 10 | 8* | 0.5 |

Table 26 Materia medica importance: first level of healer consensus. (Cont.)

| Code | Scientific name | IC | UR | Health category | IUV |
|-------|---|----|----|-----------------|------|
| | | | | 14 | 0.1 |
| PL250 | <i>Cocos nucifera</i> L. var. <i>nucifera</i> | 6 | 8 | 4 | 0.25 |
| | | | | 6 | 0.25 |
| PL281 | <i>Mimosa pudica</i> L. | 6 | 10 | 6 | 0.3 |
| | | | | 8 | 0.1 |
| PL323 | <i>Clausena excavata</i> Burm.f. | 6 | 13 | 3 | 0.15 |
| | | | | 4 | 0.15 |
| | | | | 6 | 0.15 |
| | | | | 13* | 0.23 |
| | | | | 14 | 0.15 |
| PL354 | <i>Imperata cylindrica</i> (L.) Raeusch. | 6 | 6 | 5 | 0.67 |
| PL393 | <i>Saccharum officinarum</i> L. | 6 | 7 | 5 | 0.57 |
| PL51 | <i>Salacia chinensis</i> L. | 5 | 11 | 5* | 0.55 |
| | | | | 8* | 0.18 |
| | | | | 13 | 0.18 |
| PL75 | cf. <i>Ixora ebarbata</i> Craib | 5 | 10 | 3* | 0.2 |
| | | | | 13* | 0.5 |
| PL101 | <i>Disopyros venosa</i> Wall A.DC. | 5 | 16 | 4* | 0.5 |
| | | | | 13* | 0.25 |
| PL132 | <i>Litsea cubeba</i> (Lour.) Pers. | 5 | 18 | 5 | 0.17 |
| | | | | 3* | 0.11 |
| | | | | 12* | 0.11 |
| | | | | 13 | 0.17 |
| | | | | 14* | 0.22 |
| PL209 | <i>Caesalpinia sappan</i> L. | 5 | 12 | 6 | 0.17 |
| | | | | 13* | 0.25 |
| | | | | 14 | 0.17 |
| PL269 | <i>Neuropeltis racemosa</i> Wall. | 5 | 12 | 5* | 0.58 |

Table 26 Materia medica importance: first level of healer consensus. (Cont.)

| Code | Scientific name | IC | UR | Health category | IUV |
|-------|---|----|----|-----------------|------|
| | | | | 8* | 0.17 |
| | | | | 13 | 0.17 |
| PL388 | <i>Cyperus rotundus</i> L. | 5 | 5 | 5 | 0.6 |
| PL16 | <i>Allium sativum</i> L. | 4 | 4 | 5 | 0.5 |
| PL63 | <i>Oryza sativa</i> L. | 4 | 5 | 6* | 0.6 |
| PL77 | <i>Ixora cibdela</i> Craib | 4 | 9 | 3 | 0.22 |
| | | | | 13 | 0.33 |
| PL79 | <i>Smilax</i> sp. | 4 | 7 | 6 | 0.28 |
| PL93 | <i>Sesamum orientale</i> L. | 4 | 4 | 2* | 0.75 |
| PL107 | <i>Piper sarmentosum</i> Roxb. | 4 | 4 | 5 | 1 |
| PL140 | <i>Nauclea orientalis</i> (L.) L. | 4 | 8 | 13* | 0.5 |
| PL144 | <i>Borassus flabellifer</i> L. | 4 | 4 | 5 | 0.75 |
| PL157 | <i>Phyllanthus amarus</i> Schumach & Thonn. | 4 | 4 | 5* | 0.75 |
| PL178 | <i>Ichnocarpus frutescens</i> (L.) W.T. Aiton | 4 | 7 | 3* | 0.58 |
| | | | | 5 | 0.29 |
| PL208 | <i>Bambusa vulgaris</i> Schrad. ex J.C. Wendl. var. <i>vulgaris</i> | 4 | 4 | 5 | 0.5 |
| PL228 | <i>Ficus religiosa</i> L. | 4 | 5 | 6* | 0.4 |
| PL289 | <i>Tiliacora triandra</i> Diels | 4 | 9 | 4* | 0.56 |
| | | | | 13 | 0.22 |
| PL308 | <i>Melodorum fruticosum</i> Lour. | 4 | 4 | 5 | 0.5 |
| PL305 | <i>Ziziphus oenoplia</i> (L.) Mill. var. <i>brunoniana</i> Tardieu | 4 | 11 | 3* | 0.18 |
| | | | | 5 | 0.27 |
| | | | | 8 | 0.18 |
| | | | | 13 | 0.18 |
| PL331 | <i>Clausena harmandiana</i> Pierre ex Guillaumin | 4 | 13 | 1* | 0.23 |
| | | | | 4* | 0.15 |

Table 26 Materia medica importance: first level of healer consensus. (Cont.)

| Code | Scientific name | IC | UR | Health category | IUV |
|-------|--|----|----|-----------------|------|
| | | | | 6 | 0.15 |
| | | | | 13* | 0.31 |
| PL341 | <i>Ananas bracteatus</i> (Lindl.) Schult. & Schult. f. | 4 | 5 | 3 | 0.4 |
| | | | | 5* | 0.6 |
| PL363 | <i>Areca catechu</i> L. | 4 | 6 | 8* | 0.5 |
| PL408 | <i>Eurycoma longifolia</i> Jack | 4 | 5 | 6* | 0.4 |
| FU1 | --- | 4 | 9 | 5 | 0.3 |
| | | | | 13 | 0.22 |
| | | | | 14 | 0.22 |
| PL57 | <i>Curcuma zedoaria</i> (Christm.) Roscoe | 3 | 4 | 13 | 0.75 |
| PL65 | <i>Grewia abutilifolia</i> W. Vent. ex Juss. | 3 | 4 | 5* | 0.5 |
| PL120 | <i>Xylia xylocarpa</i> Taub. var. <i>kerrii</i> (Craib & Hutch) I.C.Nielsen | 3 | 8 | 5 | 0.25 |
| | | | | 13 | 0.25 |
| PL127 | <i>Ardisia symplocifolia</i> (C.Chen) K. Larsen & C.M. Hu | 3 | 5 | 5 | 0.4 |
| PL180 | <i>Tinospora crispa</i> (L.) Hook.f. & Thomson | 3 | 4 | 5* | 0.5 |
| PL186 | <i>Amorphophallus paeoniifolius</i> (Dennst.) Nicolson | 3 | 3 | 5* | 0.67 |
| PL190 | cf. <i>Dalbergia oliveri</i> Gamble ex Pain | 3 | 4 | 5* | 0.75 |
| PL213 | <i>Dracontomelon dao</i> Merr. & Rolfe | 3 | 7 | 4 | 0.29 |
| | | | | 5* | 0.43 |
| | | | | 13 | 0.29 |
| PL216 | <i>Piper betle</i> L. | 3 | 4 | 11* | 0.5 |

Table 26 Materia medica importance: first level of healer consensus. (Cont.)

| Code | Scientific name | IC | UR | Health category | IUV |
|-------|---|----|----|-----------------|------|
| PL238 | <i>Tamarindus indica</i> L. | 3 | 8 | 4* | 0.25 |
| | | | | 5 | 0.25 |
| | | | | 6 | 0.25 |
| PL257 | <i>Moringa oleifera</i> Lam. | 3 | 3 | 5 | 0.66 |
| PL258 | <i>Carica papaya</i> L. | 3 | 5 | 3 | 0.4 |
| PL298 | <i>Millingtonia hortensis</i> L.f. | 3 | 6 | 5 | 0.67 |
| PL306 | <i>Derris elliptica</i> (Roxb.) Benth. | 3 | 5 | 1* | 1 |
| PL326 | <i>Barleria lupulina</i> Lindl. | 3 | 5 | 1* | 1 |
| PL330 | <i>Strychnos nux-vomica</i> L. | 3 | 7 | 4 | 0.29 |
| | | | | 13* | 0.57 |
| PL345 | <i>Chromolaena odorata</i> (L.) R.M. | 3 | 7 | 13 | 0.29 |
| | King & H. Rob. | | | | |
| PL376 | <i>Calamus</i> sp. | 3 | 4 | 5 | 0.5 |
| PL379 | <i>Streblus asper</i> Lour. | 3 | 9 | 4 | 0.22 |
| AN12 | <i>Elephas maximus</i> Linnaeus | 3 | 4 | 12 | 0.5 |
| PL21 | <i>Dioscorea hispida</i> Dennst. var. | 2 | 5 | 1 | 0.4 |
| | <i>hispida</i> | | | | |
| PL23 | <i>Phyllodium pulchellum</i> (L.) Desv. | 2 | 2 | 13 | 1 |
| PL35 | -- | 2 | 8 | 4 | 0.25 |
| | | | | 13 | 0.25 |
| PL54 | <i>Combretum acuminatum</i> Roxb. | 2 | 2 | 5 | 1 |
| PL68 | <i>Sopubia fastigiata</i> Bonati | 2 | 3 | 5 | 0.67 |
| PL69 | <i>Diospyros borneensis</i> Hiern | 2 | 2 | 5 | 1 |
| PL72 | <i>Urena lobata</i> L. | 2 | 7 | 3 | 0.43 |
| PL84 | <i>Oxyceros horridus</i> Lour. | 2 | 12 | 4* | 0.17 |
| | | | | 13* | 0.33 |
| | | | | 14 | 0.25 |
| PL97 | <i>Asparagus racemosus</i> Willd. | 2 | 4 | 13 | 0.5 |

Table 26 Materia medica importance: first level of healer consensus. (Cont.)

| Code | Scientific name | IC | UR | Health category | IUV |
|-------|--|----|----|-----------------|--------------|
| PL148 | <i>Alstonia scholaris</i> (L.) R.Br. | 2 | 3 | 14 | 0.67 |
| PL171 | <i>Uvaria microcarpa</i> Champ. ex Benth. | 2 | 5 | 4 14 | 0.4 0.4 |
| PL187 | -- | 2 | 5 | 4 | 0.4 |
| PL226 | <i>Cissus quadrangularis</i> L. | 2 | 2 | 8* | 1 |
| PL234 | <i>Uvaria rufa</i> Blume | 2 | 4 | 4* | 0.5 |
| PL253 | <i>Baccaurea ramiflora</i> Lour. | 2 | 3 | 4 | 0.67 |
| PL259 | <i>Jasminum sambac</i> (L.) Aiton | 2 | 3 | 4 | 0.67 |
| PL312 | <i>Curcuma xanthorrhiza</i> D. Dietr | 2 | 2 | 3 | 1 |
| PL313 | <i>Zingiber montanum</i> (J. König ex Retz.) Theilade | 2 | 2 | 8* | 1 |
| PL320 | <i>Hymenodictyon orixense</i> (Roxb.) Mabb. | 3 | 6 | 4* 5 | 0.67 0.33 |
| PL347 | <i>Hydnophytum formicarum</i> Jack | 2 | 2 | 5 | 1 |
| PL348 | <i>Stemona phyllantha</i> Gagnep. | 2 | 3 | 13 | 1 |
| PL353 | <i>Aganosma marginata</i> (Roxb.) G. Don | 2 | 4 | 8 | 0.75 |
| PL360 | <i>Schefflera leucantha</i> R. Vig. | 2 | 4 | 13 | 0.5 |
| PL380 | <i>Micromelum minutum</i> Wight & Arn. | 2 | 5 | 8* | 0.4 |
| AN5 | <i>Gallus gallus gallus</i> | 2 | 2 | 9* | 1 |
| AN19 | <i>Anas</i> sp. | 2 | 2 | 2* | 1 |

Table 27 Materia medica importance: second level of healer consensus. Table is sorted based on the order established in Table 26 (descending order by IC frequency; life form of materia medica (plants, fungus, animals, then minerals); and alphabetically by Thai characters of the vernacular name). HC = health condition (refer to Glossary F for details); IC = Informant consensus frequency; Plant part: bk&w = Bark and wood; am = apical meristem; rt = root; st = stem; rhz = rhizome; end = endosperm; fr = fruit; all parts = all parts of plant; Preparation: based on definitions established in section 4.3.

| Code | Scientific identification | HC | IC | Plant part | Preparation | Application |
|-------|--|------|----|------------------|------------------------------------|---------------------|
| PL394 | <i>Saccharum chinensis</i> Nees ex Hook. & Arn. | 5.11 | 2 | bk&w, st & lf | Boil; Pound and soak in alcohol | consume, two pots |
| | | 8.7 | 3 | bk&w | Boil | consume, once a day |
| PL100 | <i>Dracaena loureiri</i> Gagnep. | 2.2 | 2 | hw | Sand | consume |
| | | 4.1 | 4 | hw | Sand (water) | consume; bathe |
| | | 4.3 | 3 | hw | Sand; Soak in water | consume; bathe |
| | | 4.2 | 2 | hw | Sand | consume; mouthwash |
| | | 8.1 | 2 | hw | Sand (water); Pound, then boil | consume; bathe |
| | | 13.7 | 2 | hw | Sand; Boil | consume |
| | | 13.1 | 4 | hw | Sand; Boil | consume |
| | | 14.1 | 2 | hw | Sand | consume |
| PL292 | <i>Smilax glabra</i> Roxb. | 8.7 | 2 | rhz | Dry, pound together, | consume |

Table 27 Materia medica importance: second level of healer consensus. (Cont.)

| Code | Scientific identification | HC | IC | Plant part | Preparation | Application |
|-------|---|-------|----|---------------|--------------------------------|------------------------|
| | | | | | then put into capsules | |
| | | 13.11 | 2 | rhz | Boil; Pound fresh | 1. consume; 2. topical |
| PL103 | <i>Mansonia gagei</i> J.R. Drumm ex Prain | 4.1 | 2 | hw | Sand (water) | consume or bathe |
| | | 13.1 | 2 | hw | Sand | consume |
| | | 13.7 | 2 | hw | Sand; Boil | consume |
| PL223 | <i>Cladogynos orientalis</i> Zipp. ex Span. | 8.1 | 5 | rt | Boil (4); Sand (1) | consume; topical |
| PL323 | <i>Clausena excavata</i> Burm.f. | 13.1 | 3 | rt; hw | Sand; Boil | consume while hot |
| PL51 | <i>Salacia chinensis</i> L. | 5.11 | 2 | hw | Boil; Pound and soak (alcohol) | consume |
| | | 8.1 | 2 | hw | Boil | consume |
| PL75 | cf. <i>Ixora ebarbata</i> Craib | 3.1 | 2 | all parts; rt | Boil | consume |
| | | 13.7 | 2 | rt | Sand; Boil | consume |
| | | 13.1 | 2 | rt | Sand; Boil | consume |
| PL101 | <i>Disopyros venosa</i> Wall. A.DC. | 4.2 | 2 | hw | Sand | consume |
| | | 4.1 | 2 | hw | Sand (water) | consume or bathe |
| | | 4.3 | 3 | hw | Sand; Soak | consume or topical |
| | | 13.7 | 2 | hw | Sand; Boil | consume |
| | | 13.1 | 2 | hw | Sand; Boil | consume |

Table 27 Materia medica importance: second level of healer consensus. (Cont.)

| Code | Scientific identification | HC | IC | Plant part | Preparation | Application |
|-------|--|------|----|---------------|-----------------------------------|-----------------------|
| PL132 | <i>Litsea cubeba</i> (Lour.) Pers. | 8.1 | 2 | bk&w | Sand; Boil | consume or bathe |
| | | 12.2 | 2 | bk&w | Sand | consume |
| | | 14.1 | 3 | bk&w | Sand; Boil | consume |
| PL209 | <i>Caesalpinia sappan</i> L. | 13.1 | 2 | hw | Sand; Boil | consume |
| PL269 | <i>Neuropeltis racemosa</i> Wall. | 5.11 | 2 | bk&w | Boil; Soak (alcohol) | consume; two pots |
| | | 8.1 | 2 | bk&w | Pound, then boil | consume |
| PL63 | <i>Oryza sativa</i> L. | 6.5 | 2 | endosperm | Healer chews; Dry roast, then mix | 1. blows 2. consume |
| PL93 | <i>Sesamum orientale</i> L. | 2.1 | 3 | seed: oil | Fresh | topical |
| PL107 | <i>Piper sarmentosum</i> Roxb. | 5.1 | 3 | rt; all parts | Boil; Parboil, dry, then boil | consume |
| PL140 | <i>Nauclea orientalis</i> (L.) L. | 13.1 | 2 | hw | Boil | bathe or eat |
| PL157 | <i>Phyllanthus amarus</i> Schumach & Thonn. | 5.1 | 2 | fr; all parts | Boil | consume |
| PL178 | <i>Ichnocarpus frutescens</i> (L.) W.T. Aiton | 3.1 | 2 | rt | Boil | Consume; steam vagina |
| PL228 | <i>Ficus religiosa</i> L. | 6.5 | 2 | bk | Sand | topical |
| PL289 | <i>Tiliacora triandra</i> (Colebr.) Diels | 4.1 | 3 | rt | Soak (water); Sand | consume |
| PL305 | <i>Ziziphus oenoplia</i> (L.) Mill. var. <i>brunoniana</i> Tardieu | 5.2 | 2 | st; rt | Boil | consume |

Table 27 Materia medica importance: second level of healer consensus. (Cont.)

| Code | Scientific identification | HC | IC | Plant part | Preparation | Application |
|-------|--|------|----|------------------------|--|---|
| PL331 | <i>Clausena harmandiana</i> (Pierre) Pierre ex Guillaumin | 1.2 | 2 | rt | 1. Healer chews; 2. Sand | 1. blows; 2. topical |
| | | 4.1 | 2 | rt | Sand (water) | consume or bathe |
| | | 13.1 | 2 | rt | Sand; Boil | consume |
| PL341 | <i>Ananas bracteatus</i> (Lindl.) Schult. & Schult. f. | 5.10 | 2 | am | Boil | consume |
| PL363 | <i>Areca catechu</i> L. | 8.1 | 2 | hw; end | Boil; Soak (water) | consume or bathe |
| PL408 | <i>Eurycoma longifolia</i> Jack | 6.4 | 2 | rt | Sand (rice water) | topical |
| PL65 | <i>Grewia abutilifolia</i> W. Vent. ex Juss. | 5.7 | 2 | rt | Boil | consume |
| PL180 | <i>Tinospora crispa</i> (L.) Hook.f. & Thomson | 5.1 | 2 | bk&w | Boil; Steam, then boil | consume; 2 pots |
| PL186 | <i>Amorphopallus paeoniifolius</i> (Dennst. Nicolson | 5.1 | 2 | juice from head; st | Boil | Consume |
| PL190 | cf. <i>Dalbergia oliveri</i> Gamble ex Pain | 5.2 | 2 | bk&w | Sand (rice water); Boil | Topical |
| PL213 | <i>Dracontomelon dao</i> Merr. & Rolfe | 5.1 | 2 | bk&w; fr | Boil | Consume |
| PL216 | <i>Piper betle</i> L. | 11.1 | 2 | lf | Roll leaf into tube; Healer chews | blows medicine through leaf onto patient |
| PL238 | <i>Tamarindus indica</i> L. | 4.1 | 2 | hw | Sand (water) | consume or bathe |
| PL306 | <i>Derris elliptica</i> (Roxb.) Benth. | 1.3 | 3 | rt | Sand (lime juice); Pound, then soak | Topical |

Table 27 Materia medica importance: second level of healer consensus. (Cont.)

| Code | Scientific identification | HC | IC | Plant part | Preparation | Application |
|-------|--|------|----|------------|---|------------------------|
| PL326 | <i>Barleria lupulina</i> Lindl. | 1.2 | 2 | lf; ys | Pound fresh, then soak (water) | Topical |
| PL330 | <i>Strychnos nux-vomica</i> L. | 13.1 | 2 | bk&w | Sand; Boil | Consume |
| PL23 | <i>Phyllodium pulchellum</i> (L.) Desv. | 13.1 | 2 | rt | Boil | Consume |
| PL84 | <i>Oxyceros horridus</i> Lour. | 4.1 | 2 | rt; hw | Sand (water); Boil, then cool | consume or bathe |
| | | 13.1 | 2 | rt; hw | Sand; Boil | Consume |
| PL226 | <i>Cissus quadrangularis</i> L. | 8.7 | 2 | Bk&w | Dry, pound together, then put into capsule; Push into ripe banana | Consume |
| PL234 | <i>Uvaria rufa</i> Blume | 4.3 | 2 | rt | Sand; Soak | Consume |
| PL313 | <i>Zingiber montanum</i> (J. Konig ex Retz.) | 8.1 | 2 | rhz | Boil | Consume |
| | Theilade | | | | | |
| PL320 | <i>Hymenodictyon orixense</i> (Roxb.) Mabb. | 4.1 | 2 | hw; rt | Soak(water); Boil | Consume |
| | | 4.3 | 2 | bk&w; rt | Soak | consume and bathe |
| PL380 | <i>Micromelum minutum</i> Wight & Arn. | 8.1 | 2 | hw | Boil | consume |
| AN5 | <i>Gallus gallus gallus</i> Linnaeus | 9.1 | 2 | foot & leg | Sand | patient holds in mouth |
| AN19 | <i>Anas</i> sp. | 2.2 | 2 | blood | Combine with alcohol | consume |

Table 28 List of healers and health conditions treated using betel quid and blowing treatment method.

| Healers | Health conditions |
|---------|---|
| Y2 | 1.2, 5.4 |
| Y5 | 13.7 |
| B1 | 2.1 |
| B2 | 2.1, 2.2, 6.4 |
| B3 | 2.1, 2.2, 4.2, 6.4, 6.5 |
| B4 | 2.1, 2.2, 5.7, 6.4, 8.6, 9.2 |
| B5 | 1.1, 1.4, 1.6, 2.1, 2.2, 5.4, 5.5, 5.9, 8.6, 9.2, 9.3 |
| B6 | 1.2, 2.1, 6.4 |
| B7 | 1.2, 1.6, 2.1, 2.5, 4.1, 4.4, 6.4, 6.5, 8.1, 12.1, 13.7 |
| B8 | 1.2, 6.5, 11.1, 12.9, 13.7 |
| B9 | 3.9, 12.1, 12.3 |
| B10 | 2.1, 3.8, 4.1, 8.1, 9.3, 11.1, 12.1, 12.2, 12.3, 12.5, 12.6, 12.7, 13.7 |
| B12 | 1.2, 4.1, 4.2, 4.3, 8.1, 10.1, 12.3, 13.11, 12.9 |
| B13 | 1.1, 1.6, 2.1, 2.2, 2.3, 2.4, 2.6, 4.3, 6.4, 13.1, 13.7 |
| B14 | 2.1 |
| B15 | 2.2, 12.6 |

Table 29 Items in *Lum Pee Taan* ceremonies and frequency of occurrence in four observed ceremonies. Table is sorted by frequency.

Scientific name: preceding species code references to Appendix G. Use: Description of material's use. These include: 1) Offerings to spirits; 2) Construction, in which the material was used to make a symbolic item; 3) Symbol in event, in which the material was used whole to symbol; 4) Decoration to attract the spirits to the ceremony and medium; and 5) Other miscellaneous purposes; Frequency: frequency that materials were used among observed ceremonies.

| Vernacular name, part | Scientific name | Use | Frequency |
|---|----------------------------------|--|---------------------------------|
| กล้วย <ul style="list-style-type: none"> ▪ fruit ▪ leaf (ใบตอง) ▪ stem ▪ sucker | (PL20) <i>Musa sapientum</i> L. | offerings construction (make into <i>sui</i> , wrap <i>cao tom</i>) construction (symbol) offerings; symbol (forest items) | 50 12 28 8 2 |
| ข้าว non-glutinous, glutinous <ul style="list-style-type: none"> ▪ husks ▪ kernels: dried, dry roasted, cooked ▪ rice beer (เหล้าข้าว) | (PL63) <i>Oryza</i> sp. | construction (symbol) offerings offerings | 37 2 29 6 |
| ผึ้ง bee: Wax | (AN20) <i>Apis</i> sp. | offerings | 20 |
| มะพร้าว Coconut | (PL250) <i>Cocos nucifera</i> L. | | 17 |

Table 29 Items in *Lum Pee Taan* ceremonies and frequency of occurrence in four observed ceremonies. **(Cont.)**

| Vernacular name, part | Scientific name | Use | Frequency |
|--|---|--|-----------|
| <ul style="list-style-type: none"> ▪ Coconut milk ▪ Leaves | | construction (make <i>cao tom</i>) construction (ceremonial roof) decoration | 11 6 |
| ขมิ้น | (PL55) <i>Curcuma longa</i> L. | construction (dye cotton & rice, mix with water for blessing, 'purify' items; decoration (perfume for dancers) | 16 |
| หมาก : nut | (PL363) <i>Areca catechu</i> L. | offering | 14 |
| ต้นทม : flower | (PL301) <i>Plumeria rubra</i> L. | decoration (necklaces and other) offering (necklaces) [Note: spirits find this flower irresistible] | 13 |
| อ้อย <ul style="list-style-type: none"> ▪ Sugar ▪ Stalk | (PL393) <i>Saccharum officinarum</i> L. | construction (make <i>cao tom</i>) offering | 11 1 |
| ยาสูบ: leaf | (PL291) <i>Nicotiana tabacum</i> L. | offering | 10 |
| พลู & ปูน | (PL216) <i>Piper betle</i> L. & (AN30) CaCO ₃ | offering | 10 |
| ไก่: Egg | (AN5) <i>Gallus gallus</i> Linnaeus | offering, other (divining) | 8 |
| ดอกพุด: flowers | (PL225) <i>Tabernaemontana divaricata</i> (L.) R.Br. ex Roem. | decoration (necklaces) offering (necklaces) | 7 |
| ขอ : wood | (PL282) <i>Morinda citrifolia</i> L | construction | 6 |
| คูน (T) อะราง (K): bark, leaves | (PL85) <i>Cassia fistula</i> L. (Fabaceae) | offering | 6 |
| เล็บครุฑ: leaf | (PL304) <i>Polyscias fruticosa</i> (L.) Harms | offering | 6 |

Table 29 Items in *Lum Pee Taan* ceremonies and frequency of occurrence in four observed ceremonies. (Cont.)

| Vernacular name, part | Scientific name | Use | Frequency |
|---------------------------------|---|---|-----------|
| เข็ม: yellow flowers | (PL77) <i>Ixora cibdela</i> Craib | offering, decoration | 5 |
| มะลิ : flowers | (PL259) <i>Jasminum sambac</i> (L.) Aiton | decoration (necklaces); offering (necklaces) | 5 |
| ชัยพฤกษ์: leaf & flowers | (PL42) <i>Cassia javanica</i> subsp. <i>agnes</i> (de Wit) K. Larsen | offering, decoration | 4 |
| การะเกด: bract | (PL43) <i>Pandanus tectorius</i> Blume | decoration | 3 |
| มันปลา: flowers | (PL266) <i>Adinandra laotica</i> Gagnep. | decoration (necklaces); offering (necklaces) | 3 |
| รัก: flowers | (PL294) <i>Calotropis gigantea</i> (L.) R.Br. | decoration (necklaces) offering (necklaces) | 2 |
| บานไม่รู้โรย : flowers | (PL184) <i>Gomphrena globosa</i> L. | construction | 1 |
| ชบา : flowers | (PL105) cf. <i>Hibiscus rosa-sinensis</i> L. | decoration | 1 |
| ถ่าน : color rice | (M15) charcoal | construction (color rice) | 1 |
| พริก : fruit | (PL214) <i>Capsicum frutescens</i> L. var. <i>frutescens</i> | offerings (evil spirits) | 1 |
| เกลือ | (MI1) Sodium chloride | offerings (evil spirits) | 1 |
| พยอม: bark | (PL221) <i>Shorea roxburghii</i> G. Don | offerings | 1 |
| มะก้า: seeds | (PL237) <i>Adenanthera pavonina</i> L. | construction (eyes of horses and elephants) | 1 |
| ส้มป่อย: branch of young leaves | (PL321) <i>Acacia concinna</i> (Willd.) DC. | other (tool to disperse blessed water on items and dancers) | 1 |

Table 29 Items in *Lum Pee Taan* ceremonies and frequency of occurrence in four observed ceremonies. **(Cont.)**

| Vernacular name, part | Scientific name | Use | Frequency |
|-----------------------|--|--|-----------|
| หญ้าคา: leaves | (PL354) <i>Imperata cylindrica</i> (L.) P. Beauv. | construction (wall of ceremonial area) | 1 |
| เฟื่องฟ้า: flowers | (PL231) <i>Bougainvillea spectabilis</i> Willd. | decoration | 1 |

4.4.3 Beliefs and restrictions associated with collecting materials

There are a number of factors which limit the collection of materials including time of year, spirit guardians, method of collection, need, and qualities of the raw material and preparation method.

Healers believe that *materia medica*, and knowledge, is best collected in the morning, on Tuesdays, and during the 5th month of the year by the Thai traditional calendar (around April-May). Tuesday and the 5th month are considered ‘hard’ (แข็ง) times of the year or a time when spirits have the most power. Medicines collected at these times ensure more potent and powerful medicine.

When a healer collects a material, they must first ask permission from the ‘*jao-ti jao tang*’ or spirit owners of the land and area. Usually a healer simply notifies these spirits that s/he is taking a material for a necessary purpose. Healers may recite an incantation while collecting the material and herbalist **Y5** brings a pair of flowers and candles to conduct a small ceremony to ask for the plants.

Healer **B13** states that when he collects plants, his shadow cannot touch the plant, or the plants will not have medicinal qualities. The traditions of herbalist **Y11** require a woman to collect medicinal plants. During his plant collection trips, he points out the plants that he wishes the woman to collect.

Healers who rely mostly on boiling medicines, which are generally fresh roots and plant parts, believe that plants should not be collected until there is a need for them. If plants are collected before they are needed, then the healer will be so inundated with patients that the healer will have no time to eat or sleep (blowing doctor **B13**).

Healer **B13** uses mostly small herbs in his remedies. These plants have no leaves during the hot season and are very difficult to find. Therefore, most of his plant collection is conducted during the rainy season.

4.4.4 Collection sites of *materia medica*

The following two sections (4.4.4.1 and 4.4.4.2) focus on collection sites used by the healer. These categories of collection sites were established by the researcher based on the locations of specimen collections and discussion with the healers as to where materials were located. Collection sites include local and non-local collecting sites. Local collecting

sites are defined in this section as accessible areas where healers can identify the exact location of a materia medica. Materials which are no longer found in local collecting sites can be collected from alternate or non-local collecting sites. The third section, 4.4.4.3, defines collection sites from the context of the materia medica. This section is linked directly to the table of identified plants in Appendix G.

4.4.4.1 Local collecting sites

Local collecting sites can be further divided in to two categories, developed and undeveloped areas (Table 30). Developed areas include agriculture areas and along roads, building, and man-made retention ponds and homegardens and undeveloped areas include areas surrounding Buddhist temples, community forests, and mountain forests.

Along roadsides and houses is a popular collection sites among all herbalists, one blowing doctor (**B10**). Some spirit healers also collect a few plants at these sites. Roadsides and along houses are most often the home of weeds, or fast growing, hardy plants which can make up a large part of the healer's repertoire⁷. In comparison to rice fields, large trees are usually absent from these sites. However, roadsides to agricultural sites or remote areas can be a good nursery for shrubs and trees, which would ordinarily have a difficult time getting started in a shady forest. Herbalist **Y3**, for example, collected parts of many large shrubs along the road and path to a cashew orchard. Spirit healers may use some decorative plants in their ceremonies, such as ฆ่านมรัฐโรย (*Gomphrena globosa*) and รัถ (*Calotropis gigantean*).

Rice fields are collection sites for all types of healers. Rice fields form the immediate perimeter of the household nucleus of a village, and households that are on the outermost edge can adjoin a rice field. Villagers often visit their rice fields weekly and sometimes daily, to prepare and cultivate rice during the rice field and grow other crops outside of the rice season. All herbalists collect medicinal plants from rice fields, and herbalists from very developed villages may be limited to these sites. Herbalists may even travel to rice fields of other villages to collect parts of plants and trees that are located there. Blowing doctors (**B2**, **B4**, **B13**) also depend on plants from rice fields, for example *Cassia fistula* (กุน) which is often included in betel chews. *Cassia fistula* and *Cassia javanica* subsp. *agnes*, both commonly used in *Pee Taan* spirit ceremonies, are collected from the rice fields.

Homegardens are used by most herbalists (**Y2**, **Y3**, **Y5**, **Y6**, **Y8**, **Y11**, **Y12**, **Y13**,

Y14) as a site for medicinal plants. Both blowing doctors and spirit healers rely on home gardens for materials found in a betel chew. Many of the plants that spirit healers use in their ceremonies may be found in homegardens. The origin of medicinal plants in home gardens varies. It may be a rare plant that the healer found while foraging far in the forest (**Y5, Y11**) or specifically ordered from a distant location (**Y2, Y3**). Some plants are weeds and grew in the garden naturally (**Y12, Y13**). Most herbalists (**Y2, Y3, Y5, Y11, Y6**) conserved medicinal plants in the garden because they were collected from faraway forest sites and were difficult to find. Herbalist **Y14** cultivated mostly common Thai medicinal plants which were obtained from other people.

Forest areas consist of all types of undeveloped forest including community forests, mountain forests, and along water ways. These areas are used predominantly by herbalists and other healers who use herbal medicine (**B13**). Blowing doctors and spirit healers may collect *Cassia fistula* from the forest. Spirit healers may also collect *Shorea roxburghii* and *Morinda citrifolia* from the forest

Herbalists **Y7** and **Y13** share the same community forest (ป่าสงวน). It is made up of about 100 *rai* (16,000 m²) and is used by the entire sub-district to collect only non-timber forest products. Herbalist **Y13** states that it was established at least 100 years ago by the local Kui community for this purpose. It is now monitored by the Thai Royal Forest Department, who surveys the land at regular intervals.

Herbalists **Y5** and **Y6** share the same mountain forest that is located along the Thai-Cambodia border (See Box 8). This area is protected by border patrol, but local people may collect non-timber forest products. Land along water ways is used by herbalists **Y2** and **Y8**.

Buddhist temples and the natural areas around them are traditional sanctuaries where it is generally forbidden to kill or collect any living things. However, temple grounds are most popular as a collecting site for herbalists (**Y3, Y11**).

Orchards were used as a collecting site by herbalists **Y2** and **Y3**. Herbalist **Y2** often collects plants along the edges of rubber tree orchards and herbalist **Y3** collects herbaceous medicinal plants in the understory of a cashew nut tree orchard.

Cleared land was another type of disturbed area. These were fields which had been cleared for the purpose of agriculture, but had been left dormant for a few years. Herbalist **Y2** depended chiefly on this type of collection site.

Table 30 Types of local collection sites for medicinal plants used by healers

| Types of disturbed areas | Types of undisturbed areas |
|--|--|
| Along roadsides and houses Rice fields Homegardens Orchards Cleared land | Community forests Mountain forests Forests along waterways Buddhist temples |

4.4.4.2 Non-local collecting sites

Non-local collecting sites are outside of the healer's immediate vicinity and are areas where the healer believes materia medica is located, without knowing the exact location. Healers can obtain materials from other districts, provinces or neighboring countries, purchase plants from border markets, and city shops and markets, traveling vendors, or as gifts.

Other districts and provinces such as SaKaew district of Surin province and Ubon Ratchathani province and were noted by herbalist **Y2** (of Surin province) as having plants, mostly large trees, that he needed and could not find in his local collecting sites.

Neighboring countries⁹ such as Cambodia and Laos PDR were considered 'full' of materia medica by all herbalists. Herbalist **Y11** recently went on a plant collecting trip to Cambodia (See Box 6), and other healers stated that they had collected in Cambodia and/or Laos PDR in the past (**Y2**, **Y3**, **Y5**, **Y6**). Healers may also hire people to collect plants from other countries. During the study, herbalist **Y3** showed us a fresh supply of medicinal plants that he had hired people to collect for him in Cambodia.

⁹ Cambodia is the nearest neighboring country to the study sites.

Box 6 Excerpt from field notes of interview with herbalist **Y11**: Collecting plants in Cambodia

29/04/05. The healer (*Thaa*, grandfather) is not home. His wife and daughter tell us that he left on his bicycle and has been gone for three days already. They don't know where he has gone, but they believe that he has gone on a plant collecting and selling excursion. Apparently, he does this often—leaves home with his bicycle and a bottle of whisky and without notifying anyone. It is hard for them to estimate when he will be back. His family gets updates now and then from friends and relatives in neighboring villages, reporting that they have seen him.

30/04/05. We stop by *Thaa*'s house in the morning, but he has not returned home.

02/05/05. Before leaving the district we make one more visit and find that *Thaa* has still not returned.

12/07/05. *Thaa* is here today. He proudly reports that he had gone to Cambodia for 21 days. He did not plan to go so far, but just continued on his bicycle travels until he was in Cambodia. He did not use a visa and passed through the border patrol unnoticed. Along the way, he collected, sold, and traded medicinal plants and knowledge. He also came back with new remedies from other healers (one remedy he tells us under oath that we are only to use it for ourselves and not share it with anyone else). He looks incredibly and worryingly thin, but he says that he was simply ill. *Thaa* is so vivacious and enthusiastic from his trip that he will probably recover soon.

Border markets¹⁰ between Laos PDR and Thailand sell a diversity of materia medica from Laos PDR. Healers may visit these markets to seek out needed materials.

City shops and markets often order and obtain materia medica from the above mentioned origins. Healers **Y3**, **Y7**, **Y11**, and **Y12** have purchased materia medica from

¹⁰ There are two border crossings between Laos P.D.R. and Thailand that are located close to the southern part of Northeast Thailand (Ubon Ratchathani and Mukdahan provinces). Both border crossings have large markets where materia medica from Laos P.D.R. is sold. In contrast, there are no nearby official border crossings between Cambodia and Thailand, and no large border markets to purchase materia medica from Cambodia.

shops that are located in provincial city centers. Materials used in betel nut quid, that blowing doctors and spiritual ceremonies rely on, can be purchased in city markets.

Traveling vendors provide a link between outside sources of medicines (listed above) and healers.

Gifts of materia medica from friends, relatives and patients who are knowledgeable of the healer's needs are another way for healers to obtain materia medica that they cannot locate. Herbalist **Y12**, for example, obtained his most recent piece of 'eagle's feces' (fossilized shell fragment) from a friend. Herbalist **Y5**, mentioned to us that she was highly in need of PL146 (sp., Combretaceae), and we later found and brought her a supply as a gift for her generous hospitality.

Table 31 Definitions of collection origin terms.

| Collection origin (CO) | Definition |
|--|--|
| Purchased (P) | Purchased from a shop or vendor and materials made by the healer, for example, slaked lime. |
| Nearby forest in local collecting site (NF) | Collected from forest in a local collecting site that was within walking distance (half day's collection expedition). |
| Faraway forest in local collecting site (FF) | Collected from forest in a local collecting site that required using a vehicle (about a full day's collection expedition). |
| Disturbed areas (D) | Collected from rice fields, orchards, cleared areas and other disturbed areas. |
| Homegardens (H) | Cultivated by the healer in homegardens |
| Non-local collecting site (X) | Collected from forest in a non-local collecting site. |
| Everywhere (E) | Collected from many locations including disturbed areas and along roadsides and houses. |

4.4.4.3 Collection origins of materia medica

Appendix G identifies the area where each material was collected by the healer. These areas are defined in Table 31, and the definitions are based on the

descriptions in section 4.4.4.1 and 4.4.4.2. These collection origins are based on the plant itself, rather than the collection behavior of the healer. The data on Table 32 shows a total of 638 observations made, according to all medicinal plants and healers.

Table 32 Frequency of observations for each collection origin of materia medica. Frequency summary: Summation of all materials that are found in each type of collection origin. For example, ‘Homegardens’ includes materials found in Homegardens, Homegarden or Purchased (H/P), and Disturbed areas or Homegarden (D/H).

| Collection origin | Frequency | Frequency summary |
|---|-----------|-------------------|
| Purchased (P) | 68 | 83 |
| Nearby forest (NF) | 189 | 190 |
| Faraway forest (FF) | 40 | 40 |
| Disturbed areas (D) | 119 | 129 |
| Homegardens (H) | 155 | 169 |
| Non-local collecting site (X) | 9 | 9 |
| Everywhere (E) | 31 | 31 |
| Homegarden or Purchased (H/P) | 12 | |
| Disturbed areas or Homegarden (D/H) | 2 | |
| Disturbed areas or Nearby forest (D/NF) | 8 | |
| Purchased or Disturbed areas (P/D) | 1 | |
| Nearby forest or Purchased (NF/P) | 3 | |

4.4.5 Plants parts

Only plants that were used in herbal medicines (all herbalists and blowing doctor **B13**) are included here. Table 33 shows the types of plants parts that are used for medicine. The terms written in Thai reflect the vocabulary used by the healers and villagers used to describe the plant parts. More than one part of the same species could be used by healers, and these were each considered one observation (reflected in the numbers in parentheses in the table).

Table 33 Plant parts used of medicinal plant species listed in descending order of frequency.

Frequency is the number of times a plant part was reported in interviews.

| List of Plant parts used as medicine | Frequency |
|--|-----------|
| ราก Root | 141 |
| แก่น Heartwood | 72 |
| ลำต้น Bark & wood | 65 |
| ใบ Leaf | 57 |
| ทั้งต้น All parts | 31 |
| เปลือก Bark | 22 |
| เหง้า Rhizome | 20 |
| ผลไม้ Entire fruit | 16 |
| กิ่ง Stem | 10 |
| เมล็ด Seed <ul style="list-style-type: none"> ▪ เมล็ด entire seed (4) ▪ เนื้อ, เมล็ด endosperm: rice, หมาก (<i>Areca catechu</i>) (4) ▪ เปลือกเมล็ด seed coat (1) | 9 |
| ยอด Young shoot | 6 |
| หัว <ul style="list-style-type: none"> ▪ Corm (1) ▪ Bulb หัว (3) ▪ Clove กีบ (1) | 5 |
| ดอก Flower <ul style="list-style-type: none"> ▪ ทั้งดอก entire flower (1) ▪ น้ำหวานดอกไม้ nectar (1) ▪ ปลีกล้วย (<i>Musa sapientum</i>) flower sheath (1) | 3 |
| เหง้า Apical meristem (top of pineapple fruit) | 1 |
| เปลือกผล Exocarp | 1 |
| งวง (<i>Borassus flabellifer</i>) Male rachillae | 1 |

4.4.6 Relationship between preparation methods and materia medica habit

This analysis includes only materia medica that was used in herbal medicines (all herbalists and blowing doctor **B13**). Table 34 shows the correlation between materia medica, with an emphasis on the plant habit, and the preparation method based on Table 21. Table 35 and 36 summarize the data from Table 34. Table 35 compares the preparation method of plant categories, in relation to the plant category. Table 36 compares the preparation method of plant categories, in relation to the preparation method. Plants habits are based on definitions established by Smitinand (2001)

Table 34 Frequency of materia medica habit prepared with different preparation methods. kk

| Materia Medica habit | Boil | Sand | Soak | Fresh | Steam | Burn |
|-------------------------------------|-------------|-------------|-------------|--------------|--------------|-------------|
| PLANTS | | | | | | |
| Small | | | | | | |
| Creeping herb (CrH) | 1 | 0 | 0 | 0 | 0 | 0 |
| Grass (G) | 7 | 1 | 3 | 4 | 0 | 1 |
| Herb (H) | 33 | 10 | 5 | 19 | 1 | 2 |
| Herbaceous climber (HC) | 2 | 3 | 4 | 5 | 0 | 0 |
| Parasitic herbaceous climber (PaHC) | 0 | 0 | 0 | 1 | 0 | 0 |
| Parasitic herb (PaH) | 0 | 1 | 0 | 0 | 0 | 0 |
| Terrestrial orchid (TerO) | 0 | 1 | 0 | 0 | 0 | 0 |
| Medium | | | | | | |
| Bamboo (B) | 2 | 0 | 1 | 0 | 0 | 0 |
| Climber (C) | 32 | 15 | 10 | 3 | 1 | 2 |
| Climbing fern (CF) | 1 | 1 | 0 | 0 | 0 | 0 |
| Climbing palm (CP) | 1 | 0 | 1 | 1 | 0 | 1 |
| Epiphytic shrub (ES) | 0 | 0 | 1 | 0 | 0 | 0 |
| Palm (P) | 0 | 3 | 2 | 2 | 0 | 0 |
| Parasitic shrub (PaS) | 1 | 1 | 0 | 0 | 0 | 0 |
| Shrub (S) | 24 | 16 | 7 | 9 | 0 | 1 |
| Scandent shrub (ScanS) | 3 | 3 | 0 | 0 | 0 | 0 |
| Undershrub (US) | 6 | 3 | 0 | 3 | 0 | 1 |
| Large | | | | | | |
| Shrub/Shrubby tree (S/ST) | 13 | 7 | 2 | 1 | 0 | 1 |
| Shrubby tree (ST) | 28 | 15 | 10 | 5 | 1 | 1 |
| Tree (T) | 57 | 28 | 22 | 10 | 2 | 1 |
| FUNGUS | 1 | 0 | 1 | 0 | 0 | 0 |
| ANIMAL | 4 | 16 | 1 | 9 | 0 | 2 |
| MINERAL | 2 | 2 | 1 | 3 | 0 | 0 |
| Total | 218 | 126 | 71 | 75 | 5 | 13 |

Table 35 Preparation method of plant categories, relative to the plant category.

| | Boil | Sand | Soak | Fresh | Steam | Burn |
|---------------|------|------|------|-------|-------|------|
| Small | 45.7 | 17.0 | 12.8 | 30.9 | 1.1 | 3.2 |
| Medium | 47.3 | 28.4 | 14.9 | 12.2 | 0.7 | 3.4 |
| Large | 48.0 | 24.5 | 16.7 | 7.8 | 1.5 | 1.5 |

Table 36 Preparation method of plant categories, relative to the preparation method

| | Boil | Sand | Soak | Fresh | Steam | Burn |
|---------------|------|------|------|-------|-------|------|
| Small | 20.4 | 14.8 | 17.6 | 46.0 | 20.0 | 27.3 |
| Medium | 33.2 | 58.9 | 32.4 | 28.6 | 20.0 | 45.5 |
| Large | 46.4 | 46.3 | 50.0 | 25.3 | 60.0 | 27.3 |

4.5 Defining characteristics and socio-demographics of healers

This section describes each group of healers according to defining factors, such as obtaining and gaining knowledge, treatment activity, birthplace and ethnicity, gender and age, years practiced as a healer, multiple treatment skills, languages and literacy, household wealth, family size, population of village, ethnicity of village, distance to district center and distance to health clinic. See section 3.5.2 and 3.7.5 for descriptions of demographics and analysis methods.

Table 45 provides a summary of the results with elaboration on the kinds of practices. Additional confirmed ethnographic details, testimonials and unconfirmed hearsay information are presented below.

Numerous tables throughout this section give detailed information on defining factors among healer types. Within these tables, general spirit mediums and *Pee Taan* spirit mediums are treated as separate groups because of their contrasting characteristics. The columns of all tables are labeled as follows: herbal= herbalist; blow= blowing doctor; spirit= general spirit mediums; PT= *Pee Taan* spirit mediums.

4.5.1 Obtaining and passing on knowledge

All healers obtained their primary medical knowledge from a Kui medical

practitioner, who represents a lineage of traditional medical knowledge. Table 37 details the frequency of healers in regards to different relationship with the teacher.

Table 37 Relationship of the healer to teacher.

| Teacher | Frequency among different types of healers | | | | |
|---------------------------------|--|--------|------|--------|----|
| | Overall | Herbal | Blow | Spirit | PT |
| parent, grandparent | 16 | 7 | 4 | 3 | 2 |
| close relative in birth village | 3 | 2 | 1 | 0 | 0 |
| elders from other villages | 8 | 1 | 5 | 0 | 2 |
| spirits | 3 | 0 | 0 | 3 | 0 |

4.5.1.1 Herbalists and blowing doctors

Apprentice herbalists and blowing doctors traditionally make offerings in a *yok kru* (ยอกครู) ceremony to an experienced healer to gain knowledge. Blowing doctors reported paying 24 B, 122 B, or 300 B to learn the treatments. Blowing doctor **B10** recounted that his teacher taught knowledge, according to how much the student had in their pocket. Other offerings included flowers, incense, candles, ไตรย (sui), alcohol, and white cloth.

After a blowing doctor gains the new treatment knowledge, a phenomenon called *long khong* (ลองของ) may occur. *Long cong* presents an accident or illness in which a close relative, usually a younger relative, or the healer becomes injured or sick within two or three weeks of learning the knowledge. This event tests and builds the healer's confidence and beliefs in using the treatments. However, fear in this phenomenon also prevents people from wanting to learn the knowledge. Seven healers reported this phenomenon. One blowing doctor (**B3**) reported that after he learned the treatments, his son became infected with an abscess. The new healer took his son to the blowing doctor but after the treatment, the veteran healer said, 'Why don't you treat him yourself?' This marked the beginning of the new healer's practice as a blowing doctor.

4.5.1.2 Spirit mediums

Pee Taan spirit mediums inherit the spirit or *ohng* (องค์) via elder relatives, usually a parent. When a spirit medium dies, the spirit looks for a new host in a younger generation. Spirit healer **P7**, recounted her experience of becoming a medium. When her grandmother died, a young relative became ill. A diviner determined that the illness was caused by the *Pee Taan*, who once ‘lived’ with her grandmother. All potential spirit mediums of the family gathered in a ceremony to identify the new spirit medium and in the end, the spirit chose to stay with her. Sometimes elder *Pee Taan* spirit mediums may mediate numerous *Pee Taan* spirits and wish to ‘give’ the spirit to a younger relative. A similar ceremony can be conducted for this purpose. See section 4.1.6.5.1 for a description of how the *Acharn Lum Pee Taan* are selected.

The journey towards becoming a spirit medium can be divided in to five parts. The first three stages affect the healer personally, and the last two stages involve the people surrounding the healer. This process is similar among both general and *Pee Taan* spirit mediums, but it is often more exaggerated and drawn out among general spirit mediums. *Pee Taan* spirit mediums differ because they are usually more prepared for the spirits and can quickly identify and accept the presence of the spirit.

Phase 1: Illness. All healers report that illness was the first indication of the spirit’s presence. Some healers were even thought to be dead. For example, spirit healer **P2** did not stir for seven days, and family members began to prepare for her funeral. Spirit healer **P4** was sick for a long time, and sought relief from both Western and traditional doctors and by praying at many different sacred objects.

Phase 2: Introduction to the spirit. The healer discovers the presence of the spirit, which can be very disorientating for the healer. The spirit will either make itself known to the healer or the healer will seek out diviners who acknowledge the spirit. During this initiation, the healer may be in a delirium and have visions and mystical experiences. They may also exhibit magical and divine powers, such as foreseeing events, and villagers will begin to recognize the potential of the new medium.

Phase 3: Accepting the spirit’s presence. Once the healer accepts the presence of the spirit, the healer makes a fast recovery. Spirit healer **P4** reported that she had a difficult time accepting the spirit, and was ill for three years before she could adapt. By contrast,

when spirit healer **P8** discovered that she was to be the vessel for a *Pee Taan* spirit, she organized a ceremony the very next day and recovered immediately. Healers report that if they can not accept the spirit, then their illness will continue until death.

Phase 4: Adapting to the spirit. In this stage, both the healer and the healer's family must acclimate themselves to the presence of the spirit. At first, the spirit may be present at all times of the day. Spirit healer **P2**, for example, could see the spirit every time she closed her eyes. During this stage, she talked to the spirit often and treated the spirit like a person by including it in meals and other daily family activities. Family members thought that she was crazy. They sought medical help for her and finally, took her to a Buddhist monk who confirmed the presence of an angel. Spirit healer **P4** had to work hard to fulfill her duties as a spirit medium. Before the spirit's arrival, she knew little about spiritual ceremonies and sought out other spirit healers to teach her how to prepare and conduct the ceremonies.

Phase 5: Accepting their new role as a spirit medium. None of the healers advertised their new powers but nevertheless, their reputation as a spirit healer spread fast. Spirit healer **P4** described that when she first accepted the spirit, many villagers came to see her. She became so anxious that she locked up her house and left the village to avoid the attention. After she came to terms with her new situation, she returned to the house and began her role as a spirit medium.

4.5.2 Treatment activity among healers

Table 38 presents an estimate of the frequency of patients per day that healers treated, based on data generated from health condition logs. This data was generated with the health condition logs that were record with the healers. Herbalists **Y3** and **Y14** reported that they saw more than one patient a day. Blowing doctors may not see even a patient each month. At a maximum, some spirit mediums (**P2** and **P4**) treat more than one patient a day. All are spiritual treatments, although many patients are simply seeking fortune-telling, lottery numbers or to meditate and pray in front of the medium's spirit altar. The activity of *Pee Taan* spirit mediums fluctuates greatly. Outside of the ceremony period, these spirit mediums may divine illnesses and conduct a few related ceremonies (eg. initiating a new medium or leading a ceremony for a patient to 'promise' to host a *Lum Pee Taan* ceremony later in the year). However during the month of *Lum Pee Taan* ceremonies, the mediums are practicing almost everyday or night.

Table 38 Average number of patients seen per day by healers, based on data generated by health condition logs.

| Code | Patients /day | Code | Patients /day | Code | Patients /day |
|------|---------------|------|---------------|------|---------------|
| Y2 | 0.062 | B1 | 0.522 | P1 | 0.030 |
| Y3 | 0.108 | B2 | 0.052 | P2 | 0.270 |
| Y5 | 0.229 | B3 | 0.041 | P3 | 0.057 |
| Y6 | 0.050 | B4 | 0.067 | P4 | 0.138 |
| Y7 | 0.044 | B5 | 0.560 | P7 | 0.100 |
| Y8 | 0.078 | B10 | 0.124 | P8 | 0.167 |
| Y11 | 0.113 | B11 | 0.067 | Aj1 | 0.050 |
| Y12 | 0.067 | B13 | 0.038 | Aj2 | 0.071 |
| Y13 | 0.262 | B14 | 0.011 | Aj3 | 0.092 |
| Y14 | 3.000 | B15 | 0.233 | Aj4 | 0.056 |

4.5.3 Birthplace and ethnicity (Table 39)

Most healers were born in the village in which they are currently residing and migrated very little during their lifetime. All herbalists and *Pee Taan* spirit mediums were born in their villages. Four of the male blowing doctors were born outside of their current village, because they married into a family at a neighboring village and moved to this new village, as a result. However, out of the four spirit healers who were born outside of their current village, three of the healers are female. All healers have Kui parents, with the exception of herbalist **Y12** whose father is Lao and mother is Kui.

Table 39 Distance between healers' birth place and current residence.

| Distance from present village | Frequency among different types of healers | | | | |
|-------------------------------|--|-----------|------|--------|----|
| | Overall | Herbalist | Blow | Spirit | PT |
| 0 km | 23 | 10 | 6 | 3 | 4 |
| 1-20 km | 6 | 0 | 4 | 2 | 0 |
| 20-50 km | 1 | 0 | 0 | 1 | 0 |

4.5.4 Gender and Age

Table 40 shows the average and range of age among different types of healers. There is no significant difference (one-way ANOVA) between the mean age of herbalists and overall group of healers. There is no significant difference (one-way ANOVA) between the mean age of blowing doctors and overall group of healers. The average age of spirit healers as a whole is lower than herbalists and blowing doctors, but it is not statistically significant. However, examining the *Pee Taan* spirit mediums apart from the general spirit mediums, results in a significantly higher mean age.

Herbalists and blowing doctors are predominantly male and both types of spirit healers are predominantly female. There were more female blowing doctors than there were female herbalists. In contrast to herbalists and blowing doctors, both types of spirit healers are predominantly female.

Table 40 Gender and age of interviewed healers.

| Type of healers | Frequency among different types of healers | | | | |
|-----------------|--|--------|-------|--------|-------|
| | Overall | Herbal | Blow | Spirit | PT |
| Males | 19 | 9 | 7 | 1 | 1 |
| Females | 11 | 1 | 3 | 5 | 3 |
| Average | 64.6 | 65.3 | 63.6 | 54.5 | 80.5 |
| Range | 31-89 | 46-82 | 31-78 | 37-68 | 73-85 |

4.5.5 Years practiced as a traditional healer

Table 41 shows the number of years that healers have practiced as healers, based on ten year intervals. There is no significant difference between groups of healers (One-way ANOVA). *Pee Taan* spirit mediums have been practicing for a significantly longer period than the other healers.

Table 41 Number of years practiced according to different groups of healers.

| Number of years | Frequency among different types of healers | | | | |
|-----------------|--|--------|------|--------|----|
| | Overall | Herbal | Blow | Spirit | PT |
| 0-9 | 2 | 0 | 1 | 1 | 0 |
| 10-19 | 2 | 0 | 0 | 2 | 0 |
| 20-29 | 6 | 3 | 3 | 1 | 0 |
| 30-39 | 5 | 2 | 1 | 1 | 1 |
| 40-49 | 7 | 2 | 4 | 1 | 0 |
| 50 -59 | 5 | 2 | 1 | 0 | 1 |
| 60-69 | 3 | 1 | 0 | 0 | 2 |

4.5.6 Multiple treatment skills

Table 42 shows the frequency of healers with multiple treatment skills. Herbalists **Y3**, **Y5**, **Y11**, and **Y12**, blowing doctor **B10** and spirit healer **P3** are adept at chasing away and protecting against evil spirits, especially among small children. Spirit medium **P3** uses blowing treatments to chase spirits away, as well as conducts *sa-doh-chrot* ceremonies for village households. Spirit healer **P1** takes part in a spirit ceremony called พิธีฉลองพระธรรม, ฉลองเทวดา, or องค์เทวดาไหว้คุณ with a nearby ethnically Lao village. This form of treatment resembles *Lum Pee Taan* ceremonies because it is also a group ceremony that is used to treat sick people. In contrast, however, there is an absence of alcohol in the ceremony and the patient is the center focus during the ceremony.

Table 42 Frequency of multi-skilled healers.

| Types of treatment | Frequency among different types of healers | | | | |
|--------------------|--|--------|------|--------|----|
| | Overall | Herbal | Blow | Spirit | PT |
| Herbalism | 12 | 10 | 2 | 0 | 0 |
| Blowing treatment | 18 | 7 | 10 | 1 | 0 |
| Spirit treatment | 11 | 1 | 1 | 6 | 3 |
| PT treatment | 8 | 0 | 1 | 3 | 4 |

4.5.7 Languages and literacy

Table 43 demonstrates the frequency, average, and range of multilingualism that different languages (Kui, Lao, Khmer, and central Thai) are spoken among different types of healer. Table 44 demonstrates the frequency of literacy among the different types of healers.

Table 43 Linguistic abilities among healers. Average and range are relative to individual healers.

| Language | Frequency among different types of healers | | | | |
|--------------|--|--------|------|--------|-----|
| | Overall | Herbal | Blow | Spirit | PT |
| Kui | 29 | 9 | 10 | 6 | 4 |
| Lao | 29 | 10 | 9 | 6 | 4 |
| Khmer | 12 | 5 | 3 | 2 | 2 |
| Central Thai | 20 | 9 | 4 | 5 | 1 |
| Average | 3.0 | 3.3 | 2.7 | 3.2 | 2.6 |
| Range | 2-4 | 2-4 | 2-4 | 3-4 | 2-4 |

Table 44 Frequency of literacy among healers

| Literacy | Frequency among different types of healers | | | | |
|--------------|--|--------|------|--------|----|
| | Overall | Herbal | Blow | Spirit | PT |
| literate | 15 | 8 | 3 | 2 | 2 |
| non-literate | 15 | 2 | 7 | 4 | 2 |

4.5.8 Household wealth (Table 45)

There is significant difference (one-way ANOVA) between the groups and most dramatically between the herbalists and the spirit healers. An analysis of *Pee Taan* spirit mediums, apart from the spirit medium group, shows that *Pee Taan* spirit mediums are an outlying group.

Healers rated 5 are considered wealthy. They own a large vehicle and do not participate directly in agricultural work. Healers rated 2-4 are considered sustainable, with some surplus. Healers rated 1 are on a barely sustainable level. Most healers live with adult children, who greatly help to sustain the household. Households rated 2-4, cooperate as a family unit to grow rice and other agricultural products and raise cattle. Younger members of

the family often work outside of the village to support the family. Most households own at least one motorcycle, and larger vehicles are rare.

4.5.9 Family size

Table 45 shows the family size among each healer. There is an average of 4.6 people; range of 1-6; in each healer's household. Herbalist **Y3** and blowing doctor **B1** are the only healers who live alone.

4.5.10 Population of village

Table 45 shows that the populations of healers' villages ranged from 202-1163 people; average 651 people. There is no significant difference (One-way ANOVA) between the different groups of healers.

4.5.11 Ethnicity of village

Table 45 shows the ethnicity of the village, from the perspective of the leader of the village. The ethnicity of the villages ranged from 2-100 percent; average 91.46667. Significant difference was not possible to calculate because the variance was not standard.

4.5.12 Distance to district center and health clinic

Table 45 shows the distance of the healers' village from both the district center, which is also the location of the hospital, and the health clinic. The healers' villages are an average of 16.3 kilometers from the district center and hospital and an average of 1.6 kilometers from the health clinic. Significant difference for both of these factors was not possible to calculate because the variance was not standard.

Table 45 (Cont.) Demographic data of in-depth sample group of healers.**Table 45** Demographic data of in-depth sample group of healers.

| TH code | Province | Gen. | Age | Birthplace | Languages | Treatment | ID of teacher | Teacher ethnicity | Years as TH | Health conditions | Materia medica use |
|---------|----------|------|-----|------------|-----------|-----------|---------------|-------------------|-------------|-------------------|--------------------|
| Y2 | S | M | 76 | 1 | KLMT | H | 2 | 1 | 5 | 20 | 60 |
| Y3 | S | M | 57 | 1 | KLMT | HBS | 1 | 1 | 2 | 36 | 81 |
| Y5 | U | F | 46 | 1 | KLMT | H | 1 | 1 | 2 | 45 | 111 |
| Y6 | U | M | 63 | 1 | KLT | HB | 1 | 1 | 4 | 13 | 23 |
| Y7 | SS | M | 68 | 1 | KLT | HB | 1 | 1 | 3 | 12 | 28 |
| Y8 | S | M | 82 | 1 | KLMT | H | 2 | 1 | 6 | 13 | 33 |
| Y11 | SS | M | 67 | 1 | KL | HB | 1 | 1 | 3 | 30 | 55 |
| Y12 | SS | M | 74 | 1 | KLT | HB | 4 | 1 | 5 | 12 | 31 |
| Y13 | SS | M | 54 | 1 | KLMT | HB | 1 | 1 | 2 | 24 | 58 |
| Y14 | SS | M | 66 | 1 | LT | HB | 1 | 1 | 4 | 14 | 36 |
| B1 | S | F | 70 | 1 | KLM | B | 1 | 1 | 4 | 1 | 3 |
| B2 | S | F | 70 | 1 | KLT | BL | 1 | 1 | 4 | 8 | 6 |
| B3 | S | M | 65 | 1 | KL | B | 4 | 1 | 2 | 6 | 1 |
| B4 | SS | M | 65 | 2 | KL(T) | B | 1 | 1 | 2 | 12 | 6 |
| B5 | SS | M | 31 | 2 | KLT | B | 2 | 1 | 0 | 10 | 2 |
| B10 | U | M | 54 | 1 | (K)L | HBS | 4 | 1 | 2 | 14 | 2 |
| B11 | SS | M | 68 | 2 | KLM | B | 4 | 1 | 4 | 1 | 3 |
| B13 | S | M | 68 | 2 | KLMT | HB | 4 | 1 | 3 | 13 | 22 |
| B14 | SS | F | 67 | 1 | K(T) | B | 1 | 1 | 5 | 8 | 1 |
| B15 | S | M | 78 | 1 | KL | B | 4 | 1 | 4 | 3 | 7 |
| P1 | S | F | 40 | 1 | KLT | S | 5 | 4 | 1 | 4 | - |
| P2 | S | F | 52 | 2 | KLT | SL | 5 | 4 | 1 | 8 | - |
| P3 | U | M | 68 | 2 | KLM | BS | 1 | 1 | 4 | 6 | - |
| P4 | SS | F | 37 | 1 | KLT | S | 5 | 4 | 0 | 12 | - |
| P7 | SS | F | 62 | 1 | KLT | SL | 1 | 1 | 2 | 2 | - |

Table 45 Demographic data of in-depth sample group of healers. (Cont.)

| TH code | Province | Gen. | Age | Birthplace | Languages | Treatment | ID of teacher | Teacher ethnicity | Years as TH | Health conditions | Materia medica use |
|----------------|-----------------|-------------|------------|-------------------|------------------|------------------|----------------------|--------------------------|--------------------|--------------------------|---------------------------|
| P8 | SS | F | 68 | 3 | KLMT | SL | 1 | 1 | 3 | 0 | - |
| A1 | S | F | 84 | 1 | K(L)M | SL | 1 | 4 | 6 | 3 | - |
| A2 | SS | M | 73 | 1 | KL | SL | 5 | 4 | 3 | 0 | - |
| A3 | U | F | 85 | 1 | KL | L | 1 | 1 | 6 | 6 | - |
| A4 | SS | M | 80 | 1 | KLMT | SL | 2 | 1 | 5 | 2 | - |

TH code = code of traditional healer (See Tables 6-8 for names and addresses)

Province = province location; **S**: Surin, **SS**: Si Sa Ket, **U**: Ubon Ratchathani

Gen. = gender of the traditional healer; **M**: male, **F**: female; **Age** = current age of traditional healer

Birthplace = distance between current village of residence and village of birth; **1**: birthplace is the same as current place of residence, **2**: birth village is 20 km from the current residence, **3**: birth village is 20-50 km from the current residence

Languages = languages spoken by healer; **K**: Kui, **L**: Laos/Isan, **M**: Khmer, **T**: Central Thai. Parentheses indicate healer is partially fluent in the indicated language

Treatment = abilities as a healer; **H**: herbalist, **B**: blowing doctor, **S**: spirit healer, **L**: *Maa mod*, **Ms**: masseuse, **Mw**: midwife

ID of teacher = relationship/identity of the teacher of traditional medicine to the healer; **1**: parent or grandparent, **2**: close relative or elder in the birth village; **3**: Buddhist monk; **4**: villager or elder from other villages; **5**: spirit entity

Teacher ethnicity = ethnicity of the teacher; **1**: Kui, **2**: Khmer, **3**: Lao, **4**: spirit entity

Years as TH = number of years as a practicing healer; **0**: 1-9 years, **1**: 10 - 19 years, **2**: 20 - 29 years, **3**: 30 - 39 years, **4**: 40-49 years

Health conditions = number of health conditions recorded with healers

Materia medica use = number of materia medica (identified and unidentified) used by healer

Table 45 Demographic data of in-depth sample group of healers. (Cont.)

| TH code | Family members | TH works | Work. adults | School child. | Literacy | Wealth | Pop. village | Kui ethnicity (village) | Dist. center/hospital | Dist. health clinic |
|---------|----------------|----------|--------------|---------------|----------|--------|--------------|-------------------------|-----------------------|---------------------|
| Y2 | 4.5 | 0 | 1 | 2 | 0 | 4 | 1000 | 90 | 52 | 8 |
| Y3 | 1 | 0 | 0 | 0 | 1 | 4 | 437 | 100 | 18 | 8 |
| Y5 | 5 | 1 | 2 | 2 | 1 | 1 | 789 | 80 | 25 | 1 |
| Y6 | 5 | 1 | 4 | 1 | 1 | 3 | 776 | 80 | 25 | 3 |
| Y7 | 4 | 1 | 2 | 0 | 1 | 2 | 357 | 100 | 7 | 1 |
| Y8 | 4.5 | 0 | 4 | 1 | 0 | 3 | 301 | 100 | 12 | 6 |
| Y11 | 5.5 | 0 | 1 | 0 | 1 | 4 | 613 | 100 | 10 | 1 |
| Y12 | 6 | 1 | 2 | 2 | 1 | 2 | 231 | 100 | 6 | 2 |
| Y13 | 3 | 1 | 0 | 1 | 1 | 4 | 1128 | 95 | 9 | 4 |
| Y14 | 6 | 0 | 3 | 0 | 1 | 3 | 635 | 2 | 23 | 2 |
| B1 | 1 | 1 | 0 | 0 | 0 | 1 | 1163 | 100 | 5 | 1 |
| B2 | 7 | 0 | 2 | 3 | 1 | 2 | 656 | 100 | 7 | 2 |
| B3 | 5.5 | 1 | 3 | 1 | 0 | 2 | 499 | 100 | 15 | 5 |
| B4 | 3.5 | 1 | 1 | 1 | 0 | 2 | 300 | 100 | 3 | 1 |
| B5 | 4 | 1 | 0 | 0 | 1 | 1 | 214 | 100 | 15 | 1 |
| B10 | 4 | 0 | 4 | 1 | 0 | 5 | 979 | 100 | 30 | 2 |
| B11 | 6 | 0 | 2 | 2 | 0 | 2 | 1160 | 100 | 5 | 3 |
| B13 | 6 | 1 | 3 | 1 | 1 | 3 | 202 | 100 | 8 | 3 |
| B14 | 5 | 0 | 0 | 3 | 0 | 2 | 613 | 100 | 100 | 1 |
| B15 | 3 | 0 | 1 | 4 | 0 | 2 | 700 | 95 | 5 | 1 |
| P1 | 5 | 1 | 1 | 3 | 0 | 1 | 499 | 100 | 15 | 5 |
| P2 | 10 | 1 | 5 | 4 | 0 | 3 | 202 | 100 | 8 | 3 |
| P3 | 2 | 1 | 0 | 0 | 1 | 1 | 1026 | 100 | 21 | 1 |
| P4 | 6 | 0 | 1 | 2 | 1 | 5 | 1160 | 100 | 5 | 3 |
| P7 | 2 | 0 | 1 | 0 | 0 | 2 | 223 | 100 | 10 | -- |
| P8 | 5 | 0 | 2 | 1 | 0 | 2 | 635 | 2 | 23 | 2 |
| Aj1 | 4.5 | 1 | 1 | 3 | 0 | 1 | 1163 | 100 | 5 | 1 |
| Aj2 | 4.5 | 0 | 1 | 2 | 1 | 1 | 371 | 100 | 9 | 2 |

Table 45 Demographic data of in-depth sample group of healers. (Cont.)

| TH code | Family members | TH works | Work. adults | School child. | Literacy | Wealth | Pop. village | Kui ethnicity (village) | Dist. center/hospital | Dist. health clinic |
|----------------|-----------------------|-----------------|---------------------|----------------------|-----------------|---------------|---------------------|--------------------------------|------------------------------|----------------------------|
| Aj3 | 2 | 0 | 1 | 0 | 0 | 1 | 1026 | 100 | 21 | 1 |
| Aj4 | 3 | 0 | 2 | 0 | 0 | 1 | 470 | 100 | 2 | 2 |

Fam. = true number of family members in the household, including the healer

TH works = healer works outside of his/her practice as a healer; **0**: no, **1**: yes.

Work. adults = true number of working adults and financial contributors to the household

School. child. = true number of children and adults in school and higher education who are supported by the household;

Liter. = literacy level of the healer; **0**: illiterate, **1**: literate

Wealth = rate of wealth; healers were judged as a group on a scale of 1- 5, with ‘5’ as the wealthiest and ‘1’ as the poor

Pop. vill = population of village, documented by leader of village

Ethn. vill. = ethnicity of village in percentage as perceived by the leader of the village

Dist. Capital & hospital = distance of village to provincial capital and hospital in kilometers

Dist. Health clinic = distance of village to district health clinic in kilometers

CHAPTER V

DISCUSSION

Sections 5.1-5.5 are parallel discussions of the results sections of Chapter 4. Sections 5.6-5.9 focus directly on the research objectives that were established in Chapter 1 and conclude each objective.

5.1 System of treatment

In Table 46 it is notable that **Yai Bu** and spirit healer **P7** did not include an identifier for traditional healer (หมอ in Thai) in front of the Kui word for ‘massage.’ This may suggest that masseuses do not figure strongly in the Kui traditional medical system. A few masseuses were identified during the preliminary surveying of this study, but none were found throughout the course of the in-depth study. Among Kui communities, massage techniques are used mostly as complimentary techniques for other treatments used by healers who treat physical ailments. This supports observation made by Brun, Schumacher (1994) and Polgurd (1998).

Some incantation and magic experts were observed among the Kui. *Mo Tham* among the Kui was only discovered after specific questioning. These healers were described by community members as being closely associated with the Buddhist religion and using incantation and oil in their treatments (หมอน้ำมันต์ or *Mo NamMun*). Informant **Yai Bu** stated in villagers in MurnSriYai village must seek out a *Mo Tham* (หมอธรรม) from a Buddhist temple to treat spirit possession. Spirit healer **P7** stated that people who learn *Tham* or choose to be treated by a *Mo Tham* are no longer able to participate in *Lum Pee Taan* ceremonies and practices. Herbalist **Y5** states that *Mo Tham* is very similar to *Lum Pee Taan*, yet different. These comments suggest that *Mo Tham* may be a competing practice with *Lum Pee Taan*. On the other hand, spirit healer **P3** is considered a *Mo Tham* even though he participates directly in the *Lum Pee Taan* ceremonies.

Sa-doh-chro ceremonies are used to cure and protect against misfortune. We observed one *sa-doh-chro* ceremony for a family that was being conducted by herbalist **Y3** and an

annual *sa-doh-chro* ceremony for an entire village at the village of blowing doctor **B10**. Spirit healer **P3** stated that *sa-doh-chro* ceremonies were specific according to the day of the week. The ceremony could last all day on Thursdays and Saturdays. For all other days of the week, the ceremony can only be conducted at specific times of the day. The day of the week must also be auspicious for the patient, and this depends on the patient's birth date and day. Only one spirit healer (**P6**) in the supporting sample group of healers was skilled in removing curses. And, one healer (**Y14**) was found to be adept at fortune-telling through horoscope.

5.1.1 Procedure for gaining traditional medical treatment from healers

5.1.1.1 Offerings before treatments

The blooming cycle of plants may affect the plant species that patient offer to healers. Patients may have a preference towards plants that are flowering at the time of treatment. However, on the other hand, the leaves of some flowering plants, such as ต้นไก่อ่ (*Seriococalyx schomburgkii*) were often a preferred offering even when the plant was not flowering. This high preference may indicate a greater symbolic significance of these plants, beyond the attractive color and smell of its flower, among the community.

The amount of money that a patient gives as an offering to the healer for treatment is designated by the healer's teacher. This is usually a negligible amount of money that is more symbolic than practical, because it scarcely covers the real costs that may arise during a treatment. Healers do not attempt to raise or change the traditional 'price' for a treatment. Healers must accept this tradition to maintain their reputation as humanitarians who are not motivated by economic gain. And, it is believed that healers have the opportunity to gain good merit by treating sick people. In any case, the donation that patients give to a healer after they have recovered may be a technique for healers to overcome the financial limitations of tradition. Without this donation system, the healers' practice would not be able to survive. Some healers are required to donate all or part of their financial gain to a Buddhist temple, and this is yet another guard against corruption in the traditional medical system.

5.1.1.2 Diagnosis of health conditions

Patients may seek multiple health practitioners to diagnose their illness. They may visit a hospital doctor for diagnosis and then seek the healer for treatment.

Patients may ask the healer for a diagnosis or to determine the seriousness of their illness.

5.1.1.3 Patient follows through with treatment plan

In contrast with Western medicine, which can require patients by law to follow through with a recommended treatment, it is notable that patients of Kui traditional medicine have a choice to follow or not follow a traditional healer's treatment plan. This is a positive attribute of traditional medicine, where the patient has control of their body and has the flexibility to enforce their own beliefs on personal health care. Healthcare is in a sense, a belief system, and contrasts between the beliefs of a patient and physician can be a cause for great conflicts within a health care system (Fadiman, 1998).

5.1.1.4 Offerings after treatment

Polgurd (1998) notes that patients prefer to visit traditional healers because the treatment is less expensive than that of a hospital. In contrast, however, Kongtapan's (2002) study, reported that the majority of respondents found the cost of Thai traditional medicine to be too high. Research among the Kui supports both Polgurd (1998) and Kongtanpan (2002). While some fixed prices for remedies among Kui healers were quite high, others were quite low and this discrepancy was relevant to the specific healer.

Winning a lottery can provide material proof that the winner has a great store of 'merit.' Spirit healers, as links to the other world, are often asked to give lottery numbers to patients. The spirit healer's spiritual strength may also be materialistically measured by their ability to provide winning lottery numbers.

5.1.2 Restrictions

There are many restrictions associated with healing practices. However, among rural societies, such as the Kui, rely heavily on practicality and strict restrictions are often luxuries that they cannot afford. Healers may ask for permission from spirits to lift restrictions out of necessity. In light of this, restrictions among healers may be considered a generality, rather than rules.

5.1.2.1 Herbalists and blowing doctors

Restrictions among herbalists and blowing doctors prevent and discourage potential healer candidates from learning the trade, which may negatively affect the transmission and survival of the trade. However, at the same time these restrictions may serve to filter out less committed healers and ensure higher quality of health care.

5.1.2.2 Spirit mediums

In contrast to herbalists and blowing doctors, restrictions among spirit healers are not relevant to the tradition, but reflect the personality of the spirit. This can offer more and less flexibility to the spirit healer tradition. On one hand, spirit healers have the ability to negotiate restrictions with the spirit. However, on the other hand, spirit healers may find themselves physically unable to eat certain foods, which can cause vomiting, for example.

5.1.3 Treatment by herbalists

Herbalists rely predominantly on herbal medicines for treatment. The herbalist can diagnose and treat illnesses that are hidden from the eye. Each herbalist is believed to have specific and secret remedies that differ from other herbalists. Faith in the diversity of herbalists is a strong motivation for patients with serious illnesses to search out herbalists for ‘jackpot’ cures. And, herbalists themselves may seek out necessary cures. Herbalist **Y6** stated that he traveled far and wide to find a successful remedy to treat his ailing wife for kidney failure. Even after the death of his wife, he continues to believe that there a traditional cure for this illness exists, but he had failed to find it.

Deviations among herbalists usually fall under skills of a blowing doctor or incantation and magic expert. Herbalists often use these skills to accompany their herbal treatments, but some cases show that herbalist use these skills as the primary treatment for a specific health condition. These blowing treatments are used to treat health conditions that are usually treated by blowing doctors, for example, acute injuries and crying children.

5.1.4 Treatment by blowing doctors

5.1.4.1. Description of a *cum*

Blowing doctors have some flexibility in the materials of used in a *cum*. Many stated that they could still conduct a blowing treatment without these materials. This infers that the power of the blowing treatment rests primarily on the strength of their incantation.

5.1.4.2 Description of a treatment round

The number of *cum* that is used in the rounds can also be changed according to the healer's discretion. Blowing doctor **B5**, for instance, reported that he is able to use less *cum* in a round. This indicates flexibility in the system of treatment. However, it may be notable that **B5** is one of the few blowing doctors who is not a habitual betel nut chewer.

5.1.4.3 Number of timing of the treatments per day

The number of times that a patient is treated per day is also flexible towards the patient, although the time of day of the treatment was stricter. Healers who stated that they must blow before eating were usually adamant on this point as well.

5.1.4.4 Language of incantation

It is notable that most of the blowing doctors did not use an incantation in Kui. This can be interpreted in many different ways. The blowing treatment and tradition may not be traditionally Kui. Or, this phenomenon may be the result of intermingling with other nearby ethnicities, whose traditions could be interpreted as more powerful.

5.1.4.5 Number of incantations used for treatment

Both the number of incantations used by a healer and health conditions that each incantation was used to treat provide insight into the blowing doctors' range and categorization of health conditions. A diverse number of incantations indicate a broader treatment range of the healer. Along the same lines, the use of only one incantation to treat a diversity of health conditions indicates less discrimination between health conditions.

5.1.4.6 Associated treatments and deviations

Blowing doctors generally stay within the range of blowing skills, even though some of their skills may be more associated with incantation and magic experts. Deviations among blowing doctors are usually limited to the use of herbal remedies, mostly to treat internal injuries.

5.1.4.7 Evaluating a successful treatment

Usually the patient evaluates the success or non-success of their treatment and simply stops coming for the treatment or brings the required offerings to signal the end of the treatment. On the other hand, the patient also has the choice to continue the treatment for an indefinite period. Again, this choice characterizes traditional medicine from Western medicine, where the success of a treatment is usually determined by the physician, rather than the patient.

5.1.5 Treatment by general spirit mediums

Spirit healers can tap into the unseen origins of mysterious diseases and provide some psychological closure and remedy to illnesses. Patients often seek out a spirit healer after other avenues, such as a hospital doctor, herbalist and blowing doctor, have been exhausted. The strength of a spirit healer varies, and is dependent on the spirit's strength and the healers' relationship with the spirit.

5.1.5.1 Household spirit altars

These altars were particularly useful in the data collection. Discussions with the healer were often stimulated by the objects, such as plant based offerings, that were on the altar. For example, the statues on the altar often represent the number and types of spirits that the spirit healer mediates. Also, photographing the altar served to gain the healer's confidence in our research, because healers often believe that a clear photo demonstrated that the spirit's willingness to participate in the study.

5.1.5.2 Descriptions of mediated spirits

The languages spoken by the spirits offer insight into the ethnicity of the spirits, and presents a basis for which to question the origin of the tradition of spirit

mediating among these Kui healers. Spirits communicated with the mediums mostly in Thai and Lao, rather than Kui. Again, this may be the product of the many complexities that arise from the intermingling of different cultures (see section 5.1.4.4).

5.1.5.3 Mediating spirits

Many healers state that they were reluctant to be hosts to a spirit when they were first approached by the spirits. However, all of the spirit mediums in this study now appear to enjoy mediating spirits and relish their unique relationship with the spirits.

5.1.5.4 Associated treatments and deviations

Spirit healers rarely delve into any other forms of treatment outside of spirit healing and the spirit world. The only exception was spirit healer **P7** and *Acharn Lum Pee Taan Aj3*, who are both midwives. However, they were both trained as midwives before they became spirit healers. Because spirit healers did not make a conscious choice to become healers, this may effect their motivation to learn other healing practices. They often do not identify themselves as healers, and rather consider themselves as vessels for the spirit world.

5.1.6 Treatment by *Pee Taan* spirit mediums

5.1.6.1 Descriptions of mediated spirits

It may be useful to focus on the *bagum* spirits of the Kui. These spirits are considered inherently Kui, because they are closely related to the Kui's tradition of catching elephants. Sodsung (2002) states that as a close companion with this quickly fading tradition, *pa-gum* spirits are also disappearing from Kui culture. However, this research shows that the *pa-gum* and elephant culture, still figure dominantly in the Kui's *Lum Pee Taan* ceremonies and beliefs. Either the *pa-gum* were once the center of these ceremonies which later absorbed the traditions of *Lum Pee Taan* ceremonies from other cultures, such as the Lao and Khmer groups, or the *pa-gum* were a later addition to the ceremony.

5.1.6.2 Mediating spirits

A curious trend among both the general and *Pee Taan* mediums is that few mediums report that they converse Kui with the spirits that they mediate. The most distinct case may be seen in MurnSriYai village which is one of the least multilingual of all

the study villages. Even though they speak predominantly Kui in everyday life, during the *Lum Pee Taan* ceremonies led by *Acharn Pee Taan Aj1* the *Pee Taan* spirit mediums speak only Lao with the spirits.

However, even though *Pee Taan* spirit mediums state that they speak non-Kui languages with their spirits, it is possible that if this question was re-phrased to specify the *bagum* spirits, that there may be a different answer. It is possible that spirits represent a static tradition and do not change languages as easily as minority groups do. However, if *Pee Taan* spirit mediums do speak non-Kui with the *bagum* spirits, this may infer that there cultural shifts are occurring among the Kui communities (see section 5.1.4.4).

5.1.6.3 Household spirit altars

Like general spirit mediums, these altars can serve to stimulate discussion of natural materials that are used and placed as offerings on the altar.

5.1.6.4 Events leading to *Lum Pee Taan* ceremony

Unlike a treatment with an herbalist or blowing doctor, a patient does not have the choice to choose another treatment after *Pee Taan* spirits has been diagnosed as the origin of their illness. Even though a patient's household may not conduct the ceremonies for years after the diagnosis, it is believed that the patient or another household member will become ill again until their household carries through with the promised ceremony.

5.1.6.5 Description of *Lum Pee Taan* ceremony

Pee Taan ceremonies are group ceremonies that rely on the cooperation of many members of the community. These ceremonies are often focused on the family unit, and family members may travel home from faraway places to participate in a family ceremony. In this way, *Pee Taan* ceremonies act to bring families and the community together. This may be seen even more clearly in the case of an illness. The patient is usually not held responsible for the illness. If the illness is caused by angry *Pee Taan* spirits, it is usually a consequence of other family members' actions. For example, quarreling in a family may lead to another member of the family becoming ill from upset *Pee Taan* spirits. On the other hand, an illness may simply be caused by the *Pee Taan* spirits because the spirits have decided that it is time for a household ceremony. A ceremony requires the family and

community to gather resources together and plan, organize, and fund raise for the ceremony. The patient has little to do with the ceremony, and even their illness is overlooked. The focus of the ceremony is to appease the spirits. It is taken for granted that the patient will recover completely after the ceremony.

(1) Participants

The role of the participants in the ceremony is also of interest. Polgurd (1998) noted that *Pee Bupboro*, ผีบรรพบุรุษ (Thai) or ยะจ้าวะฮ (Kui) spirits of the Kui are matrilineal. This may provide an explanation for why male in-laws are restricted from taking part in the ceremonies. It infers that Kui believe the tie to the mother is considered stronger than the tie to the wife or wife's family.

Ethnomusicology also comes into play when examining the role of musicians in the ceremony. Many participants of the ceremony state that ceremonies are not possible without the presence of a traditional *caan* musician. They are a highly respected part of the ceremony. However, it is possible that these musicians can be replaced with a taped recording of their music. We witnessed one spirit medium ceremony that used a taped cassette recording in place of a musician. While this may be possible for short ceremonies, it is highly unlikely that this would be an alternative to a real musician during the lengthy *Lum Pee Taan* ceremonies, which also have events during the ceremony that honor the musician(s).

(2) Logistics of the household ceremony

According to elders, *Lum Pee Taan* ceremonies of the past lasted for much longer than they do today—for as long as three full days and nights. Ceremonies today can be conducted during the night or day and generally last for eight hours or more. More traditional villages, such as MurnSriYai village of *Acharn Pee Taan Aji*, conduct a day and night ceremony consecutively.

(3) Preparing for the *Lum Pee Taan* ceremony

This is a family and community effort that requires great communication and cooperation. In effect, this ceremony helps to reinforce the family and community unit.

(4) Beginning the ceremony and entering possession

The discussion that occurs between the spirit and family members can help to resolve family conflicts, identify and address grievances in the family, and admonish bad behavior. Overall, it serves to reinforce family and community values.

(5) Events during the ceremony

A closer analysis of these events may show important insight into Kui culture and history but this was not a focus of the research.

(6) Ending the ceremony

There is nothing to discuss in this section.

5.2 Health conditions and treatment range among healers

Some bias is introduced into data because of the healer's perspective of 'important' health conditions. Healers may only mention health conditions which they believe we, as researchers, will find most interesting. They may disregard 'insignificant' health conditions, such as cuts and bruises. This was made apparent during a health condition log interview with blowing doctor **B4**. He described four health conditions as the most important cases of the last month, and declared that the remaining health conditions were simply 'little things' and of no interest to us. A neighbor then added that villagers seek out the blowing doctor for almost any kind of acute injury, including scrapes, bruises and bumps. And in fact, he himself had strained his wrist the day before and sought out the healer for a blowing treatment.

Intermediary languages, central Thai and Lao-Isan, were used to communicate with the healers and this affected the data. Most healers were multi-lingual. During interviews, their responses reflected names of plants and diseases which they thought were more likely known by us as outsiders to the community. This bias is noted in the results which show strong 'R' names, in contrast to Kui or Yuh names. When healers were asked directly for a translation of a name, some responded that it was the same name that was already listed. Later, it was realized, that they meant the name was a direct translation in Kui.

5.2.1 Herbalists

Herbalists treat a wide range of health conditions, but some can specialize in chronic diseases. Herbalists who can successfully treat difficult illnesses, such as cancer and AIDS, often become known as specialists of these diseases. Herbalists can be the last resort for patients who are too ill for the hospital system. As experts of chronic illness in the community, herbalists who specify a limitation in their treatment knowledge of chronic illnesses, also identify a real gap in the knowledge of Kui traditional healers.

5.2.2 Blowing doctors

The main area of expertise among blowing doctors is acute physical injury with physiological origins. In general, these are illnesses that can be seen on the outside of the body. Internal injuries are rarely treated with blowing methods by blowing doctors and blowing doctors may resort to herbal remedies to treat these types of illnesses. Aside from this, blowing doctors also treat some health conditions with spiritual origins by using magical incantations. Similarly with herbalists, patients can be motivated to seek out a blowing doctor to treat especially difficult illnesses, such as health condition 6.5.

5.2.3 Spirit mediums

The health conditions that were recorded with spirit healers is considered less comprehensive, in comparison to the data that was collected among herbalists and blowing doctors. Spirit mediums focus on the origin of a patient's illness, which is caused by a spirit, and pay little attention to the patient's physical symptoms. In fact, spirit healers often learn of the patient's symptoms via word of mouth from other community members. Even when they can recall the health conditions that they treated, they can usually offer only vague descriptions of the patients' health conditions. It is evident that spirit healers also serve the emotional and psychological needs of the community. These were not recorded in this study because it was considered too invasive on both the healer and patient's personal confidence.

5.3 Preparations methods

In general, vehicles are linked to the application method of the remedy. Medicines mixed with water, alcohol, duck's blood, honey, and no vehicle are usually consumed by the patient. Topical medicines usually use oil, rice water, lime juice, water and slaked lime, and

urine. There is little relationship between the type of vehicle and the type of health condition, materia medica, materia medica part, and healer's preferences.

The practical characteristics of the health condition can determine how a remedy is applied. Painful and aching eyes, for example, are treated with blowing treatment by both herbalists and blowing doctors. Dermatological illnesses are usually treated with topical medicines. As a more complex example, herbalists may treat a fever by applying a single remedy to a patient via two ways, consumption to reduce body temperature and topically to treat dermatological fever blisters.

The type of plant affects the preparation method that is used by the healer. For example, plants which are small, succulent, fresh and leafy are difficult to sand, and are prepared in other ways.

5.3.1 Boiling

Kui herbalists can be considered primarily boiling medicine herbalists because about 90% of all herbal remedies used by the herbalists are prepared with boiling methods. Herbalists who used mostly boiling medicines use at least one sanded remedy. Boiling medicine healers usually choose to sand medicine according to the nature of the health condition and the plant part that is required. Herbalist **Y13**, for example, uses sanding medicine for treating skin lacerations.

5.3.2 Sanding medicine

Sanding medicines are the second most popularly used preparation method among herbalists. The only two herbalists (**Y2**, **Y12**) who rely mostly on sanding medicines also use a few boiled medicines.

5.3.3 Soaking

There is nothing to discuss in this section.

5.3.4 Fresh: herbal

There is nothing to discuss in this section.

5.3.5 Fresh: Blowing treatment

There is nothing to discuss in this section.

5.3.6 Fresh: Spiritual treatment

There is nothing to discuss in this section.

5.3.7 Roasting

This type of preparation treatment of bark was also noted by Polgurd (1998).

5.3.8 Burning

There is nothing to discuss in this section.

5.3.9 Steaming

There is nothing to discuss in this section.

5.4 Materia medica

Specimens of common plants, such as banana and coconut, were not collected. In hindsight, specimens for all species should have been collected to verify the identity of materials in a standardized and comprehensive manner (see introduction for section 4.4.).

5.4.1 Diversity of materia medica

The diversity level among blowing doctors and spirit mediums is affected by some of healers being multi-skilled. For example, blowing doctor **B13** used many plants as herbal treatment, which greatly increased the range of the materia medica used by blowing doctors. Data collected from spirit healer **P6** included materials used for herbal remedies. Finally, the definition circumscription of material medica has also impacted the diversity level, through exclusion of many materials used by some healer types and inclusion of materials used by other healer types.

5.4.2 Materia medica importance

5.4.2.1 Herbalists and blowing doctors

Plants on the first level of healer consensus (Table 26) are less likely to have legitimate healing properties for treating the specific health conditions. Because there is some level of informant consensus, this information is included here. Materials which passed the second level of informant consensus (Table 27) are considered the most important medica materia in this study.

5.4.2.2 Spirit mediums

Materia medica use among general spirit mediums is defined predominantly in offerings before and after treatment. Spirit healers use few materials in their treatment ceremony, and for this reason their use of plants was not quantified.

Among *Pee Taan* spirit mediums, *Musa sapientum* was the most frequently observed materia medica (50 times). Other important materials, which were observed over ten times, include non-glutinous and glutinous rice, wax, coconut, tumeric, *Areca catechu* nut, *Plumeria*, sugarcane, tobacco, and *Piper betel* leaf with slaked lime. It is an unlikely coincidence that these plant species are also common and practical plants that are staples of Northeast Thailand.

Plants which are less able to be substituted are considered more important plants. Like the general spirit mediums, many of the decorative flowers used in the *Pee Taan* ceremonies are easily substitutable. Decorative flowers are selected mostly for their beauty and good-smell rather than species. However, there are plant species that are more difficult to substitute. *Morinda citrifolia* wood was the only irreplaceable plant species found in the ceremonies. One *Pee Taan* medium participant (**Yai Bu**) of MurnSriYai village was asked what would occur if there was no *Morinda* wood available to make the various items (See Appendix I) in the ceremony. She answered, ‘Then we must seek it out until it is found.’ Tumeric is necessary for ‘cleaning’ items and difficult to replace. *Plumeria* is favored for decoration and to attract spirits, but it is likely that it can be replaced with other similarly beautiful and good smelling flowers if necessary. Coconut leaves for the roof can be only substituted with PL354 (*Imperata cylindrica*) and cloth.

5.4.3 Beliefs and restrictions associated with collecting materials

Healers consider four factors when collecting materials: 1) Increasing potency of the material as a medicine by collecting materials at specific times; 2) Respecting the spirit guardians of the materials by making appropriate ceremonies; 3) Considering practicality by collecting materials when they can be identified; and 4) Measuring the need for the material and collecting only if it is necessary. Some of these restrictions may be traditional methods for conserving and encouraging sustainable use of the materials. All of the above ‘rules’ are guidelines that should be followed whenever possible (Refer to section 5.1.2).

The type of medicine that a healer uses can affect the collection patterns of healers. Healers who use boiling medicine (**B13**, **Y5**) usually collect plants just before they should be used and use the plants fresh. Sanding medicine healers, however, often use the same materials for a long time and rarely have to collect more plants. Herbalist **Y12** rarely collects materials because he uses only sanding medicines. Most of his materials were inherited from his father. However, the animal products in his collection are usually purchased because they are difficult to find and collect.

5.4.4 Collection sites of materia medica

The level of ecological knowledge on materia medica varies among healers. Almost all healers who rely on herbal medicine (herbalists and blowing doctor **B13**) collect their own plants and are intimate with the identity, location, qualities and characteristics of the materials they used. They collect plants in local collecting sites and most healers, with exception of **Y5**, **Y6**, **Y13**, and **B13**, also collect plants from non-local collecting sites. Herbalist **Y12** is the only herbalist who is less knowledgeable of plants in their natural habitats-- most likely because he rarely collects medicines.

Blowing doctors were less knowledgeable than healers who use herbal medicine. Outside of the typical betel chew that was used in the treatment, only half of blowing doctors used other materials (**B2**, **B4**, **B10**, **B13**, **B15**) (see section 4.1.4). Of these five blowing doctors, only three (**B4**, **B10**, **B13**) used more than one plant and collected the plants themselves, in contrast to purchasing plants from a vendor.

Box 7 Excerpt from field notes with herbalist **Y5**: Interview on land use.

Herbalist **Y5** resides close to the forested mountains of the Cambodia border. Both its rough terrain and history of warfare— it is still filled with landmines-- has helped to conserve the area in its natural state. As a result, herbalist **Y5** has access to one of the richest sources of medicinal plants in the region. At the bottom of the mountain, she owns some agricultural land which is still partly undeveloped. This is the site of some medicinal plants that she collects and uses. However, she is in the process of clearing some of the remaining brush and trees from her rice field. While we stand in newly cleared land, I ask the healer of her intentions for the medicinal plants that are still located in the planned site of the rice fields (I= interviewer; Y5 = Herbalist) :

I: The medicinal trees/plants in your rice field, will you conserve them when you make your rice field?

Y5: No. Because I can always find more someplace else, like in the forest (on the mountain).

I: Are you worried that you won't be able to find the plants that you need one day?

Y5: No. There is always more.

I: But they may be very far in the forest, will you still want to go collect them?

Y5: You know me-- I am never too lazy.

5.4.4.1 Local collecting sites

The more frequently visited plant collection sites are those which are most easily accessible to the healer. These are identified as Local collecting sites in this study, and discussion of these sites in the following paragraphs.

Rice fields may often be thought of as clear-cut featureless fields, but in reality they are dotted with tall trees and clusters of brush and shrubs. Raised paths which run along the outer edge of each rice patty provide areas for wild plants to grow. These small undeveloped pieces of land often harbor wild plants that were either left behind when the natural forest was cleared or grew naturally as the rice field was cultivated. Under these circumstances, it is attractive to believe that healers purposively retain plants for their medicinal qualities. However, upon questioning, both villagers and healers respond that trees in rice fields are conserved mainly for shade, even though some have medicinal purposes. An interview with herbalist **Y5** demonstrates even further that conserving local medicinal plants is not a primary

concern among healers (See Box 7).

Homegardens are most often used to cultivate food herbs and are rarely established for the main purpose of growing medicinal plants. Most medicinal plants that are found in home gardens have a primary use as a food or decoration/spiritual plant and only a secondary use as a medicine.

Herbalists **Y14** and **Y6**, were the only herbalists who grew more than a dozen plants in their home garden. While most herbalists (**Y2, Y3, Y5, Y6, Y8, Y11, Y12, Y13, Y14**) cultivate medicinal plants in homegardens, these are often limited to a few plants. However, this low number may be due to the difficulty of some plants to be cultivated. It is notable that some healers, such as herbalist **Y5**, can identify whether or not a plant can be cultivated. If the plant can be cultivated, she can describe in detail how to grow the plant. This demonstrates that healers may often experiment with plant cultivation.

Blowing doctors, who rely on materials that are used in betel chews, collect much of their materia medica from home gardens. Betel chew is chewed regularly by most Kui villagers and these materials are often grown in home gardens. *Areca catechu* is more commonly grown by villagers, because *Piper betle* is more difficult to cultivate.

Additionally, spirit healers use plants that are often grown in gardens for decorative and spiritual purposes. These plants are popular for beautifying the home and to make frequent offerings to the Buddhist temple and local spirits. Other plants used by spirit healers, such as rice, coconut and banana, are staples of the Northeast Thai livelihood and their spiritual symbolism is considered a secondary purpose.

Forest areas are indispensable among all herbalists and other healers who use herbal medicine (**B13**). Among herbalists, forest areas are a necessary partner to developed landscapes for collecting plants. Forest areas are less accessible than developed areas and require the healer to travel farther to reach these sites. Blowing doctor **B13**, for example, must travel to a wild area adjoining rice fields that is about 10 km outside of his village to collect plants for his herbal medicines. Herbalists **Y2** and **Y8** collect some plants along the banks of waterways. Because it is difficult to develop these areas, they are often left in its natural conditions.

Spirit healers may rely on some plants which are found only in the forest, while blowing doctors use few products from the forests for their blowing treatments. Blowing doctors and spirit healers may both collect *Cassia fistula* from the forest, but this plant can

usually be found in more convenient locations, such as rice fields.

Buddhist temples were once the central site for education and knowledge in the community with many monks being skilled in herbal and traditional medicine. Today herbalism still survives there in varying degrees, and some temples have conserved medicinal plants within its perimeters. Temple grounds are most popular as collecting sites for herbalists (**Y3**, **Y11**), and especially for those who have spent a considerable amount of time as monks in the past. Herbalist **Y3** often returns to the temple where he was once a monk to collect plants. In order to collect plants from the temple grounds, a healer must first ask permission from the abbot and spirits of the temple. In a restricted area, such as a temple, the plant can always be collected if the healer ‘asks’ first.

Cleared land is often a rich and convenient site for collecting materials, after the original plant life begins to grow back. Herbalist **Y2** depended chiefly on this type of plant collection site, which is located with a five minute walk from his house.

5.4.4.2 Non-local collecting sites

Materia medica which can no longer be found in the healer’s local collecting sites are collected in Non-local collecting sites. Neighboring countries are a rich source of materia medica, and especially for those materials that are difficult or impossible to obtain in Thailand. Because it can be quite dangerous for a healer to personally collect materials from these sites, the healer may choose to hire other people to collect the plants. Border markets provide more easy access to the materia medica that is found in neighboring countries. Traveling vendors may even be the healers themselves. Herbalist **Y11**, for example, does business collecting and selling materia medica (Box 6).

5.4.4.3 Collection origins of medicinal plants

An examination of the identified materia medica listed in Appendix G shows that most materials recorded for use by healers in this study were collected from Nearby forest, and this was followed closely by Homegardens. It is notable that plants were more commonly collected from closer and more accessible areas. Purchasing and collecting materials from Faraway forest was less common among healers. There were only nine materials which could not be found by the healer, but this frequency is biased because only ‘identified’ materia medica is analyzed in this section.

5.4.5 Plants parts

Healers often state that more than one part of the plant can be used in a remedy, although one part may be better than others. The part of the plant that is used may be selected according to practical reasons. Herbalist **Y13**, for example, states that the roots of plants are the best part of the plant to use. But roots are often very difficult to dig out of the ground, so he often substitutes other parts of the plant, like the stem. Stem and underground parts of the plants were the most important parts of plants used for treatment. Sustainable harvesting (e.g. stem versus root) was not recorded as a factor for considering which plant parts to use.

The vernacular terms (written in Thai characters) in Table 33 show very specific vocabulary for some plants species. These species represent plants that are important staple of Northeast Thailand. This supports the theory that more specific vocabulary is used for more useful and important aspects of peoples' lives.

5.4.6 Relationship between preparation methods and materia medica

Table 34 shows that animal parts are mostly prepared by sanding methods. This may relate to the rarity of this material, because sanding methods require less use of the material. Herbalist **Y12** notes that if a cloth that is holding the bile of a python is dipped into water, then it becomes 'bland.' However, if it is merely touched with another plant material and this material is sanded, then the bile is still added to the medicine and can be used almost indefinitely as a materia medica.

Table 35 supports the conclusion that boiling, and then sanding, is the most popular type of preparation method used by healers. Table 36 demonstrates that there is little pattern of preparation methods according to the type of plant. Within the fresh category, small plants are more popularly prepared with this method, which again falls into the theme of practicality.

5.5 Defining characteristics and socio-demographics of healers

The defining factors included in this study may be categorized into two groups: 1) Characteristics of the healers as individuals: obtaining and gaining knowledge, restrictions, treatment activity, birthplace and ethnicity, gender and age, years practiced as a healer,

multiple treatment skills, languages, literacy, household wealth, family size; and 2) Environmental factors: population of village, ethnicity of village, distance to district center and distance to health clinic.

5.5.1 Obtaining and passing on knowledge

All healers obtained their primary medical knowledge from a Kui medical practitioner, who represents a lineage of traditional medical knowledge. More than half of the healers learned from a practitioner who was a parent or grandparent.

Protégés are not pre-selected to join the practice, rather the knowledge ‘sticks to’ (ติด) a person naturally. Therefore, a person who seeks to become a healer cannot necessarily become a healer because of this phenomenon. Blowing doctor **B15**, for example, sought out a blowing doctor with a group of other interested villagers. But he was the only one to succeed with the skills. This infers that becoming a healer requires natural talent, and that the trade is not available for everyone.

It should be noted that some traditions of medical knowledge have traditions which protect it from being passed on to other people. The restrictions that are associated with treatment knowledge are an example. There is a lot of secrecy involved in the tradition and some healers are reluctant to share their knowledge with anyone else, even family members.

It may be notable that healers from the at-large sample group who were considered to have poor traditional medical knowledge, and not included in the in-depth sample group, showed a pattern in their origin of knowledge. They either attributed the source of their knowledge to spirits (**Y10**, **P6**) or were unable to identify a single healer who was most responsible for their knowledge (**Y4**).

5.5.1.1 Herbalists and blowing doctors

Among all traditional medical trades, herbalism may be the most difficult practice to master. Learning the trade is a gradual process that requires close association between the teacher and student over many years. Herbalists must usually learn the trade throughout their childhood in order to be prepared as a healer by adulthood. Most herbalists began learning the trade as children, from elder relatives or neighbors whom were easily accessible to the healer.

Even in adulthood, herbalists must continue to seek out new knowledge. It is common for herbalists to travel widely in search of new remedies, knowledge and medicinal plants. Even in old age, herbalists still show the initiative and desire to travel (Box 8).

Many herbalists report that they ordained as monks during their early twenties for a considerable period of three to seven years. This appears to have positively influenced their herbal practice, by giving them the freedom to focus on studies of herbal remedies. They learned new remedies from other monks, honed their medical skills, and became literate. Many healers continue to adhere to Buddhist principles within their herbal practice or are still closely associated with the Buddhist temple. Their quiet and contemplative demeanor may be linked to their training as Buddhist monks.

Only a few herbalists had passed on their knowledge to other people, and they did so only partially. Herbalist **Y12** had passed on some of his knowledge to his daughters. He taught his daughters herbal medicine, but he refrained from teaching them the blowing incantations because of the restrictions associated with the knowledge (refer to section 4.1.2). Herbalist **Y11** recently had a few students learn knowledge from him. They were relatives who stayed with him for a month, but it was hardly enough time for them to become full-fledged herbalists. Herbalists (**Y2**, **Y3**, **Y5**) often state that they do not have any students who are interested in learning their knowledge.

An almost equal number of blowing doctors learned from relatives and non-relatives. All three female blowing doctors learned from their father, and none sought to learn any blowing treatment knowledge from an outside source. Five blowing doctors learned from non-related healers in other villages, and all were motivated to learn because they had an injured child who needed continual treatment from a blowing doctor. The last two healers sought knowledge out of personal interest. One healer (**B10**) is a jack-of-all-trades and collects traditional medical knowledge. Blowing doctors usually sought out the knowledge and learned the knowledge within a short period (less than a year).

The higher number of non-relatives, compared to the herbalists, is significant because it infers that blowing practices are more easily transferred between healers. It takes a considerably shorter time to master blowing techniques, and this may explain the high frequency of blowing doctors in rural areas and popularity of the trade.

Most blowing doctors have not passed on their knowledge. The only exception is blowing doctor **B4**, who passed the knowledge on to his eldest son, and who in turn, passed

the knowledge onto his younger brother (**B5**). Spirit healer **P7** reported that the tradition of the blowing doctor in her village is very strong. The healer must protect the knowledge and carefully choose the succeeding healer. This individual is almost always a close younger relation.

5.5.1.2 Spirit mediums

Spirit healers differ from herbalists and blowing doctors because they have no choice in becoming a healer. Their role as a healer is determined by a spirit, and they can literally become a healer overnight. General spirit healers have no forewarning at all that they will become a spirit healer, while *Pee Taan* spirit mediums have some forewarning because they inherit the spirits from their parents. It is this lack of forewarning that distinguishes general spirit mediums from *Pee Taan* spirit mediums.

Data collected on origins of knowledge among spirit healers may be affected by different interpretations of the word ‘teacher’ among both types of spirit mediums. Some general spirit healers considered that spirits were the origin of their knowledge, while other mediums considered their elder relatives to be responsible for teaching them how to carry out the associated ceremonies and tradition properly. *Pee Taan* spirit mediums consider only the origin of their knowledge to carry out the ceremonies and tradition properly. In any case, these different interpretations serve to emphasize the dichotomy between these two types of healers, based on their different perspectives of themselves as healers. Some general spirit healers view that their actions relate directly to the recovery of a patient. *Pee Taan* spirit healers, however, focus on carrying out the ceremony properly and the recovery of the patient is simple an indirect result. This perspective may be attributed to the group nature of the *Lum Pee Taan* ceremonies in which no single participant is responsible for the recovery of the patient. *Acharn Lum Pee Taan* spirit mediums do not concern themselves with the specific illness of the patient, and are rarely able to describe the patient’s illness.

5.5.2 Treatment activity among healers

A high degree of treatment activity was one of the initial criteria for selecting healers which lends a bias to the data in this section. Among multi-talented healers, the treatment activity among different types of healers includes all types of treatment that are within the healers’ capability.

A couple of herbalists (**Y3** and **Y14**) reported that they often treat more than one patient a day. This high activity may relate to the fact that herbalists, and especially very talented and knowledge ones, are not easy to find within the community. On the other hand, herbalists' activities may be underestimated, because herbalists often sell remedies to people whom they do not consider patients.

The degree of treatment activity can also affect the collection patterns of healers. Herbalist **Y14**, for example, has a thriving business that requires him to collect large quantities of plants which he quickly sells to patients as remedies. Because these large quantities are difficult to obtain locally, he may choose to collect some of these plants from neighboring countries.

Blowing doctors are the least active of the healers. This may be due to the limited types of health conditions that they can treat. However, they can have influxes of patients at certain times of the year, such as after a holiday (e.g. car accidents). General spirit mediums, as a whole, are the most active group of healers. Their skills can cover a wide range of needs among patients, such as insight into all types of personal and social problems. And, in some communities, general spirit mediums can be rare.

5.5.3 Birthplace and ethnicity (Table 39)

Most healers were born in the village in which they are currently residing and migrated very little during their lifetime. Some men may marry into different households and nearby villages. During the initial surveys of traditional healers, it was discovered that there is a strong correlation between the distance of the birth village from the present residence and the ethnicity of the healer. Healers who have migrated over 50 km to the present village are more likely to be an ethnicity other than Kui.

Marriages in Northeast Thailand are often matrilineal and matrilocal. Therefore, the ethnicity of the mother, rather than the father, was determined to have a greater cultural effect on the child. In support of this, herbalist **Y12** who has a Lao father and Kui mother was born and raised in a Kui village and considers himself Kui. This healer also studied from an elder in the village, rather than his father, therefore his knowledge was considered to represent Kui traditional medical knowledge.

5.5.4 Gender and Age (Table 40)

Two possibilities for the relatively high age of the healers are a lack of younger practitioners to take over the practice and/or continued activity of the elder healer, in which patients prefer the senior healer over the younger practitioner.

Herbalists and blowing doctors are predominantly male and both types of spirit healers are predominantly female. There were more female blowing doctors than there were female herbalists. In contrast to herbalists and blowing doctors, both types of spirit healers are predominantly female.

The strong ratio of male to female herbalists is most likely linked to socio-economic factors, rather than gender bias. Two herbalists (**Y8**, **Y10**) both passed on knowledge to their daughters. However, this could also reflect changes in traditions, such as the increased migration of males towards larger cities to search for work. Only one bias against women was found. Herbalist **Y12** states that women cannot learn the associated incantations because it will cause their bodies to become stiff.

Herbalist **Y5** is the only female herbalist and the youngest practitioner of the group. She is very active as an herbalist and may be motivated by her passion for the trade and necessity. As a single parent, she financially relies on her trade to support her family of five.

Herbalist **Y8** was the eldest healer in the study, and he passed away during the research period. Overall, more elder herbalists (**Y2**, **Y8**) have more complete knowledge in traditional medicine. They are proficient in all areas of treatment, such as disease characteristics, diagnosis, treatment, and medicinal plant identification. Younger healers are less proficient in all areas, especially diagnosis and medicinal plants identification. Both healers were also illiterate and 100% Kui and had lived most of their lives in the same village which was 100% Kui. These characteristics may have provided them with more opportunity to learn the practice of traditional knowledge in entirety.

In comparison to the herbalist group, the practice of blowing treatments appears to be more flexible towards including women in the trade. One blowing doctor (**B4**) even stated that females were better suited as blowing doctors and are more successful healers. The youngest healer (**B5**) in the study is a blowing doctor. Because it requires relatively little tutelage to learn the blowing treatments, for which incantations are the emphasized factor in the treatment, healers who are quite young can be successful healers within the community.

Heinze (1988) reports that spirit healers are typically female throughout Southeast

Asia. This study among the Kui also supports this conclusion. The lower average age of the spirit healers, in comparison to herbalists and blowing doctors, is most likely linked to the method of learning the practice itself. Villagers can become a spirit healer overnight, because it takes little time for a spirit to become a part of the person's life. Neighboring villagers will quickly hear of the news and visit the villager with the spirit to ask for treatment and advice.

Of all four healer types, *Acharn Lum Pee Taan* spirit mediums are the only group with a significantly different mean age. In comparison to herbalists, blowing doctors and other spirit healers, the role of an *Acharn Lum Pee Taan* can be basically reduced to simply attending the various *Lum Pee Taan* ceremonies. The *Acharn Lum Pee Taan* leader holds their status until death, upon which the spirit is passed on to a relative of a younger generation. This new medium is most likely to be middle aged, usually around 40 years old. *Acharn Lum Pee Taan* spirit mediums rarely inherit their position, but are selected by the other *Pee Taan* spirit mediums of the community on account of their high knowledge of the traditions and ceremony and/or age.

5.5.5 Years practiced as a traditional healer (Table 41)

Herbalists were noted as practicing the longest out of all the healers. Herbalists usually begin learning their knowledge at a young age, and are ready to treat by young adulthood.

In contrast with herbalists, blowing doctors were often prompted to learn the treatments out of necessity or usefulness. Blowing doctors were often more mature or were parents, before they became interested in learning the practice. Therefore, their length of practice was shorter. Because it takes little time to learn the trade, blowing doctors are also able to begin practicing fairly quickly after they begin learning the trade.

General spirit healers have distinctly less experience with treating patients compared to the other healers. This is most likely due to the spirit healers' fast initiation into the practice. It also takes little time for villagers to respect the healers' treatment capabilities, as word of a particular healer's 'power' spreads quickly and it is not long before patients come to seek the spirit healer for advice.

In contrast most *Pee Taan* spirit mediums started practicing when they were about 21 years old. While they do not reach the level of *Acharn Lum Pee Taan* at this time, they consider their first participation in a ceremony as a medium as the beginning of their practice.

5.5.6 Multiple treatment skills (Table 42)

The most frequently practiced form of treatment among all types of healers was blowing treatment, while herbalism followed closely behind. It is notable that massage and midwifery skills exist among herbalists, blowing doctors, and spirit healers.

The only herbalists who are not multi-talented are herbalists **Y2** and **Y8**. These herbalists represent the most traditional type of Kui herbalists, and it is likely that during their most active days, there were many different types of healers in the village who filled the various needs of the village. In comparison with the other healers, herbalists tend to seek out new treatment knowledge throughout their life. Blowing treatment is the most compatible form of treatment with herbalism. After an herbal treatment, herbalists could use blowing treatments with incantation to chase away and protect patients from spirits and ensure the patient's recovery.

Blowing doctors rarely seek out new knowledge, especially among other treatment arenas. Only four of the blowing doctors mentioned skills outside of blowing treatment. However it is likely that most blowing doctors could be considered masseuses, because they often incorporate massage techniques into their blowing treatment. Blowing doctors may be considered herbalists by some villagers, although their knowledge in herbalism is limited (less than 3 treatments). There can be a fine line between Kui blowing doctors and spiritual healers, because blowing techniques can be used to chase away and protect patients from spirits. Technically, blowing doctors can be considered *Mo Siyasat* (a type of incantation and magic expert), because they are knowledgeable of incantations.

Both types of spirit mediums generally stay within the realm of spirit treatments. They do not show much interest in gaining more knowledge outside of this category. Possibly, this related to the fact that they never make a conscious decision to become a healer and many mediums do not even consider themselves healers.

Some general spirit mediums may also act as *Acharn Lum Pee Taan*, and all spirit mediums in the study participate in the ceremony in some way. Female spirit healers are direct participants (mediums) in the ceremony, and the lone male general spirit healer (**P3**) opens and closes the *Lum Pee Taan* ceremony.

5.5.7 Languages and Literacy (Table 43 and 44)

All healers are multilingual, and almost all healers are bilingual in Kui and Laos. Less than half of the healers spoke Khmer. This is unexpected because the Kui have had a long and close association with Khmer groups, and it is expected that healers would be more proficient in Khmer language.

Herbalists are the most multi-lingual healer. As continual seekers of knowledge, herbalists must be proficient at communicating with other people so they can more easily move about and treat patient, find and collect plants, and learn more remedies. The only healer (**Y14**) who does not speak Kui, speaks Lao and Thai. He considers himself Laos, even though his heritage and Kui. According to interviews with the leader of the village, this healer's village considers themselves Lao (he notes 98% Lao and 2% Kui) even though at least half of the village is ethnically Kui.

Almost all blowing doctors speak both Kui and Laos, but their fluency in Khmer and Thai is low. Blowing doctors have an incantation in all other languages but Kui, which infers that blowing treatment knowledge may not be a traditional Kui practice of medicine.

Half of the spirit healers in the study speak Thai, compared to the 38% for overall healers, 47.3% for herbalists, 35.9% for blowing healers, and 20% for *Acharn Lum Pee Taan* ceremonies. This may not seem significant, since close to 50% of the herbalists also speak Thai. Compared to spirit healers, herbalists have more opportunity to learn linguistic skills. Multilingualism could be easily tied to gender because males are more likely than women to travel outside of the village as monks and to act as government staff in the village. Herbalists also travel widely in search of more knowledge and medicinal plants. On the other hand, spirit healers are usually women and spend most of their time at home in the village, which is mostly Kui, Laos or Khmer speaking.

Two spirit healers (**P1** and **P2**) explained that their fluency in Thai was related to an accompanying spirit, who only spoke Thai with them. It is notable that their villages are almost 100% Kui and their villages speak Kui and Laos predominantly. Thai is rarely spoken among the villagers within the village. Spirit healer **P1**, in particular, lives quite far from the village and rarely has the opportunity to associate with villagers, let alone non-Kui villagers.

Acharn Lum Pee Taan are less fluent in Laos and Thai, although the sample size *Acharn Lum Pee Taan* is too small to draw exact conclusions. However, as mostly elderly females, *Acharn Lum Pee Taan* are more insulated than other groups of healers, and this may

lead to their lower degree of multilingualism.

Among the sample group as a whole, an equal number of healers were literate and illiterate. Herbalists were the only group of healers with a majority of literate healers. Blowing doctors and spirit mediums were predominantly illiterate. Half of *Pee Taan* spirit mediums were literate, and this is unexpected because more elderly villagers are usually less literate because standardized education for children was only widely spread within the last thirty or so years.

The fact that only 50% of all the healers are literate strongly contrasts with the statistics from census in 200 which reports that 90.8% of Thai people over the age of 6 are literate (Education, 2005).

5.5.8 Household wealth

A successful herbalist can earn much more than other types of successful healers. They are the wealthiest group of healers. Six herbalists worked outside of their herbalism practice to help support their family via agriculture and rice farming. Of the remaining four herbalists, herbalists **Y3** and **Y14** have a thriving herbal practice and herbalists **Y2** and **Y11** both have adult sons who successfully support the household as a rubber farmer and village mechanic, respectively. The household of herbalist **Y11** is the household in the study to own a large vehicle (truck). Herbalists **Y2**, **Y3**, **Y11**, **Y13**, and **Y14** are on a sustainable household level (rated at 3-4). There are only five herbalists who raise cattle. Three of these herbalists (**Y5**, **Y7**, **Y12**) are on a basic sustainable level (rated at 1-2) and have adult children help to sustain the family. Herbalist **Y12** makes supplemental income by selling wooden crafts. Herbalist **Y5** independently supports a family of five, with two children in school, and has the lowest level of wealth (rated 1) among herbalists.

Most of the blowing doctors were on a sustainable level of income (rated 2-3). Much of blowing doctor **B10**'s wealth (rated 5) may be attributed to his highly education children (university educated) who worked in large cities and sent money home. This healer owned a truck and did not directly participate in agricultural work.

Three of the spirit mediums (**P2**, **P7**, and **P8**) were on a sustainable level of income (rated 2-3), but the majority of spirit healers were on a basic sustenance level (rated 1). Spirit healer **P4** was the only spirit medium with a wealthy household (rated 5). Her husband had a stable job, they owned a modern style house and truck, and their family did not participate

directly in agricultural work.

The *Pee Taan* spirit healers were all rated 1. An analysis of *Pee Taan* spirit mediums apart from the spirit medium group shows that *Pee Taan* spirit mediums are the outlying group. *Pee Taan* spirit mediums stood out with the lowest level of sustainability among all the groups of healers. The *Pee Taan* spirit mediums are elderly and are generally lacking in financial profit and material wealth. Usually they are supported by working children who live elsewhere.

5.5.9 Family size

There were very few healers who lived alone, and blowing doctor **B1** may be the only healer to truly live alone. Herbalist **Y3** lived just down the road from his family. He spent a long part of his life as a monk, and prefers solitude to practice his trade as a traditional healer. He is a jack of all trades as an herbalist, blowing doctor, and spiritual healer.

5.5.10 Population of village

This factor serves to support the measure of homogeneity among healers.

5.5.11 Ethnicity of village

The variance was not standard among the villages, and this is most likely due to the fact that these estimates are based on the opinion of the leader of the village. This factor can be used to support the individual cases of the healers.

5.5.12 Distance to district center and health clinic

The variance was not standard among these distances and therefore generalizations of this statistic are not possible. However, this factor can be used to support the individual cases of the healers. Some healers stated that closer proximity to district health clinics and hospitals encourages patients to travel to these places for treatment instead of seeking treatment from healers. However, other healers stated that this did not affect their practice, because the modern health care system is not able to meet all the needs of the patients.

5.6 Conclusions of research objectives

5.6.1 Conclusion of objective 1: Describe health conditions and method of treatment by each type of healer and define their role as a health practitioner.

The role of Kui herbalists, blowing doctors, and spirit mediums is shaped by the health conditions and materia medica that is available for use. Each healer fills an important role within the traditional medical system based on their techniques for diagnosing and treating specific areas of disease. Herbalists specialize in treating chronic illnesses that have physiological origin with mostly herbal remedies. Blowing doctors work in two areas of the health care system. Most blowing doctors specialize in acute injuries that have physiological origin with incantation and herbal remedies and some blowing doctors also treat illnesses that have spiritual origin with incantation. Spirit mediums specialize in treating illnesses that have spiritual origin with spiritual ceremony. By working together, healers form a symbiotic unit within the traditional medical system of the Kui.

Ultimately, however, the role of the healer is dependent on the patient's perspective. This is most clearly demonstrated among multi-talented healers. During the field surveys for Kui traditional healers, it was noted that a villager could identify a single healer as an herbalist on one occasion, and then as a blowing doctor on the next occasion. This identity is based on the services that are needed by the patient, which are linked to the preparation methods of the materia medica. For example, herbalists use herbal remedies and blowing doctors blow materials for treatment. In turn, these preparation methods are based on the qualities of the materia, such as the plant's habit and part of the material that is used. Preparation methods have been developed over long traditions of healers to make the most efficient and practical use of the material to treat health conditions.

On the other hand, it should be noted that it is not possible to completely segregate healers into different categories. In a holistic manner that is characteristic of traditional medical systems, healers attend to the physiological, mental and emotional needs of a patient during each treatment session. For example, while herbalists and blowing doctors focus on the physical body of the patient, they perform ceremonies to treat the patient's other needs.

Deviations in treatment among the healers point out weaknesses within each type of healer's tradition, and strengthen the descriptions of the healers' role within the Kui traditional medical system. It is apparent that some health conditions can only be treated via specific treatment skills. Some examples are identified among the herbalists and blowing

doctors in sections 5.1.4 and 5.1.5.

The Kui traditional medical system is heavily reliant on morality and fulfillment of expectations. While both the healer and patient avoid pressing expectations on the other side, these expectations do exist. Patients expect healers to heal their illness and most healers expect financial reward for a successful treatment. Patients who ‘promise’ to give a certain amount to the healer are expected to complete this promise upon recovery. It is believed that patients who break this promise invite moral punishment (e.g. bad merit) as a consequence.

The main objective of healers is to fulfill their duties to treat an ailing individual, but their contribution in Kui society goes above and beyond this. Healers have a reputation as moral, dedicated, and self-sacrificing people. They are trusted and respected elders and leaders of the community who take on a life-long commitment of community service. Spirit mediums, for example, often lead and participate in important occasions in the community, such as new births, deaths, marriages, and the completion of new dwelling. Once a patient is treated and healed by a healer, the patient is forever grateful towards the healer.

5.6.2 Conclusion of objective 2: Identify plants and plant parts used in treatments and evaluate their importance as a medicine

While there is a wide range of diversity among the healers, the existence of informant consensus for material medica types and preparation and application methods demonstrate that there are patterns of materia use among the healers. While collecting plants with healers, more than one healer declared that ‘all plants are medicines—it depends on the body of knowledge that you are using.’ Healers are reliant on similar natural resources of materials for medicines, which also contribute to the similarity of their knowledge. This study concludes that the body of knowledge being used by the healers in this study is highly homogenous.

5.6.3 Conclusion of objective 3: Examine the relationship between traditional healers and local natural resources

The healers’ choices for using materials for medicine are based on two main factors, rarity and accessibility to materials. As indirect factors, conservation and sustainable use of natural resources may also affect the use of plants among healers. All three of these factors are discussed below.

5.6.3.1 Rarity of materials

Boiling versus sanding preparation methods demonstrate well how rarity can affect the type of preparation methods that are used. Herbalists **Y2** and **Y3** both state that the same materia medica mixtures can be sanded or boiled. However, herbalist **Y2** prefers to sand plants and herbalist **Y3** prefers to boil plants. Herbalist **Y2** considers boiling to be a wasteful technique because, “If (you) run out of medicine then where are you going to find more?” On the other hand, herbalist **Y3** prefers to boil his remedies because he considers this technique more sanitary. Boiling destroy harmful fungus, bacteria, insects and latex in the raw materials while allowing the appropriate bio-active compounds to diffuse into the water. If the plant must be sanded, then herbalist **Y3** will first remove the bark of the raw material. Likewise, herbalist **Y12** bases preparation methods on the rarity of some materials, such as python bile. This is described in more detail in section **5.3.2.5**.

5.6.3.2 Accessibility to materials

Healers often have alternate remedies and plants to treat different health conditions, and this is most prevalent among chronic illnesses. It is rare for healers to distinguish one specific plant or herbal mixture as the only plant that can be used for treatment. They believe that all remedies are equal and its ability to treat a health condition depends solely on the patient. With this in mind, healers retain a lot of flexibility to choose plants and often select remedies based on accessibility and convenience. In the case that the first remedy is not successful, the healer may fall back on plants that are less accessible in an effort to find a remedy to match the patient’s needs. This also serves to protect the healers’ practice. In the case that a material becomes unobtainable, they have other remedies that they can use.

Studies with the healers show that some plants have become unavailable within the lifetime of the healer. It is reasonable to believe that all of the materials used by healers were once found commonly in their area. Both herbalists **Y5** and **Y6** depend only on materials that they can find. In the event, that they cannot find the materials that they need in the local vicinity, they travel farther until they find the materials or do without the materials. However, this decision making process may be linked to their proximity to the virgin forests on the border of Thailand and Cambodia, which makes their situation unique from other healers who

are more limited from accessible resource areas.

Healers prefer to collect and use plants that are most convenient and accessible to them. Sanding medicine herbalists invest time to seek out large tree, which may be located in forests, because plant parts of these types of plant can be kept for a long time and used for multiple remedies. Boiling medicine herbalists, on the other hand, use smaller plants which can often be found nearby in disturbed areas. However, some of the plants may also be located in forests. Herbalist **B13** for instance, uses small plants for his boiling medicines which are only found in wild areas.

5.6.3.3 Conservation

Restrictions that are mentioned in section 4.4.3 serve to limit the healers' use of plants, but it must be noted that none of these restrictions completely prevent healers from collecting plants. Buddhist temples, for instance, are considered conservation areas but materials may be collected if the need arises and the healer asks for permission from the spirit and the abbot of the temple.

It appears that healers are not particularly conservation minded. An interview with herbalist **Y5** (Box 7) demonstrates that healers may perceive that there is an inexhaustible supply natural resources. During the study, it was rare to find a healer who grew their own medicinal plants for conservation purposes. Healers, who grew plants in homegardens, did so for their own convenience. Most healers lamented that plants were increasingly difficult to find, and continued to seek out and collect plants farther and farther from their home.

This perspective could originate from different factors. From a historical perspective, the Kui have always been able to migrate towards more plentiful natural resources. Also, they have long been hunters and gatherers, and agriculture and horticulture is a fairly recent skill among the Kui. On the other hand, some Kui do travel quite far, such as to work in Bangkok. But in this case, they may see the traditional aspects of their life as an unnecessary part of the new developing world. As a community that hovers on a precarious sustenance level, it is more important that their local natural resources are used to sustain them until the next day, rather than investing in the future. There is always another material that can be used as a remedy, just as there is always another new disease to treat.

5.6.4 Conclusion of objective 4: Determine the effects of socio-demographic factors on materia medica knowledge

Most of the socio-demographics have an impact on healers' materia medica knowledge. In comparison to the other types of healers, herbalists spend more time obtaining knowledge of their treatment skills. They learn to use plants over many years, which assist to build their strong and in-depth knowledge of materia medica. And this education continues throughout their life. A healer who has more time to practice as a healer and high treatment activity becomes more proficient in their knowledge of materia medica. Multiple treatment skills also increase the healers' range and diversity of materia medica knowledge.

All healers migrated very little in their life and they are all ethnically Kui. This makes it impossible to measure the effect of migration and ethnicity on the healer's knowledge. The village size had no impact on the healers' knowledge.

While male healers were expected to have more knowledge on materia medica, exceptions in the data of this study indicate otherwise. Female herbalist **Y5**, for example, has a very strong knowledge of plants. Spirit healers are also predominantly female, and they carry a lot of knowledge on symbolic and representative plants. However, age may be related to a difference in knowledge of plants. Blowing doctor **B5**, for example, admits that he does not have the knowledge of plants that his father does.

Language and ethnicity affects materia medica knowledge. For example, herbalist **Y14** does not speak Kui, and he considers himself Laos. He is also literate and spent some time as a Buddhist monk. His knowledge on materia medica reflects this characteristic because he is the only healer who uses a high number of Thai medicinal plants in his remedies (accepted TTM plants that are often published in literature). Lack of literacy is an indicator of more traditional culture and thus, more knowledge of the local natural resources.

Household wealth may affect materia medica knowledge because healers must rely on their skills to support themselves. Herbalist **Y5**, for example, is the breadwinner of her family and she relies greatly on her skills to support her entire household. Likewise, family size may affect the knowledge of healers who live alone because they must rely partly on their practice to support themselves. On the other hand, there were also many healers who were well off and did not use their skills to provide financial support. In another aspect, herbalist **Y2** does well financially as a rubber farmer. He does not need to use much land as a result, and has more land accessible for collecting plants.

5.7 Evaluation of study and methods

This research was planned as a one year field work study. It is evident that the proposed scope of the study was beyond the resources for the research. For a one year field study, it was unrealistic to record the knowledge of 30-45 healers across three provinces of Thailand. Less than ten healers within one or two provinces would have been more appropriate. After a year of field work, new plants and uses were still being recorded with the healers. This is reflected in the number of ‘unidentified plants.’ It is evident that at least another year of fieldwork would have been necessary to truly complete the work. Nonetheless, this research study was able to provide a comprehensive snap shot of the Kui traditional medical system as a whole. It offers a base of knowledge, which can provide a platform for more specific research.

5.7.1 Surveying for healers

Dress can be a superficial method for distinguishing Kui people from other ethnic groups (Photo 4.16). The traditional shirt of the Kui is made of naturally dyed indigo or black silk cloth that is woven with a specific diamond pattern. Ceremonial variants include traditional cube-shaped silver buttons and detailed red and white embroidery along the hems. Silk sarongs are dyed in the *mut-mee* (มัดหมี่) fashion for which the region is internationally known. However, on an everyday basis, most Kui wear modern and purchased clothes.

Upon arriving to a new village, heads of villages should be contacted as soon as possible after entering a new village. The informed consent process should be directed towards the healers, younger generations who surround the healers, and neighbors. A copy of all official documents should be left with the household to study at their leisure.

The Thai/Lao word for ‘traditional healer’ presented a linguistic challenge. *Mo* (หมอ) is a general term that refers to an expert of traditional knowledge, and can include experts of music, handicrafts or other areas of expertise. It is possible to specific this term as *Moa ti ruk-sa su-ka-pap* (หมอที่รักษาสุขภาพ), traditional experts who treat peoples’ health, but preconceptions among villagers often lead to assumptions of that we are looking only for herbalists. To overcome this problem, types of healers must be specified to prompt the

villagers. This can easily lead to biased data if the types of healers in the communities have not been researched well. It is recommended that before embarking on a survey of healers in a community, the researcher should spend time identifying the types of healers found in the community, which can vary according to region and ethnic group. Then, this data can be used as a checklist during a survey of the healers in a community.

Community members consider that all villagers have the potential to become *Pee Taan* mediums, for example, during illness. Therefore, in response to a question asking them to identify the *Pee Taan* mediums in a village, community members will inevitably answer, 'Everyone is a *Pee Taan* medium.' In the same regard, the identity of leaders of the *Pee Taan* ceremonies can also vary in some villages. In hindsight, it may be more productive to ask if *Lum Pee Taan* ceremonies are conducted in the village and identify the households which participate in the ceremony.

Preconceived notions among the villagers and healers presented some stumbling blocks. While most elderly people had little concept of research or researchers, others assumed that we, as researchers, were interested in (1) herbalists and medicinal plants and (2) new and widely publicized diseases and not interested in 'old' traditions, such as spirit healers. These notions must be dispelled in order to move beyond these barriers. During surveying, villagers often declared that 'we have no traditional healers in this village,' meaning herbalists. However, elderly villagers who declared this same statement had an altogether different view. New generations of healers with less complete knowledge often do not live up to their definition of traditional healer, and thus, were 'not healers.' Healers often considered themselves 'not healers' and pointed out other herbalists-- especially those who had a reputation for treating hot topic diseases, such as AIDS and cancer. Villagers and healers were either slightly embarrassed or pleasantly surprised to learn that we were interested in spirit healers and other 'old' traditional ceremonies and practices.

5.7.2 Evaluating research tools

Structured interviews, in the form of the profile interview, were an appropriate tool for beginning a working relationship with the healers. Many healers understood that we were researchers or government staff, and expected us to carry out a formal collection of data. This interview method lived up to their expectations. Also, among healers who did not pass the criteria, finishing a structured profile interview was a good way to end the study in a

gentle manner.

Both free-lists and health condition logs provided a good snap-shot of frequently treated health conditions among most healers. Using two methods for the same objective worked well, because some healers responded better to one method over the other.

Free-lists were often confusing for healers, because healers were uncertain where to begin and what was expected. Healers often required prompting, which can easily lead to biased data. In retrospect, the domains could have been more specified. The free-list could start off with a general question of regarding any illnesses/diseases that the healer could treat. Then, the healer could be asked to list illnesses that were related to certain domains, such as illnesses that are caused by accidents or spirits/magic or effect parts of the body, different age groups or specific genders. In this way, quantifiable data on the most frequently treated diseases could be collected and the more specific domains could have ensured that much of the illnesses that the healer treated were documented.

Retrospective health condition logs could be overwhelming among very active healers, although it was very successful among healers with lower activity (treating less than health conditions a month). A few unusually active healers or their family members were asked to keep a house log of the health conditions that they treated. But this method proved to be much less successful than retrospective methods, and was discontinued as a result. On the other hand, if the healer or younger relative was well-trained and had a strong incentive to document the health condition, health condition logs could be a good method for collecting comprehensive data on all the patients who visited the healers.

Health condition logs among spirit healers were the least successful. Spirit healers often paid little attention to the symptoms of the health condition, because their focus is on the origin of the illness. One spirit healer (P4) explained that after divining the cause for a health condition, she pushes the event behind her and it was now difficult for her to recall the health condition at all. No attempt was made to estimate the health condition activity of *Lum Pee Taan* ceremonial leaders. During the *Lum Pee Taan* ceremony season, the healer may be leading a ceremony each day.

Categorizing health conditions could be done more effectively by using ethnoclassification methods such as pile sorting (Martin, 1995). In this way, at the end of the study, each identified illness from the healer could be written onto cards. Then, the healer could be asked to sort the cards into associated piles, and give each pile a name. In this way

different sub-types of illnesses and categories of illness could be identified from the perception of the healer.

Unraveling the concepts of *Lum Pee Taan* ceremonies proved most difficult. The leader of the ceremony was considered the most knowledgeable of the ceremonies, but this healer was often the most difficult person to interview. Leaders of the ceremony are usually quite elderly and it is difficult for them to grasp the level of our ignorance. Therefore, they often provided only sparse information. While considering the healer as the ultimate authority on the ceremonies, it was helpful to talk to many different people in the village and most effectively, as a group discussion. There also appeared to be an end-point of offered information, in which it was necessary for us to ask the right questions to gain more information. Observing ceremonies in different villages helped to gain a comprehensive and basic understanding of the ceremony, and generate more detailed questions for the next interview session in another village.

By visiting the healers on multiple occasions, a rapport was built which contributed greatly to the degree of depth and validity of the data. As the field research went on, healers began to expect the type of questions that we would ask and remembered the type of information that we needed. For example, towards the end of the study, some healers would methodically list the health condition that they had treated since our last visit. It is suggested that researchers begin a relationship with the healer by visiting them for short periods at first and then extending the time spent with the healer to greater increments. Unless a strong rapport becomes established with the healer, the healer should not be visited more than five times for the research study. Home stays are highly recommended to increase the validity of the research.

Diverse tools and cross-checking methods all aimed to collect standard data that was equal among all healers. However, it is recognized that it was not possible to completely prevent bias in the study. In particular, some rapport with the healers was stronger than others, and this is reflected in the varying breadth of data that was collected. Methods developed and tested in this study will provide a foundation for further research of traditional medicine.

5.7.3 Recording data

It is recognized that the Thai characters used in the study to record Kui, Yuh, Khmer, and Lao words are not completely proficient in capturing all of the linguistic qualities of these languages. Khmer characters would have been more specific for recording Kui, Yuh, and Khmer words, and similarly Lao words could have been more specifically documented in the Laotian written alphabet. However this was not done, simply because none of us were literate in the Khmer or Laotian alphabet.

CHAPTER VI

CONCLUSIONS

6.1 The future for Kui traditional medicine and materia medica

Kui traditional medicine is indeed endangered and there are three major aspects which contribute to this situation. These include 1) Secrecy and restrictions that protect the tradition; 2) Loss of respect and belief in traditional medicine; and 3) Loss of natural resources.

6.1.1 Secrecy and restrictions within the tradition

Kui traditional medicine is a closed tradition, and each healer prides themselves for their unique treatment knowledge. This secrecy increases the diversity of the knowledge but at the same time, it prevents the medicine from developing. Restrictions in learning the knowledge discourage and prevent others from learning the knowledge. At a time when Kui traditional medicine has reached a precarious crossroads, both of these protective practices appear to hurt the tradition more than help it. It may be possible to overcome the challenge of secrecy, by educating practitioners of the current situation of their tradition. On the other hand, this secrecy may help traditional medicine to survive. Because they represent an unknown area of medicine, patients often believe 'jackpot' cures may exist among them. In regards to traditional restrictions, however, it may not be wise to meddle with these concepts which may have been put into place for reasons that are unknown to science.

6.1.2 Loss of respect and belief in traditional medicine

A common topic of conversation with Kui villagers (healers and non-healers) is the change in healthcare preferences among villagers. All agree that hospitals are the first choice for community members. Some even stated that healers no longer exist because they have been replaced by hospitals. While some community members do not hold any belief in the abilities of healers, others believed whole-heartedly in the tradition.

Another consequence of loss of respect and belief in traditional medicine is a break in the traditional method of passing on knowledge. Most members of younger generations are minimally interested in the knowledge of their elders, and prefer to look towards the city

lights. Most Kui healers are quite old, and many admit that they have not passed on their knowledge.

This loss of confidence is hurting the tradition more than any other aspect. It may be overcome by encouraging the tradition in modern ways. By focusing on the importance of the healers in popular media, academic work, and development efforts, it may be possible to reverse its deterioration. Simply revealing that a well-established and thriving traditional medicine system in Thailand does exist can be highly beneficial. It is necessary to place traditional medicine on a platform that is equal to Western medicine, which overshadows all other perspectives of healthcare. The economic system of the Kui people may also affect the break in the traditional knowledge. Falling ever deeper into the economic culture of the modern world, they simply no longer have the luxury to learn from their elders.

However, it appears that there may be changing perspectives towards traditional medicine within the public view. An interview with blowing doctor **B15** and **Yai Bu** demonstrates how the perspective of traditional healers among the modern healthcare system has changed. They agree that in the past, hospitals would not accept the blowing doctors because their methods made people 'dirty' with หมาก (Areca catechu), but today, hospitals want to work together with the traditional healers.

While modern medicine appears to replace traditional medicine, there are still some areas where both modern and traditional medicines compliment each other well. These areas should be well identified and encouraged to grow. The vulnerability of traditional medicine to modern medicine may stem mostly from overlap between the two traditions. However, traditional medicine can also fill in areas where Western healthcare fails the community. This concept is well demonstrated among Kui healers.

Herbalists are the most similar to modern doctors in objectives and practice. This may be a major reason why herbalists are the most endangered of all the groups of healers. On the other hand, the traditions of blowing doctors and spirit healers appear to be quite strong, and this may be due to the unique niche that they fill within Kui traditional medicine.

Respect and ease of transmission of knowledge for blowing doctors may be the reason for the high number of blowing doctors in Kui communities. Even in villages where respect for herbalists has fallen, villagers still testified to the strong healing skills of their blowing doctors. Blowing doctors are the most likely category of healer to pass knowledge onto other generations. It is fairly easily transmitted medical knowledge and there are no competing

practices within Western medicine. The practice of blowing doctors is ensured because they provide a unique service for the community that is not easily replaced by modern medicine.

Like blowing doctors, spirit healers also cover a unique area of Kui healthcare. Spirits continue to hold a respected place in Kui culture. Both community members and healers feel positive about the practice. Spirit medium **P4** stated in an interview that she is glad to have an opportunity to help people because she believes that she helps people to feel better about their lives.

Pee Taan traditions retain a distinctive place in Kui culture. They go hand in hand with the Buddhist practices that are strong within the community. **Yai Bu**, from MurnSriYai village, for example, pays respects to both the Buddhist and *Pee Taan* spirit altars regularly. However, beliefs in *Pee Taan* spirits are changing among Kui villages, which respect the spirits in varying degrees. In some villages, this tradition is very strong. **Yai Bu** states that while other villages may disregard spirit, her village does not have this option. She believes that *Pee Taan* spirits look after the village and if they are not looked after well, can cause illness in the village. In any case, she states, it is not difficult to raise the spirits who only require some food and water now and then. In other villages, the recent loss of these beliefs is evident. Community members of the village of herbalist **Y2** inform us that there are no longer any *Pee Taan* spirits in the village because they did not take care of the spirits. Their last ceremony was 2-3 years ago, and their ceremonies are far and few. In other villages, only some households may adhere to *Pee Taan* beliefs.

Acharn Lum Pee Taan Aj4 notes that in the past, ceremonial participants danced very slowly, but nowadays, the younger participants dance very quickly—in ‘the new style,’ she calls it. Also, before giving the ‘elephants’ (mediums playing roles as elephants) food, the ‘elephants’ would have to look for the food. She states that she has tried very hard to conserve the ceremony exactly as it was from her elders, but now the younger generations have changed it. Changes in *Pee Taan* ceremonial practice and traditions can serve as indicators of changing beliefs within the other parts of Kui culture.

6.1.3 Loss of materia medica

Deforestation, expansive agriculture, and warfare have greatly reduced the Kui’s natural resources. Primary forests are found mostly in areas where topographical characteristics, such as mountainous terrain, have prevented destruction. Most villagers

continue to use the remaining secondary forests to collect minor non-timber forest products, such as food and medicinal plants. Wild animals are scarcely seen, and villagers can no longer rely on these animals as a food source. This region has long been considered one of the most difficult areas to survive in, because it is often subject to long and heavy droughts.

While forest resources may be scarcer than in the past, medicinal plants are still collected and used by both local people and traditional healers. Traditional medicine is directly related to local natural resources and therefore must retain a certain amount of flexibility to account for changes in the available resources. For example, Kui healers are noted to utilize small pockets of wild areas among the rice fields as well as small fast-growing herbs and weeds. Research on medicinal plant use of Kui traditional healers can impact the arenas of natural resource conservation, community development, and local health care.

6.2 Suggestions for further research projects

6.2.1 Studies on types of healers

The use of divergent skills outside of the type of healer, for example, an herbalist's use of blowing treatment, may prove to be very informative of how the traditional medical system works among traditional cultures.

Herbalists are very talented healers who conserve much traditional medical knowledge. More in-depth and standardized research should be conducted in order to study their practice more comprehensively.

Blowing doctors are most well known for their talents with healing broken bones and twisted joints. However, their talents in body manipulation may be overlooked. During the study, it has been discovered that in addition to the blowing remedy, blowing doctors move the body and bones into by pulling the limbs and 'hitting' the bones back into specific places. This knowledge may affect the fast recovery among patients, more than the actual blowing treatment itself.

Spirit mediums do not speak Kui with their spirits. It is possible that spirit mediation of this nature is not traditionally Kui. This may open up an interesting study which may have impacts on what linguistics indicate among an ethnic group that is multi-lingual. For example, do spirits change within a culture? Can this be interpreted through their use of language?

Lum Pee Taan ceremonies could reveal hidden remnants of the Kui's lost and fading culture, history and beliefs. They can offer indicators for how Kui traditions are changing.

Midwives appear to be active and highly knowledgeable among the Kui community. While traditional midwives and masseuse who practice in government facilities represent the urban variant of traditional knowledge, midwives represent the rural variant of traditional knowledge, and very little is known of them. They are often knowledgeable of materia medica use and massage. Because midwives are recognized by the Thai Ministry of Public Health (Brun, Schumacher, 1994), the results from studies on traditional midwifery has high potential for being applied within the mainstream Thai public healthcare system.

Incantation and magic experts were noted often during this research study. More research should be conducted to determine their role within the Kui traditional medical system.

6.2.2 Map of health conditions

The health conditions that healers can treat provide insight into the types of illnesses that affect the Kui community. A comparative study between the health conditions that healers treat with health conditions that are treated in local hospitals and district clinics may produce an informational map of health conditions that occur within the community. This could be applied towards upgrading community healthcare within the Kui community.

6.2.3 Location of medicinal plants

More studies should be conducted on the location and origin of medicinal plants among the Kui rural communities. Also, studies on whether proximity to different resources of materia medica (e.g. forest versus rice fields, the use of large versus small plants for medicine) may provide some insight into how traditional healers make choices about using local natural resources, especially when changes in resources occur.

6.2.4 Family dissent among healers

While conducting the research, it was found that many of the healers in the area were blood relations. There was such a high coincidence that it is possible to assume that there are specific family lines that carry traditional knowledge. Even different types of healers, such as a spirit healer and herbalist, were found to be closely related. A study on the

genealogy of healers may offer an avenue for which to study the change of knowledge across distances, migrations or generations.

6.3 Conclusion of study

It has been established that a system of traditional medicine exists within Kui communities and that the Kui have high knowledge of materia medica use and local natural resources. Materia medica use within traditional medicine is a form of resource utilization which directly relies on the local natural resources, and offers some insight into the present and changing availability of natural resources.

More emphasis must be placed on exposing and involving traditional healers in the Thai health care system. Traditional healers, as respected role models in Kui communities who are neither limited by gender or economic status, are valuable assets to both Kui and Thai society.

Thailand's rich ethnic and biological diversity provides this country with valuable resources for traditional medicine, and it would worth while to complete a comprehensive documentation of ethnomedicine throughout Thailand. The highest potential for public healthcare may be reached by building on the rich existing knowledge and resources that exist locally.

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APPENDICES

APPENDIX A

Photographs

Photos correlate with data in the manuscript and are listed by chapter and appendices.

Chapter 3



3.1 Pla ang village, Phrai Bung district, Si Sa Ket province: *Acharn Lum Pee Taan Aj4* looks over final copy of photo book before it is formally given to the community.



3.2 Pla ang village, Phrai Bung district, Si Sa Ket province: Tun (field assistant) explains and presents photo book to head of village, while healer *Aj4* looks on.



3.3 MurnSriYai village, SumRongThap district, Surin province:
Community members look over the book after it was given to the village.

Chapter 4



4.1 Different kinds of *sui* used in spirit medium ceremonies in spirit healer P7's village (Left to right: general *sui*, 'ears of rabbit' *sui* (หูกระต่าย), and tubular-shaped *sui*.)



4.2 Offering bowls for treatment to chase away spirits (used by spirit healer **P7** on left and spirit healer **P3** on right)



4.3 Offering for herbal treatment for herbalist **Y14**.



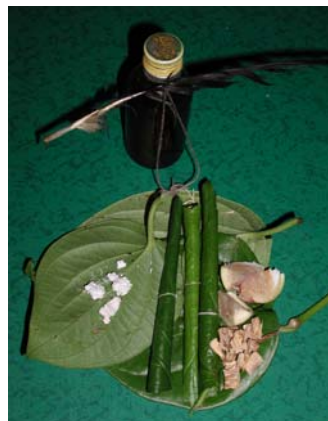
4.4 Offerings used in a *Pee Taan* spirit medium divining ceremony (P8)



4.5 Divining severity of illness with raw eggs (Y9)



4.6 Patient receiving herbal remedy from herbalist Y14 (sequence runs left to right).



4.7 *Cum* used in blowing treatment, including sesame oil for topical treatment (**B1**).



4.8 Blowing treatment for acute injuries (B1)



4.9 Blowing away evil spirits as part of a Lum Pee Taan ceremony (A1)



4.10 Blowing treatment to exorcise evil spirits from patient (village of P7).



4.11 Spirit altars of spirit healers **P1**, **P2**, **P4**, **P6** (clockwise from top left).



4.12 Fortune telling ceremony by spirit medium **P1**.



4.13 Left: Household *Lum Pee Taan* spirit altar (**P1**); Right: Household *Lum Pee Taan* spirit altar prepared for a household ceremony (**Aj2**)



4.14 *Pee Taan* divining ceremony of spirit healer P8 (Sequence left to right)



4.15 *Lum Pee Taan* ceremonial area (village of Y5)



4.16 Ceremonial dress among male and female community member at MurnSriYai village, MurnSri sub-district, Sumrongthap district, Surin province.



4.17 Center altar and outside altar for *Lum Pee Taan* ceremony (village of Y5)



4.19 Re-enacting tradition of catching elephants (village of **Aj1** on left and **Aj4** on right).



4.20 Trading for valuable forest products (village of **Aj1** on left and **Aj2** on right)



4.21 Boiling medicine by healer **Y2**



4.22 Sanding medicine by healer Y2



4.23 Fresh: herbal by healer Y2



4.24 Fresh: Blowing treatment by blowing doctor B11

Photos for Appendix I



AI.1 Bowl used to enter and leave possession (village of A1)



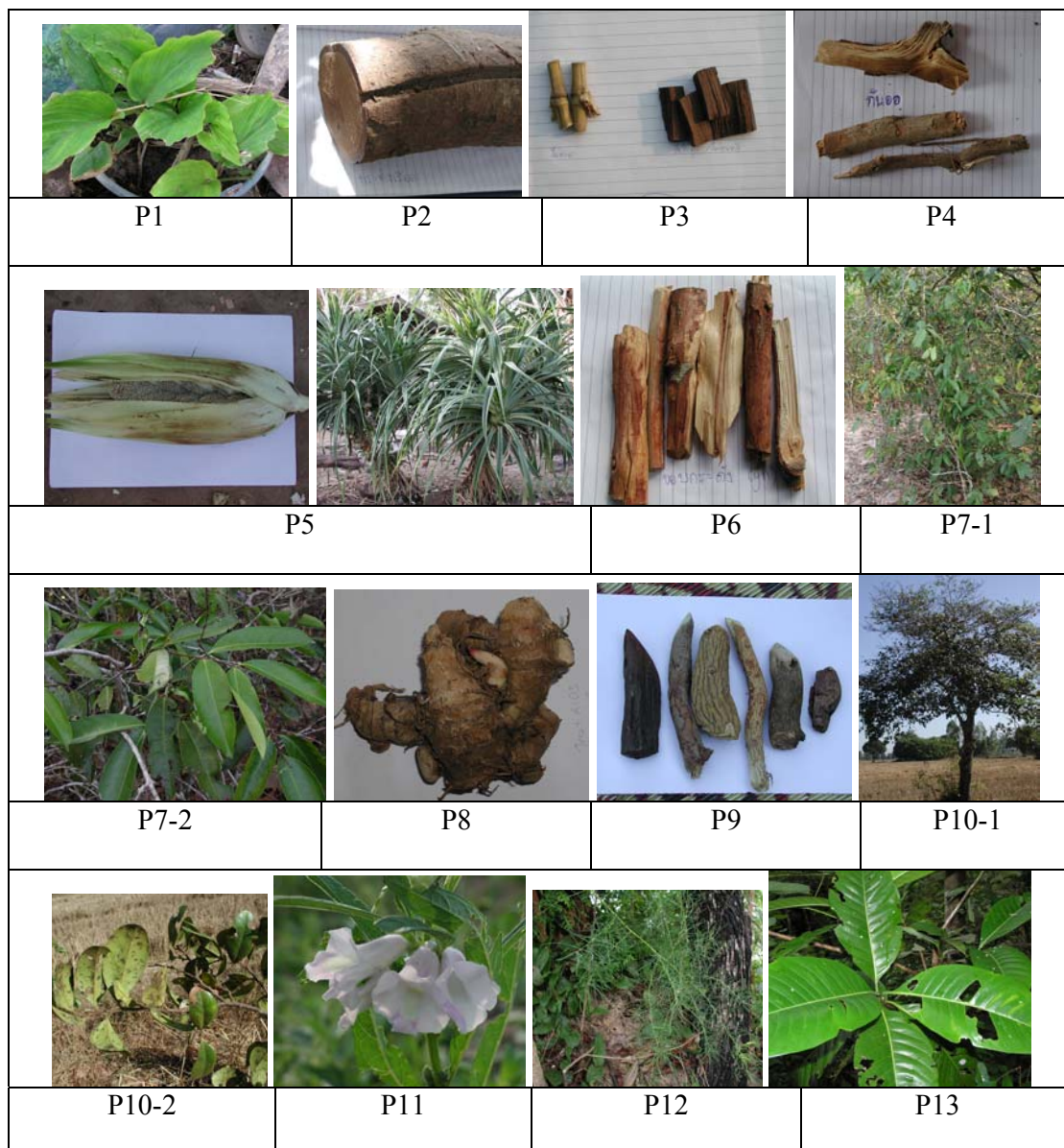
AI.2 Pyramids for attracting evil spirits (village of A1)













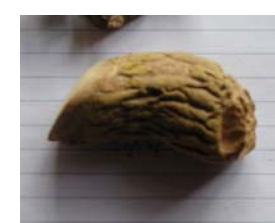

























AI.3 (Left): Rockets; **AI.4** (Right): สนม (Kui)

















Items used in *Lum Pee Taan* ceremony of *Acharn Lum Pee Taan A4*.


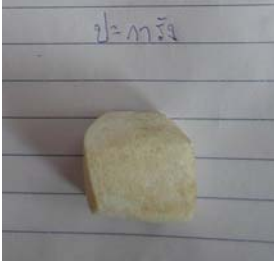







Photos for Appendix G



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|  |  |  |  |
| P14 | P15 | P16 | P17 |
|  |  |  |  |
| P18 | | | |
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| P19 | P20 | P21 | P22 |
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| P23 | P24 | P25 | P26 |
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| P27 | P28 | | P29 |

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|---|---|--|--|
|  |  |  |  |
| P30 | P31 | P32 | P33 |
|  |  |  |  |
| P34: <i>P. wallichii</i> (left) <i>P. betle</i> (right) | P35 | P36: ລູກພິກ (top left), <i>C. moshata</i> (top right), <i>P. reticulates</i> (bottom left) | P37: seeds used as eyes of carvings |
|  |  |  |  |
| P38 | P39 | P40 | P41: <i>P. merkusii</i> (center left), <i>T. triandra</i> (bottom left), <i>C. pareira</i> (top right) |
|  |  |  |  |
| P42 | P43 | P44 | P45 |

| | | | |
|---|---|--|---|
|  |  |  |  |
| P46 | P47 | P48 | P49 |
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| P50 | P51 | P52 | P53 |
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| P54 | P55 | P56 | P57 |
|  |  |  |  |
| P58 | P59 | P60: <i>Sciuridae</i> (bottom), <i>E. maximus</i> (top) | P61 |

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|  |  |  |  |
| P62 | P63 | P64 | P65 |
|  |  |  | |
| P66 | P67 | P68 | |
|  | |  | |
| P69 | | P70 | |

APPENDIX B

Ethical Approval of Research Certificate

From the Human Research Ethics Committee, Khon Kaen University

Ethical approval of research certificate
from the Human Research Ethics Committee, Khon Kaen University



มหาวิทยาลัยขอนแก่น
หนังสือฉบับนี้ให้ไว้ เพื่อแสดงว่า

โครงการวิจัยเรื่อง: การศึกษาพืชสมุนไพรที่ใช้โดยหมอพื้นบ้านชาวกวย
(A study on the medicinal plants used by Kui traditional healers)

ผู้วิจัย: นางสาวอารีกา วีระพงษ์ และคณะ

หน่วยงานที่สังกัด: นักศึกษาเภสัชศาสตรมหาบัณฑิต คณะเภสัชศาสตร์
มหาวิทยาลัยขอนแก่น

ได้ผ่านการพิจารณาของคณะกรรมการจริยธรรมการวิจัยในมนุษย์มหาวิทยาลัยขอนแก่น แล้ว
โดยยึดหลักเกณฑ์ตามคำประกาศเฮลซิงกิ (Declaration of Helsinki)

ให้ไว้ ณ วันที่ 20 สิงหาคม พ.ศ. 2547

(ศาสตราจารย์ปัทม์ ทศนาวิวัฒน์)

ประธานคณะกรรมการจริยธรรมการวิจัยในมนุษย์มหาวิทยาลัยขอนแก่น

ลำดับที่ 4.1.31: 08/2547

เลขที่: HE470653

คณะกรรมการจริยธรรมการวิจัยในมนุษย์มหาวิทยาลัยขอนแก่น

Institutional Review Board Number; IRB00001189

สำนักงาน: 123 ถนนมิตรภาพ อ. เมือง จ. ขอนแก่น 40002

Federalwide Assurance; FWA00003418

โทร. (043) 363723, (043) 363749 โทรสาร (043) 348373

APPENDIX C

Informed Consent Documents

There are four documents included in this appendix. In the order that they appear, these documents are as follows:

- 1) Informed consent that was given to healers and leaders of the village who participated in the study.
- 2) An English translation of the informed consent is included here for the convenience of non-literate Thai language readers.
- 3) Introduction letter from Khon Kaen University that accompanied the informed consent document.
- 4) An English translation of the information letter is included here for the convenience of non-literate Thai language readers.

แบบแสดงความยินยอมเข้าร่วมการศึกษาวิจัย

สำหรับการศึกษาเรื่อง “พืชสมุนไพรที่ใช้โดยหมอพื้นบ้านชนชาติกวย”

หัวหน้าคณะนักวิจัย: รองศาสตราจารย์ ดร.ชยันต์ พิเชียรสุนทร

ผู้ดำเนินการวิจัย: นางสาวอารีกา วีระพงษ์ นักศึกษาหลักสูตรวิทยาศาสตรมหาบัณฑิต

ภาควิชาเภสัชพฤกษศาสตร์และเภสัชวินิจฉัย คณะเภสัชศาสตร์ มหาวิทยาลัยขอนแก่น

โทรศัพท์: ๐๔๓-๓๖๒๐๕๓

บทนำและความมุ่งหวังของการศึกษา

การศึกษานี้จะดำเนินการโดยนักศึกษาระดับปริญญาโท สาขาเภสัชศาสตร์ มหาวิทยาลัยขอนแก่น ดังที่ทราบกันโดยทั่วไปแล้วว่า ภูมิปัญญาทางการแพทย์พื้นบ้านของไทยกำลังจะสูญหายไป เนื่องจากประชาชนส่วนใหญ่หันไปนิยมใช้บริการการแพทย์สมัยใหม่ อย่างไรก็ตาม การแพทย์พื้นบ้านยังคงเป็นส่วนสำคัญส่วนหนึ่งของระบบสุขภาพของประเทศไทย การศึกษานี้เป็นการแพทย์พื้นบ้านและการแพทย์ทางเลือกอื่นจึงยังคงมีความจำเป็น เพื่อการพัฒนาการแพทย์พื้นบ้านให้ได้รับการยอมรับมากขึ้น

องค์ความรู้ด้านการใช้สมุนไพรของแต่ละกลุ่มชนต่างๆ นับเป็นเอกลักษณ์เฉพาะและจำเพาะต่อสิ่งแวดล้อมในธรรมชาติ ผู้วิจัยเลือกที่จะศึกษาองค์ความรู้ด้านการใช้สมุนไพรของหมอพื้นบ้านชาวกวย เนื่องจากชุมชนชาวกวยเป็นกลุ่มชาติพันธุ์เก่าแก่ที่สามารถดำรงเอกลักษณ์ของตนเองไว้ได้ตลอดระยะเวลาที่ผ่านมา ชนชาติกวยที่ตั้งถิ่นฐานอยู่ในภาคตะวันออกเฉียงเหนือของประเทศไทยนี้ อาศัยในพื้นที่นี้มาเป็นเวลานานหลายร้อยปี

วัตถุประสงค์ของการศึกษาในครั้งนี้เพื่อการเก็บรวบรวมข้อมูลของการใช้พืชสมุนไพรเพื่อการรักษาโรคและอาการเจ็บป่วย ขั้นตอนและวิธีการรักษา ตลอดจนเครื่องมือยาสมุนไพรที่ใช้ในการรักษากันในชุมชนชาวกวย

การศึกษาดำเนินการเลือกหมอพื้นบ้านชนชาติกวยจำนวน ๓๐ คนเป็นกลุ่มตัวอย่าง ซึ่งในกลุ่มนี้ประกอบด้วยหมอสมุนไพร หมอเป่า และหมอไสยศาสตร์ หมอพื้นบ้านเหล่านี้คัดเลือกจากการเก็บข้อมูลจากชาวบ้านที่อาศัยอยู่ในหมู่บ้านชนชาติกวย

หากท่านเป็นหมอพื้นบ้านชาติกวย คณะผู้วิจัยใคร่ขอเชิญท่านเข้าร่วมในการการศึกษานี้ ท่านเป็นบุคคลที่ชุมชนชาวกวยให้การยอมรับว่าเป็นผู้ที่มีความรู้ความสามารถในการบำบัดรักษาอาการเจ็บป่วย และยังคงให้การดูแลความเป็นอยู่ของพี่น้องในชุมชนเสมอมา ซึ่งสิ่งที่เราใคร่ขอความกรุณาจากท่านมีดังนี้

- ท่านสามารถเสียสละเวลาเข้าร่วมการศึกษาของเราตลอดระยะเวลา ๑ ปี ตั้งแต่เดือนมิถุนายน พ.ศ. ๒๕๕๗ ถึงเดือนพฤษภาคม พ.ศ. ๒๕๕๘ ซึ่งคณะผู้วิจัยจะขออนุญาตสัมภาษณ์ พูดคุย ชักถาม ราวเดือนละหนึ่งครั้ง โดยหากเป็นไปได้จะแจ้งกำหนดการให้ท่านทราบล่วงหน้า และการสัมภาษณ์ในแต่ละครั้งอาจใช้เวลาานหลายชั่วโมง

- ในการพูดคุยเพื่อแลกเปลี่ยนข้อคิดเห็นแต่ละครั้ง ผู้วิจัยอาจสอบถามวิธีการในการรักษาโรคและสมุนไพร ตลอดจนเครื่องยาต่างๆ ที่ใช้ในการรักษาโรคของท่าน โดยผู้วิจัยประสงค์จะให้ท่านอธิบายอาการเจ็บป่วยต่างๆ ของผู้ป่วยที่มาพบท่านเพื่อทำการรักษา ในช่วงระยะเวลา ๑๐ เดือนที่ผ่านมา ตั้งแต่เดือนมิถุนายน พ.ศ. ๒๕๕๗ ถึงเดือนมีนาคม พ.ศ. ๒๕๕๘ โดยผู้วิจัยไม่ประสงค์จะทราบชื่อของผู้ป่วย แต่ต้องการทราบเพียงอายุ เพศ ที่อยู่ อาการเจ็บป่วย และการให้บริการด้านการบำบัดรักษาของท่านเท่านั้น

- ดำเนินการเก็บตัวอย่างเครื่องยาและพืชสมุนไพรที่ท่านใช้ในการรักษาผู้ป่วย

ในการขอความร่วมมือจากท่านในการวิจัยครั้งนี้ ท่านมีสิทธิดังนี้

1. ท่านมีอิสระและเวลาเพียงพอในการตัดสินใจที่จะเข้าร่วมโครงการวิจัยนี้ หากท่านไม่เข้าร่วมโครงการฯ หรือเมื่อเข้าร่วมโครงการไปแล้ว ต้องการถอนตัวก่อนจบโครงการฯ ท่านมีสิทธิทำได้ โดยไม่มีผลกระทบใดๆ ต่ออาชีพของท่าน
2. หากท่านประสงค์จะสอบถามสิทธิของอาสาสมัครโครงการวิจัยเพิ่มเติม ท่านสามารถติดต่อได้ที่ รองศาสตราจารย์ ดร.ชยันต์ พิเชียรสุนทร ภาควิชาเภสัชพฤกษศาสตร์และเภสัชวินิจฉัย คณะเภสัชศาสตร์ มหาวิทยาลัยขอนแก่น โทรฯ 043-362093 (สำนักงาน) หรือ 01-8463890 (มือถือ)
3. อนึ่งในโครงการวิจัยนี้ คณะผู้วิจัยไม่มีงบประมาณสำหรับตอบแทนหรือชดเชยการเสียรายได้ของอาสาสมัคร

ผลที่เกิดจากการศึกษา

ภายหลังจากการศึกษาเสร็จสิ้นลงแล้ว หากท่านแจ้งความประสงค์จะได้เอกสารผลการศึกษา ผู้วิจัยจะได้มอบไว้ให้แก่ท่าน เพื่อแสดงถึงภูมิปัญญาของท่าน ที่ผู้วิจัยได้รวบรวมไว้อย่างเป็นระบบ สำหรับใช้ในครอบครัว หรือเก็บรักษาไว้สืบไป

หากท่านมีปฏิกิริยาสงสัยเกี่ยวกับสิทธิของท่านขณะเข้าร่วมการศึกษานี้

โปรดสอบถามที่สำนักงานคณะกรรมการจริยธรรมการวิจัยในมนุษย์มหาวิทยาลัยขอนแก่น อาคาร
สำนักงานคณบดีคณะแพทยศาสตร์ ณ ฝ่ายวิจัย ชั้น 6 มหาวิทยาลัยขอนแก่น จังหวัดขอนแก่น 40002 หรือ
ทางโทรศัพท์หมายเลข (043) 348360-9 ต่อ 3723, 3749 หรือ (043) 363723, (043) 363749

Informed consent form for participation in research study
(English translation)

Research study entitled “Medicinal plants used by Kui traditional healers”

Head of the research study: Assistant professor Chayan Picheansoonthon

Researcher : Ms. Arika Virapongse, graduate student, Department of Pharmaceutical Botany and Pharmacognosy, Faculty of Pharmaceutical Sciences, Khon Kaen University

Telephone: 043-362093

This research study is conducted by a graduate student of the Department of Pharmaceutical Botany and Pharmacognosy at Khon Kaen University. Western medicine has greatly overshadowed traditional medicine in Thailand and this has led to the loss of Thai traditional medicine. Traditional medicine is an important aspect of healthcare, because it offers a health care alternative for Thai people. Research studies on the rural variant of traditional medicine are necessary for developing Thailand’s traditional medicine.

Medicinal plant knowledge among ethnic groups is considered to be unique and specific to the surrounding natural environment. This study focuses on the medicinal plant use among Kui traditional healers. As one of the oldest residents of Northeast Thailand, the Kui still retain and practice their unique traditional knowledge.

This research aims to collect and archive information relating to the methods and ingredients that are used by Kui traditional healers to treat diseases and symptoms/pain.

Thirty healers will be selected for the study, and this sample will be composed of herbalists, blowing doctors, and spiritual healers. This sample will be selected according to data collected from villagers who live in Kui villages.

We would like to invite you to participate in this research study as an expert Kui traditional healer. Your community believes that you are knowledgeable and capable of treating symptoms of disease and health conditions and successfully cares for the quality of life among your elders, peers and young. As participants of the study, you will be asked to commit to the following conditions:

- You must give up some of your time within a one year period of June 2004 to May 2005. The researcher will hold interviews and discussions with you at a

maximum of once a month. It is possible that each interview will take many hours. We will try to notify you before we come to visit with you.

- During each interview the researcher will ask you to describe the methods that you use to treat health conditions/diseases and the specific ingredients (medicinal plants, animals and minerals) that are used in your treatments. The researcher will ask you to describe patients you have treated within a ten month period, July 2004 to June 2005. You will not be expected to disclose the patients' names, but you will be asked their age, sex, address, symptoms and your methods for treating the patient.
- We will ask you to assist us with identifying and collecting sample of ingredients that you use for treatment.

In regards to this research study:

1. You may decide whether or not you want to participate in this study. During the course of the study, you have the right to discontinue the study at any time. Your decision to end the study will not have any negative consequences on your livelihood or occupation.
2. If you have any questions about the research and/or would like to know more you may contact: assistant professor Chayan Picheansoonthon, Department of Pharmaceutical Botany and Pharmacognosy, Faculty of Pharmaceutical Sciences, Khon Kaen University. Phone: 043-362-93 (office) or 01-846-3890 (mobile).
3. The researchers do not have a budget to financially reward you for participating in the study.

Results from the researcher

After the research has been completed, you will have access to a copy of the information that we are collecting. You will receive a copy of the data collected with you for your own personal use.

If you have any problems or questions in regards to your privileges during this research study

Please direct your questions to the Office of the Committee of Human Research, Khon Kaen University, Office building of the Department of Medical Sciences, 6th floor Research section, Khon Kaen University, Khon Kaen 40002. You may also contact (043) 348360-9 ext. 3723, 3749 or (043) 363723, (043) 363749.



Notice

วันที่ เดือน พ.ศ.

ส่วนราชการ ภาควิชาเภสัชพฤกษศาสตร์ คณะเภสัชศาสตร์ มหาวิทยาลัยขอนแก่น
เรื่อง ขอความร่วมมือในการศึกษาวิจัยเกี่ยวกับหอมพื้บ้านชาวกาย
เรียน หอมพื้บ้านชาวกาย

เนื่องด้วยนักศึกษาระดับบัณฑิตศึกษา สาขาวิชาเภสัชเคมีและผลิตภัณฑ์ธรรมชาติ ภาควิชาเภสัชพฤกษศาสตร์ คณะเภสัชศาสตร์ มหาวิทยาลัยขอนแก่น กำลังทำการสำรวจและศึกษาภูมิปัญญาพื้นบ้านด้านการใช้พืชสมุนไพร พิธีกรรม ความเชื่อ ตลอดจนประเพณีและวัฒนธรรมของหอมพื้บ้านและชาวบ้านชนชาติกาย(ส่วย) ในพื้นที่ของ ๓ จังหวัดทางภาคตะวันออกเฉียงเหนือของประเทศไทย อันได้แก่ จังหวัดอุบลราชธานี จังหวัดศรีสะเกษ และจังหวัดสุรินทร์ ซึ่งเป็นพื้นที่ที่มีประชาชนชนชาติกายได้เข้ามาตั้งถิ่นฐานอาศัยอยู่มาแต่โบราณกาล และยังคงดำรงไว้ซึ่งภูมิปัญญาท้องถิ่นดั้งเดิมในการบำบัดรักษาโรค ด้วยวิธีการต่างๆ ที่เป็นเอกลักษณ์เฉพาะตัว ซึ่งมีความน่าสนใจยิ่ง โดยมีการถ่ายทอดภูมิปัญญาท้องถิ่นดังกล่าวจากรุ่นหนึ่งสู่อีกรุ่นหนึ่งได้เป็นอย่างดี แม้ว่าในปัจจุบันวิทยาการทางการแพทย์จะมีความก้าวหน้าและทันสมัย จนทำให้ชนรุ่นหลังมองข้ามความสำคัญของการรักษาแบบพื้นบ้านไปทุกขณะ เป็นไปได้ว่าศาสตร์และศิลปะของการบำบัดรักษาโรคอันเป็นภูมิปัญญาท้องถิ่นที่ถูกคิดค้นขึ้นโดยบรรพบุรุษของชนชาติกาย อาจเลือนหายไปจากสังคมไทยในอนาคตอันใกล้ ดังนั้นทางคณะเภสัชศาสตร์ แห่งมหาวิทยาลัยขอนแก่น ซึ่งเล็งเห็นความสำคัญของการแพทย์แผนไทยและภูมิปัญญาท้องถิ่น จึงส่งเสริมให้มีการอนุรักษ์และศึกษาภูมิปัญญาท้องถิ่น ตลอดจนประเพณีวัฒนธรรม ในการบำบัดรักษาโรคของชนชาติกาย โดยตั้งเป็นโครงการศึกษาวิจัยเรื่องพืชสมุนไพรที่ใช้โดยหอมพื้บ้านชาวกาย โดยมีนางสาวอารีกา วีระพงษ์ นักศึกษาระดับบัณฑิตศึกษา และคณะเป็นผู้ทำการศึกษาวิจัย

ดังนั้นเพื่อให้การศึกษานี้ประสบความสำเร็จ บรรลุตามวัตถุประสงค์ที่ตั้งไว้ ทางคณะเภสัชศาสตร์ มหาวิทยาลัยขอนแก่นจึงใคร่ขอความกรุณาจากท่านให้ความร่วมมือในการศึกษาครั้งนี้มา ณ โอกาสนี้ด้วย จึงเรียนมาเพื่อโปรดทราบ

ขอแสดงความนับถือ

(รศ.ดร.ชยันต์ พิเชียรสุนทร)

หัวหน้าภาควิชาเภสัชพฤกษศาสตร์

day month year



Notice

Government section Department of Pharmaceutical Sciences and Pharmacognosy

Subject Request for cooperation in a research study on Kui traditional healers

Recipient Kui traditional healer / head of the village

A graduate student from the Department of Pharmaceutical Botany and Pharmacognosy at Khon Kaen University is conducting a study on the medicinal plant use and associated beliefs, ceremonies and culture of Kui traditional healers in the southern part of Northeast Thailand. The Kui (Sui) are the original inhabitants of Ubon Ratchathani, Si Sa Ket and Surin provinces. Their unique traditional knowledge on treating diseases has been passed on from generation to generation and still exists today. The popularity of modern medicine has caused new generations to overlook the importance of local methods of treatment. The science and art of treating diseases is traditional local knowledge that originates from the ancient ancestors of the Kui people, and it is now in danger of extinction. With this in mind, the Faculty of Pharmaceutical Sciences of Khon Kaen University recognizes the importance of Thai traditional medicine and local knowledge, and supports conservation and studies of the beliefs and culture of traditional medical knowledge of the Kui. A study on the medicinal plant use by Kui traditional healers was established and **Miss Arika Virapongse**, a graduate student of the Department of Pharmaceutical Botany and Pharmacognosy, is the researcher conducting this study.

In order to meet these objectives, the Faculty of Pharmaceutical Sciences, Khon Kaen University who would like to ask for your cooperation and assistance in this research study. Thank you for your attention.

With much respect,

(Assistant Professor Chayan Picheansoonthon)
Head of the Department of Pharmaceutical Botany

APPENDIX D

Villages surveyed for Kui traditional healers

These Kui villages of Surin, Si Sa Ket, and Ubon Ratchathani provinces were surveyed for traditional healers for the purpose of identifying a population of Kui healers, and ultimately, to identify a sample of healers for the study. This list of villages was based on data provided by Wanna's (1994) survey of Kui villages in Northeast Thailand. The villages are listed by province, district, and sub-district, and then chronological order that the villages were surveyed during the study.

จังหวัด สุรินทร์ Surin Province

อำเภอ ท่าตูม

| | |
|----------------|--------------------|
| ต. กะโพ | ต. ช้างกลาง |
| บ. ตาทิตย์ | บ. กระจ่าง |
| บ. โนนโพ | บ. หนองบัว |
| บ. จินดา | |
| บ. ตากลาง | |
| บ. กะโพ | |
| บ. ภูคิน | |

อำเภอ จอมพระ

| | | |
|--------------------|-----------------------|-------------------------|
| ต. เมืองสิง | ต. บุแกลง | ต. เป็นสุข |
| บ. เมืองสิง (ม.1) | บ. ว่าน (ม.4) | บ. ประเพณี (ม.5) |
| บ. นานวน | บ. หนอง ขอนใหญ่ (ม.6) | บ. สนวน & บ. สนวนโคกจิก |
| บ. ชุนอินทร์ | บ. ขาม (ม.11) | บ. ขมิ้น |
| บ. ดงเค็ง | บ. โนนกลาง (ม.13) | บ. โพธิ์งาม |
| บ. มองสิง | | |
| ต. บ้านฝื่อ | ต. จอมพระ | ต. ลุ่มระวี |
| บ. ม่วง (ม.1) | บ. โนนกลาง | บ. กำแสง |
| บ. ฝื่อ | บ. หนองสิม | บ. กอก |
| บ. บุอาโร (ม.6) | บ. โคกสะอาด | บ. ตากวนน้อย |
| บ. หนองเหล็ก (ม.7) | | |
| บ. ฝื่อน้อย (ม.10) | | |

อำเภอ ลำปาง

| ต. เกาะแก้ว | ต. หมื่นศรี | ต. ลำปาง | ต. หนองไผ่ล้อม |
|--------------------|--------------------|-----------------|-----------------------|
| บ. สองหนอง | บ. หมื่นศรีน้อย | บ. ลำปาง | บ. หนองหว่า |
| บ. โพธิ์ศรีธาตุ | บ. หมื่นศรีใหญ่ | บ. โดด | บ. กะโพ |
| บ. ตางมาง | บ. หมื่นศรีกลาง | บ. ใหม่ศรีสำโรง | บ. หนองแคน |
| บ. โนนสูง | บ. โนนเสม็ด | บ. จิ้ว | บ. ไทร |
| บ. หนองกระจาน | บ. ศิริพัฒน์ | บ. ลำพอง | บ. หนองคู |
| บ. ตะนะ | บ. กุดจ้าว | บ. ตะเคียน | บ. หนองแต้ง |
| บ. ป่าเวย | บ. ศรีพัฒนา | บ. ตะเคียนพัฒนา | บ. จังเกา |
| | | บ. อาลี | บ. โสนน้อย |
| | | บ. อาวุธ | บ. โพธา |
| | | บ. กุง | บ. โนนลี |
| | | บ. โนนบุรี | ม.5 |
| | | บ. ห้วยแสง | |

อำเภอ สนม

| ต. หนองระมั่ง | ต. นานนวน |
|----------------------|------------------|
| บ. ปะ | บ. โศกกลาง |
| บ. ผือ | บ. หนองคู |
| บ. หนองคู | บ. ทิพย์นคร |
| บ. โนนธาตุ | บ. นานนวน |
| บ. นาดี | บ. หนองตาด |
| บ. หนองทิดราษฎร์ | บ. โนนตาล |
| บ. สะทือ | |

อำเภอ สังขะ

| <u>ต. สะกาด</u> | <u>ต. สังขะ</u> | <u>ต. บ้านจรรย์</u> | <u>ต. ตาม</u> |
|-----------------------|------------------|---------------------|------------------|
| บ. ตาโมม | บ. ดง | บ. โคนไทร | บ. ปวงตึก |
| บ. สะกาด | | | บ. โคนสง่า |
| <u>ต. พระแก้ว</u> | <u>ต. ขอนแตก</u> | <u>ต. ศรีณรงค์</u> | <u>ต. บ้านขบ</u> |
| บ. พระแก้ว (ม.4) | บ. อวอก | บ. ละองค์ | บ. โชกชัย |
| บ. โคนสระแระ (ม.15) | บ. หัวกระบือ | บ. หนองเทศ | บ. พุนทราย (ม.9) |
| บ. ตาโก (ม.13) | บ. หนองตะเคียน | บ. เคาะ | บ. โพนชาย (ม.5) |
| บ. โพธิ์พัฒนา (ม.16) | บ. หนองโสน | บ. พระโกฏิ | บ. ชำสมิง |
| บ. กระสัง (ม.5) | บ. มหาไทย | | บ. ตะกอยอด |
| บ. หนองขี้เหล็ก (ม.7) | บ. แจงแมง | | |
| บ. น้อยพัฒนา (ม.11) | บ. มหาไทย | | |
| บ. แสนกลาง (ม.1) | บ. สวาด | | |
| บ. โคนปรีน (ม.6) | บ. หนองปลาขาว | | |
| | บ. หนองสิน | | |
| | บ. โดงน้อย | | |
| | บ. ผักไหม | | |
| | บ. โคนปรีอ | | |
| | บ. ขอนแตก | | |
| | บ. ขอนทอง | | |
| | บ. ตอกตรา | | |
| | บ. ดงงาม | | |
| | บ. หนองคู | | |
| | บ. ไทยสามัคคี | | |

อำเภอ กาบเชิง

| | |
|--------------------------|------------------------|
| <u>ต. กาบเชิง</u> | <u>ต. คูตัน</u> |
| บ. จะบก | บ. คูตัน |
| | บ. รวนคร |
| | บ. หนองโย |
| | ม. 1 |

จังหวัด ศรีสะเกษ Si Sa Ket province**อำเภอ เมือง**

| | |
|------------------------|------------------------------|
| <u>ต. ตะดอบ</u> | <u>ต. พรหมสวัสดิ์</u> |
| บ. เปือยใหญ่ | บ. เปือย |
| บ. นาสูง | |
| บ. เปือยน้อย | |
| บ. ตะดอบ | |
| บ. หนองสิม | |
| บ. หนองเทา | |

อำเภอ กันทรลักษ์

| | |
|-------------------------|------------------------|
| <u>ต. กระแซง</u> | <u>ต. ตากาด</u> |
| บ. เขวา | บ. ตากาด |
| บ. กระแซง (ม.18) | |

อำเภอไทรบุรี

| ต. ประสาทเยอ | ต. ดินแดง | ต. สุขสวัสดิ์ |
|---------------------|------------------|----------------------|
| บ. ประอาง | บ. ดินแดง | บ. โพนปลัด |
| บ. หนองพัง | บ. ไตรย | บ. พะวะะ |
| บ. ประสาทเยอ | บ. สร้างใหญ่ | |
| บ. คูสีแจ | บ. หนองอารีย์ | |
| บ. คูสีแจน้อย | | |

อำเภอขุนหาญ

| ต. กระหวั้น | ต. โพธิ์กะสังข์ | ต. ติ |
|--------------------|------------------------|--------------|
| บ. จะเนียว (ม. 12) | บ. โพธิ์กะสังข์ | บ. โนนสว่าง |
| บ. ตะลุง | บ. สด้า | |
| บ. กั้นจด | บ. บก | |
| บ. โพธิ์น้อย | บ. หนองประดิษฐ์ | |
| | บ. พอก | |

อำเภอ เมืองจันทน์

| ต. หนงใหญ่ | ต. เมืองจันทน์ | ต. ตาโกน |
|-------------------|-----------------------|-----------------|
| บ. ขวาว | บ. หนงแค่น้อย | บ. แต้ |
| | บ. โนนสูง | บ. สะเน๊ะ |
| | บ. อึ้งอย | บ. หนงปลาคุณ |
| | บ. ม่วงน้อย | บ. เค็ง |
| | บ. เมืองจันทน์ | บ. ตาโกน |
| | บ. กลางคำ | บ. ตาด |
| | บ. หุงคำ | |
| | บ. บก | |
| | บ. ทุ่งสว่าง | |
| | บ. คู | |
| | บ. ไร่ | |
| | บ. โลก | |
| | บ. หนงโน | |

อำเภอ น้ำเกลี้ยง

| |
|---------------|
| ต. อูบ |
| บ. สะเต็ง |

จังหวัด อุบลราชธานี Ubon Ratchathani province

อำเภอ เดชอุดม

| | |
|-------------------|-----------------|
| ต. สมสะอาด | ต. แก้ง |
| บ. สมสะอาด | บ. ประหุด (ม.7) |
| บ. สวนฝ้าย | บ. บุ่งคล้า |
| | บ. แก้ง |
| | บ. ไฮตาก |

อำเภอ น้ำยืน

| |
|-----------------------|
| ต. โดมประดิษฐ์ |
| บ. โนนสูง |
| บ. แปรอ้อม |
| บ. ค้อ |
| บ. จิมลา |
| บ. กุดเชียงมุน |

อำเภอ นาจะหลวย

| | |
|--------------------|---------------|
| ต. นาจะหลวย | ต. ตุม |
| บ. แก้งเรือง | บ. หุ้งเงิน |
| | บ. โนนเจริญ |

APPENDIX E

Interview Sheets

These are the interviews that were used to collect data from the healers. English translations are provided for the convenience of non-literate Thai language readers. The interviews included here are as follows:

1. Profile of the healer (Thai and English)
2. Health condition log (Thai and English)
3. Socio-demographic interview for healers (Thai and English)
4. Socio-demographic interview for head of the village (Thai and English)
5. Treatment methods interview for healers

การสัมภาษณ์หมอพื้นบ้าน: การคัดเลือกกลุ่มตัวอย่าง
(Healer interview: selecting sample group)

วันที่:
(Date)

1. ชื่อ นามสกุล ที่อยู่ปัจจุบัน (Name, last name, address)
2. อายุเท่าไร (เพศ) (Age, sex)
3. เกิดที่ไหน (Birthplace)
4. พูดภาษาอะไรได้บ้าง
(What languages can you speak?)
5. พ่อแม่พูดภาษาส่วยหรือภาษากวยหรือไม่ พ่อแม่เกิดที่ไหน
(Can your parents speak Kui? Where were they born?)
6. อยู่ที่หมู่บ้านนี้มากี่ปีแล้ว
(How long have you lived in this village?)
7. ย้ายที่อยู่บ่อยไหม กี่ครั้ง ย้ายจากที่ไหนไปไหน เมื่อไร
(How many times have you moved residencies? From where to where? When?)
8. มีวิธีการบำบัดรักษาโรคอย่างไร อย่างเช่นสมุนไพร เป่า พิธีกรรม
(What methods do you use to treat health conditions? For example, herbal, blowing or ceremonial methods)
9. ได้เอาต้นไม้มาใช้เป็นยาสมุนไพรหรือใช้ประกอบในพิธีกรรม ประมาณกี่ชนิด
(Do you use plants in your treatments, as herbal medicine or in ceremonies? About how many plants do you use in all your treatments?)
10. ไปเรียนวิชารักษาโรคมาจากไหนอาจารย์ที่สอนเป็นคนกวยหรือพูดภาษาส่วยหรือไม่ เรียนตอนอายุเท่าไร
(Where did you learn your medical knowledge? Was your teacher ethnically Kui or spoke Kui? At what age did you begin learning the knowledge?)
11. รักษามานานเท่าไร (How long have you been practicing your medical trade?)
12. เดือนที่แล้วได้รักษากี่คน (Last month, how many patients did you treat?)
13. รู้จักหมอบ้านที่เป็นคนส่วยหรือกวยคนอื่นอีกหรือไม่ ขอชื่อ นามสกุล ที่อยู่ปัจจุบัน (Do you know any other Kui traditional healers? What is his/her name and location?)

ข้อมูลโรคและวิธีการรักษา**(Health condition information and treatment methods)****วันที่เขียน:****(Date:)**

1. วัน/เดือน/ปี ที่รักษาโรควันแรก (Day/month/year that the health condition was first treated)
2. ลักษณะอาการ (Description of symptoms)
3. โรคเป็นนานเท่าไรถึงหมอได้รักษา (How long had the health condition occurred before it was treated by the healer?)
3. โรคนี้ได้ไปรักษาที่โรงพยาบาลหรือยัง หมอโรงพยาบาลบอกว่าเป็นโรคอะไร (Was the health condition treated at the hospital? What did the doctor at the hospital diagnose?)
4. ก. ที่ไม่สบายเกิดจากสาเหตุอะไร (ระบุชื่อโรคตามความคิดของหมอบ้าน) (What is the origin of the health condition? What is your diagnosis of the illness?)
 - ข. วิธีที่หมอบ้านใช้รักษา (สมุนไพร, เป่า, พิธีกรรม, และ อื่น ๆ) (What method did you use for treatment (herbal, blowing, ceremonial or other methods)
 - ค. ถ้าใช้สมุนไพรใช้ชนิดอะไรบ้าง (ชนิดพืช ชนิดสัตว์ และ อื่น ๆ) และแหล่งที่มาของสมุนไพร (เก็บจากป่า ปลูกไว้ ชื่อ ของเก่าที่เก็บไว้นานแล้ว) (If you do use medicinal plants, what species do you use? Where do you collect or obtain these plant materials (collect from forest, cultivated, purchased, part of long-term collection)
 - ง. อธิบายขั้นตอนในการรักษา การใช้สมุนไพรและส่วนที่ใช้ (Explain the steps to prepare and apply the medicine)
5. อาการของโรคหลังจากรักษา (กี่วันอาการดีขึ้น กี่วันหาย อธิบายลักษณะที่ทำให้รู้ว่าผู้ป่วยดีขึ้น) (What were the symptoms after treatment was finished (day or number of days before recovery; What signs did the healer use to determine that the health condition was cured?)

การสัมภาษณ์ socio-demographic: หมอพื้นบ้าน
Socio-demographic interview: traditional healer)

วันที่ :
 (Date:)

1. มีคนกี่คนที่ครอบครัวดูแลอยู่ (How many dependents are there in the family?)
2. มีกี่คนที่ทำงานแล้ว (How many working adults?)
3. เขาประกอบอาชีพอะไร หรือมีอาชีพเสริมอื่นๆอย่างไร (What is their main occupation? What are supplemental sources of income?)
4. มีกี่คนที่ครอบครัวรับภาระส่งเรียนหนังสือ (How many dependents are being supported through school?)
5. พื้นที่ของบ้านมีขนาดเท่าไร และพื้นที่ทางการเกษตรมีขนาดเท่าไร (How much area of land do you own? How much of this area is used for agriculture?)
6. ระดับการศึกษาขั้นสูงสุดของหมอบ้าน สามารถอ่านและเขียนหนังสือได้หรือไม่ (What is your level of standard governmental education? Can you read or write?)
7. มียานพาหนะกี่คัน อะไรบ้าง (How many and what kinds of vehicles are owned by the household?)
8. หมอบ้านได้สอนวิชาการรักษาโรคให้ใครหรือไม่ ตอนนี้เขารักษาคนได้หรือยัง (How many people have learned your medical knowledge? Are they treating patient now?)
9. ปีนี้กับปีก่อนๆมีคนมารักษามากขึ้นหรือน้อยลง (Compared with this year and years before, do patient comes to see you more or less?)
10. สมุนไพรหายากหรือง่ายกว่าแต่ก่อน (Compared with this year and years before, are medicinal plants less or easier to find?)

การสัมภาษณ์ (Interview) socio-demographic: ผู้ใหญ่บ้าน
demographic interview: head of village)

**วันที่ : (Socio-
 (Date:)**

1. (เพศ) ชื่อ นามสกุล ที่อยู่ปัจจุบัน (sex, name, address of residence)
2. อยู่ที่หมู่บ้านนี้มากี่ปีแล้ว เป็นผู้ใหญ่บ้านมากี่ปีแล้ว (How long have you lived in this village? How long have you been head of the village?)
3. หมู่บ้านตั้งมากี่ปี มีประวัติความเป็นมาอย่างไร (Village age and how was it established?)
4. คนในหมู่บ้านพูดภาษาอะไรได้บ้าง (What languages can people in this village speak?)
5. คนในหมู่บ้านประกอบด้วยคนชนชาติใดบ้าง (What ethnic groups do people in this village identify themselves with? In what estimated percentages?)
6. จำนวนประชากรในหมู่บ้านมีเท่าไรและมีกี่หลังคาเรือน (What is the population of people and households in the village?)
7. พื้นที่หมู่บ้านมีเท่าไร (What is the area of the village?)
 - 7.1 พื้นที่ที่เป็นที่อยู่อาศัย (What is the area of the residential area?)
 - 7.2 พื้นที่ทำกิน เช่น ที่นา สวน ไร่ (What is the area of the agricultural area?)
8. ประชากรมีอาชีพอะไรบ้าง (What are occupations of people of the village?)
9. เมืองใหญ่ที่อยู่ใกล้หมู่บ้านที่สุดคือเมืองอะไร เดินทางไปอย่างไร (What is the closest district center to the village? How do people travel there?)
10. หมู่บ้าน อยู่ห่างจากสถานีอนามัย หรือโรงพยาบาลเท่าไร เดินทางไปอย่างไร สถานีอนามัยแห่งนี้เปิดให้บริการมากี่ปีแล้ว (How far is the village from district health clinic and hospitals? How do people travel to these places? How many years have these places been established?)

Treatment methods interviews with healers

Blowing doctor

- I. Story of becoming a healer
- II. Offerings for treatment
 - A. Before treatment
 - B. After treatment
- III. Beliefs associated with blowing treatment
 - A. ၈၀၅၈၀၅
 - B. Restrictions
- IV. General method of blowing treatment
 - A. Number of treatments per day
 - B. Time of day of treatment
 - C. Treatment conducted before or after meals
 - D. Description of round
 - E. Language of incantation
 - F. Number of incantations used for treatment
 - G. Organic materials used for blowing
 - H. Diagnosis
- V. Limitations in treatment ability
- VI. Other methods of treatment

Herbalist

- I. Story of becoming a healer (Ordained as a monk in the past?)
- II. Offerings for treatment
 - A. Before treatment
 - B. After treatment
- III. Belief associated with treatment
 - A. Restrictions
 - B. Beliefs (unrelated to herbal treatment)
- III. General method of treatment

- A. Other types of treatments
- B. Diagnosis
- C. Herbal treatment
 - 1. Boiling medicine
 - 2. Sanding medicine
 - a. Stone used for sanding
 - b. Vehicle used with sanding remedy
 - c. Sanding techniques
 - d. Measurement for the remedy
 - 3. Materia medica in herbal remedies
 - a. Type of materia medica
 - b. Origin of materia medica
 - 4. Other types of treatment
- D. Limitations in treatment ability

Spirit healer

- I. Story of becoming a healer
- II. Offerings for treatment from TH
 - A. Before treatment
 - B. After treatment
- III. Methods of treatment
 - A. *Song* (mediating a spirit)
 - 1. Number of spirits
 - 2. Language spoken by the spirit
 - 3. Description of ceremony to call down the spirit
 - 4. Description of altar
 - B. *Du* (divining)
 - 1. Method of divining and description of ceremony.
 - C. *Lum Pee Taan* ceremony
 - D. Fortune telling/ lottery numbers
 - E. Other methods of treatment
- IV. Beliefs associated with treatment

- A. Restrictions
- B. Personal beliefs and feelings related to treatment

Leader of Lum Pee Taan ceremonies

I. Story of becoming a healer

II. *Lum Pee Taan* treatment

A. Vocabulary

1. Name of ceremony
2. Name of leader of ceremony
 - a. criteria used to select Aj:
 - b. Duties:
3. What is ปะกำ?
4. What is กำเกิด?

B. Offerings for *Lum Pee Taan* treatment

1. Before treatment: (Offering bowl to แก้วบน)
2. Offering to invite her to the ceremony
3. Items for the ceremony

C. Spirits

1. Number of spirits.
2. Language spoken by the spirit.

D. *Lum Pee Taan* Ceremony to treat patient

1. Time of day (night or day)
2. Time of year
3. Reasons for having ceremony:
4. Logistics of the ceremony
5. Items in offering bowl to *Lum Pee Taan* spirit during ceremony
6. Description of ceremony

E. Other ceremonies outside of *Lum Pee Taan* ceremony to treat patient

III. Beliefs associated with treatment

A. Restrictions

B. Personal beliefs and feelings related to treatment

IV. Other treatment abilities (outside of *Lum Pee Taan*)

A. *Du* (divining)

1. Method of divining

B. *Sohng* (mediating)

C. Other methods of treatment

APPENDIX F

Glossary of Health Conditions and Remedies

This is a compilation of health conditions treated by healers and their remedies. For more details, refer to Section 4.2 for health conditions and Appendix G for materia medica. Health conditions are listed by vernacular names and are categorized based on the descriptions of health conditions given by the healers. Criteria used to group health conditions together include the following:

1. Treatments and remedies: Health conditions which healer used the same remedy and method to treat the illness.
2. Body parts affected by the illness: Health conditions that affected the same body parts.
3. Health condition metamorphosis: Health conditions which the healer noted as more or less severe types of other health conditions.

In addition to all the ‘Treatment dietary restrictions’ that are listed in the glossary, herbalist **Y5** and blowing doctor **B3** suggest that all patients should not eat duck, chicken and fermented fish paste to expedite recovery from illness.

Definition of terms, listed by subject in health condition descriptions

- **Vernacular names:** R= name used by the healers to identify the health condition as a first response to the methods used to collect data. All other ymbols (K = Kui; Y= Yuh; Kh = Khmer; T = Thai; and L = Laos) indicate health conditions in different languages when specified by the healers.
- **Treatment dietary restrictions:** (Also known as อาหารผิด) Beef = the meat of both cow and water buffalos; fermented fish paste = ปลาร้า, ปลาแดก; pickled foods = (คองดอง); spicy papaya salad = ส้มตำ; snake-head fish (ปลาชน)
- **Treatment:** Typical blowing treatment = betel nut, slaked lime and nut is chewed with incantation and blowing method on injury. All materials are listed in Appendix F according to codes (PL= plants, AN= animal; FU= fungus; MI= mineral).

Outline of glossary

1. Physical trauma secondary to animals

- 1.1 กะเอนกััน, กะเฮบกัับ, กะเห็บ (K) ตะขาบต่อย/กััด (R)
- 1.2 กะสันจอก, ใส่กัับ, ชังจอก, โปงวายกัับ, กะชัยกััด (K) ชังจอก (Y) งูกััด (R)
- 1.3 กาสะกัันบรือไต (K) ปลาคุกปึก, แผลโดนแขยงปลาคุกค้ำ (R)
- 1.4 อั้งเกาสัอย, กาวเท็ยว (K) แมลงปอง (R)
- 1.5 แมงมมกััด (R)
- 1.6 เกา (K) แมลงกััดต่อย (R)
- 1.7 สัตัวกััด (R)
- 1.8 แจะดังเล็ยบ (K) กัันแมลง (R)
- 1.9 กัันชังจ็อด (K) กัันงูกััด (R)

2. Acute and accidental injuries

- 2.1 อางตะดิ / ห้างตะกิ (K) กระจุกหัก (R); ตัอยตะกิ จั้งตะกิ (K) แขนหักและขาหัก (R); แบลงตะดิ (K); ยืนตะกิ (K); ก้ำตัอยตะกิ (K); ป่องทะและ (K) ขาเคล็ด (R); เกร็ย, ห้างกิ (K); เคล็ดขัดยอก (R); อางเคล็ด (K) กระจุกเคล็ด (R)
- 2.2 A. ย้ำย้า, อีนากะหน่อง (K) ช้ำไน (R)
B. โบ-ล, อ้าง, อะ (K) บวม, ฟกช้ำ (R)
- 2.3 เด็ยะกะตัวลั้ว (K) น้าร้อนลวก (R)
- 2.4 อูกาด (K) ไฟไหม้ (R)
- 2.5 แผลสด (R)
- 2.6 ช่าอะกาเค็ยมอากอง, อางเก็ยม ตะกอง (K) ก้างติดคอ (R)
- 2.7 จามาหลอ (K) คนที่กินพิษ, ญุกยาพิษ ยาสั่ง (R)
- 2.8 บูดคอบบรอง (K) เมาเหล้า (R)
- 2.9 ป็องกัันการบาดเจ็บของช้อ (R)

3. Gynecological health conditions

- 3.1 หมาดขาว (Y) ตกขาว (R)
- 3.2 ตกเลือด (R)
- 3.3 ปวดท้อง เวลามีระดู (R)
- 3.4 มดลูกเคล็ด (R)
- 3.5 ลอดกอน, อีคุสะโบน (K) มดลูก, ชักมดลูก (R)

3.6 เลาะกอนกรอ (K) (คนที่) คลอดลูกยาก (R)

3.7 กูอู (K) อยู่ไฟ (R)

3.8 เด็กไม่ยอมกินนมแม่ (R)

3.9 เลี้ยงลูกไม่ได้ (R)

3.10 ทำให้ผู้หญิงเป็นระดู (R)

4. Fevers

4.1 A. ตะอี, ตะเกาะ (K) ตะเกีระ (Y) ไข้ (R); จะกะตำ (K) ตัวกะเตา (Y) ตัวร้อน (R)

B. ตะกอใจ, อีไปรลอง, ตะเกาะใจ (K) ไข้จับสั่น, ไข้ป่า, ไข้มาลาเรีย, ไข้หมากไม้ (R)

C. ตะกั๊วะเรือรัง (K) ไข้อักเสบ (R)

D. ไข้ไทฟอยด์ (R/K)

E. ตะเกาะ ท้มระดู (K) ไข้, ไข้ทับระดู (R)

4.2 A. เจเทีรยง, เกรียง (K) ซาง, ซางเด็ก, ไข้เด็ก, ไข้หวัดเด็ก (R)

B. เกรียงบี้ด / เกรียงแก็ด, เเทรียง (K) ซางดานขโมย (R)

4.3 อะแรบ (K) อีสุกอีส (R)

4.4 กะเตาหนึ่งกะดี, จะกะตำ (K) ตัวกะเตา (Y) ตัวลอน, ร้อนใน (R)

4.5 จะกะเงด, จะแก็ด, ตัวจะเงะ (K) ตัวจะเงะ (Y) ตัวเย็น, ยาร้อน (R)

5. Pain and febrile illnesses

5.1 ไมเอี่ยม (K) เมาหวาน (R)

5.2 ปานดง (K) ประดง (R); ปันควกะยาล (K) ประดงข้อเช่า ประดงเส้น ประดงข้อ (R)

5.3 กษัย (Y) กษัย (R)

5.4 อีกอง, อียิง, อีจะงวง (K) ปวดขา (R); มีปะก้อ (K) ปวดข้อเช่า ปวดเช่า ปวดหัวเช่า (R); อัมพาด, อียิง

อีตอง (K) ปวดขาปวดแขน (R); อีแบลง (K) ปวด/เจ็บแขน (R)

5.5 อีงแกง, อีแกน, อีอั้งโกะ, อีแก้ง (K) ปวด/เจ็บหลัง, ปวดหลัง (R)

5.6 บาดค้อ (K) บาดข้อ (R)

5.7 อีแก้ง, อีสั้น (K) ปวด/เจ็บเส้นเอ็น (R)

5.8 โรคชรา, เหน็บชา (R)

5.9 อัมพาด (K/R)

5.10 กลอมพน (K) โรคนิ้ว, ใตนิ้ว, โรคไต (R)

5.11 ไตวาย, ไตอักเสบ, โรคไต, ไตพิการ (R)

6. Dermatological disorders

- 6.1 บาง (K) กลากเกลื้อน, โรคเรื้อน, โรคผิวหนังกลากเกลื้อน (R)
- 6.2 โรคผิวหนัง (R)
- 6.3 ทุดลม, มุนมาน, ปรี, เกิดภูมิ, มูเมะ (K) ลมพิษ, ไข้ทูต (R)
- 6.4 A. แदनกา, มะม่วง, อะแสดง, ตะรอยปี, แอะ (K) อาก (Y) ฝี่, ฝี่หนอง, ฝี่อักเสบ, แผลฝี่ (R)
 B. อะแสดงเอียน (K) ฝี่หัวเอียน, ฝี่ปลาไหล (R)
 C. จากะทง (K) ฝี่ปะอาก ฝี่ปลาค้อ (R)
 D. ปกตะกอง (K)
- 6.5 กะไส-น อะเทือ-ล, เอาหวัด, อาวัด (K) งูสวัด (R)
 A. เอาหวัด (K) งูสวัด (R)
 B. ฟ่าน้ำ, เอาหวัดเดี่ยะ, งูสะหวัดน้ำ, บ่าน้ำ (K) งูสวัด (R)
 C. ฟ่าไฟ (R) เอาหวัดอู, งูสะหวัดไฟ, บ่าไฟ (K)
 D. อาวัดพรีด (K) งูสวัดใหญ่ (R)
 E. อาวัดทกด (K) งูสวัดน้อย (R)
- 6.6 ทำเปื่อย (R)

7. Respiratory system disorders

- 7.1 วันโรด (K) โรคปอด (R)
- 7.2 หอบหืด, หืดะ (K) หอบหืด, หืดะ (R)

8. Gastro-intestinal disorders

- 8.1 A. กระเพาะ (R/K)
 B. อีปุง (K) ปวดทอง (R)
- 8.2 แชนงฟุง, ลกปุง (K) ท้องร่วง, ท้องปิด, ถ่ายท้อง (R)
- 8.3 ไข้เป็นเลือด (R) กลวงฮาม (K)
- 8.4 ไข้หมากเหลือง (R)
- 8.5 อาเจียน (R)
- 8.6 กลารู, โดระกา, กานตรู (K) กลารู (Y) ไล่เลือด, ไล่ลงห้า (R)
- 8.7 สะดวง (Y) ริดสีดวง, ริดสีดวงทวาร, ริดสีดวงลำไส้ (R)

9. Otolaryngeal disorders

- 9.1 ทะมะหล่า/ พะมะลา (K) คอติบ (R)
- 9.2 ตะกองโปล, กองปี้วะ (K) คอพอก (R)

9.3 อีตะกัว (K) คางตุม / คางทุม, ปวดคอ, เป็นสารพาก (R)

9.4 เป็นกลาง (K) ปากเปื่อย (R)

9.5 อีกะเนง (K) ปวดฟัน (R)

9.6 กะเนง (K) ทะเนง (Kh) รำมะนาด (R)

9.7 กะเนาะเฮาะ (K) ปากเปี้ยว (R)

9.8 ตะเนาะมะนะ (K) ปากเหม็น (R)

10. Illnesses associated with seizures

10.1 มองละ (K) โรคลมบ้าหมู, ลมชัก (R)

10.2 A. ชัก (K/Y/R)

B. เด็กชัก (K/R)

11. Sensory System Disorders

11.1 มาดกะเซา, มัดตะเรา (K) ตาแดง, เจ็บตา (R)

11.2 ไสมีองกะ (K) ตาสั้น (R)

11.3 อีกะตอ-ล (K) ปวด/เจ็บ หู (R)

12. Spiritual illnesses

12.1 เขียม (K) ยาม (Y) เต็กร้องไห้ (R)

12.2 กลัดโมง, โมง (K) ประสาท, บ้า, บะสาทร้อน, ความดัน (R)

12.3 กันกะมด (K) กันผีกันพราย (R)

12.4 เวียนหัว เวียนตา, เป็นลม (R)

12.5 ป่วย, ไม่สบาย (R)

12.6 วาาปูบีน (K) พุดไม่ได้ (R)

12.7 No name given

12.8 No name given

13. Unclassified health conditions

13.1 A. จามาเลาะ / ลอ, เตื่อ, จาลอ, จาลัวะ, จานอั้งเตจาโดย (K) จามาเลาะ / ลอ, ลัว, เลาะสมอด (Y) กินของผิดสำแลง, อาหาร แสลง/ สำแลง/ พิด, ของ แสลง/ สำแลง, กินอาหารผิด (R)

B. สะมอด, สะบูน, สะโบน (K) เลาะสมอด (Y) ผิดสำบูน / สะบูน, กะบูน (R)

13.2 ตะกัว (K) ความอ้วน (R)

- 13.3. พ룬 (K) พยาธิ, พยาธิตัวจิ๊ด, พยาธิใบไม้ (R)
- 13.4 ครดลอม (K) โรคตับ (R)
- 13.5 กลอมพรี (K) ขับปัสสาวะ (R)
- 13.6 สดวงม็อก (K) สดวงโม๊ะ (Y) ริดสีดวงจุมก (R)
- 13.7 อีปรอ (K) ปวดหัว (R)
- 13.8 No name given
- 13.9 ตรูฮาม (K) เลือดตก (R)
- 13.10 ความคันเต้อม, เสีนเลือดฝอยอุดตัน (K) ความคันต่ำ (R)
- 13.11 แมง (K) มะเร็ง (R)
- 13.12 เอดส์ (K/R)

14. Tonics

- 14.1 Tonics to improve overall body functions
 - A. เบียชะจา (K) เจริญ/บำรุง อาหาร (R)
 - B. บำรุงกำมั่ง (K) บำรุงกำลัง (R)
 - C. บำรุงเลือด (R)
- 14.2 บำรุงเดี่ยะตอ, บำรุงเต๊ะเตาะ (K) บำรุงเดี่ยะเต๊ะ (Y) บำรุงน้านม (R)
- 14.3 บำรุงหัวใจ, โรคหัวใจ (R)
- 14.4 บำรุงผิว (R)
- 14.5 เสาะโรย (K) ผมร่วง, ผมดก, บำรุงผม (R)
- 14.6 แก้กิดหมัน (R)
- 14.7 บำรุงชูกำลังผู้ชาย (R)
- 15. Veterinary medicine
 - 15.1 No name given (R)

1. Physical trauma secondary to animals

1.1 กะเอนกััน, กะเฮบักบ, กะเห็บ (K) ตะขาบต่อย/กัด (R)

Traditional healers: Blowing doctors (B5, B13, B14)

Symptoms: The teethmarks of the animal (ตะขาบ) can be seen on the skin.

Type/Cause of illness: Physiological origin: caused by accident involving an animal.

Possibility of death: The majority states, affirmative, but one healer states, negative.

Treatment dietary restrictions: None

Treatment: Two healers use typical blowing treatment, but one of these healers also advises the patient to collect the poison off the back of a toad and apply topically to the injury. The third healer uses blowing treatment with incantation only.

1.2 กะสันจอก, ใ้สั้กัับ, ชังจอด, โป้งวายกัับ, กะชั้ยักัด (K) ชังจอด (Y) ฐักัด (R)

Traditional healers: Herbalists, blowing doctors (Y2, Y3, Y7, Y11, Y13, B6, B7, B8, B13, B14)

Symptoms: Muscles of afflicted body part are straining and look twisted. If patient is bitten on the finger by sticking their hand in hole, then the finger will never be straight again.

Type/Cause of illness: Physiological origin: caused by accident involving an animal.

Possibility of death: Affirmative by all healers. Patient can die within one day, especially if the bite becomes infected or the patient eats the wrong food. The patient cannot sleep for one night/day or the poison will take over them.

Treatment dietary restrictions: beef, shrimp, and eel.

Treatment: All blowing doctors use a blowing treatment with only incantation (no materia medica), but one blowing doctor who uses the typical blowing treatment. Most herbalists use topical herbal remedies, one herbalist uses a blowing method to administer an herbal remedy, and one herbalists uses both a blowing treatment with incantation and an ingested herbal remedy.

Treatment 1. (Y2)

A. Blowing treatment: Blows with incantation at the patients head, because if the poison reaches the brain then the patient will die.

B. Herbal treatment: This remedy follows the blowing treatment.

- Materials: 1. PL169: roots
 2. PL308: root
 3. PL363: nut

Preparation & Application: Use 7 pieces of each medicine and sand with water for consumption.

Treatment 2. (Y3)

Herbal treatment

- Materials: 1. PL188: fruit 2. PL21: vine part

Preparation & Application: Sand and apply topically to the injury.

Treatment 3. (Y7)

Blowing treatment

- Materials: 1. PL331: root

Preparation & Application: Healer chews and blows onto the injury.

Treatment 4. (Y11)

Herbal treatment

- Materials: 1. PL331: root

Preparation & Application: Sand and apply topically to the injury.

Treatment 5. (Y13)

Herbal treatment

- Materials: 1. PL326: leaves

Preparation & Application: Pound and apply topically to the injury.

1.3 กาสะกันบวรีอิต (K) ปลาตุ๊กปัก, แผลโดนแขยงปลาตุ๊กตำ (R)

Traditional healers: Herbalists (Y3, Y4, Y11)

Symptoms : Swelling, pain and injury caused by catfish sting.

Type/Cause of illness: Physiological origin: caused by accident involving an animal.

Possibility of death: Negative.

Treatment dietary restrictions: None.

Treatment: All healers use a topical herbal remedy for treatment.

Treatment 1. (Y3)**Herbal treatment**

Materials: 1. PL21: root 2. PL306: root

Preparation & Application: Sand with lime juice and apply topically.

Treatment 2. (Y11)**Herbal treatment**

Materials: 1. PL326: root 2. PL306: root

Preparation & Application: Pound fresh and soak in bottle of water. Apply topically.

1.4 อี้งกาสู้อย, กาวเทียว (K) แมลงป่อง (R)

Traditional healers: Herbalist, blowing doctors (Y11, B5, B14)

Symptoms: Many swollen bumps in one area on the skin.

Type/Cause of illness: Physiological origin: caused by accident involving an animal.

Possibility of death: Negative.

Treatment dietary restrictions: None.

Treatment: Both blowing doctors use a blowing treatment with incantation, but only uses typical blowing treatment. The herbalist uses a topical herbal medicine.

Treatment 1. (Y11)**Herbal remedy**

Materials: 1. PL326: leaves 2. PL306: root

Preparation & Application: Pound fresh and soak in bottle of water. Apply topically.

1.5 แมงมุมกัด (R)

Traditional healers: Herbalists, blowing doctor (Y3, Y6, B14)

Symptoms: Legs and hands ache and feel numb. If patient was bitten on an extremity, numbness will slowly climb up the limb and patient will feel dizzy and faint. One patient was bitten by a spider 5-6 years ago, and was still afflicted with the symptoms. Herbalists Y3 stated that the poison never completely disappears.

Type/Cause of illness: Physiological origin: caused by accident involving an animal.

Possibility of death: Negative (blowing doctor) and affirmative (herbalist)

Treatment dietary restrictions: None.

Treatment: One herbalist uses a topical herbal medicine. The blowing doctor uses a blowing treatment with incantation.

Treatment 1. (Y6)

Herbal remedy

Materials: 1. PL272 : fresh 'head' and leaves

Preparation and application: Sand, to extract the water, and combine with lime juice.

Place topically.

1.6 เกา (K) แมลงกัดต่อย (R)

Traditional healers: Herbalist, blowing doctor (Y13, B13)

Symptoms: Swelling and pain resulting from an insect sting and bite.

Type/Cause of illness: Physiological origin: caused by accident involving an animal.

Possibility of death: Negative.

Treatment dietary restrictions: None.

Treatment: Both healers use a topical herbal remedy. The blowing doctor also uses a blowing treatment.

Treatment 1. (Y13)

Herbal remedy

Materials: 1. PL326: leaves

Preparation & Application : Pound leaves and place topically on injury.

Treatment 2. (B13)

Blowing treatment: Typical treatment.

Herbal remedy

Materials: 1. AN9: venom from skin

Preparation & Application: Apply topically to the injury.

1.7 สัตว์กัด (R)

Traditional healers : Herbalist (Y5)

Description: Injury caused by a bite from any kind of animal.

Type/Cause of illness : Physiological origin: caused by accident involving an animal.

Treatment 1. (Y5)

Herbal remedy:

Materials: 1. PL262: fruit

Preparation & Application: Healer chews the fruit and blows on the patient's injury.

1.8 แจะดังเลียบ (K) ก้นแมลง (R)

Traditional healers: Herbalist (Y11)

Description: Protection from insect bites and stings.

Treatment 1. (Y11)

Herbal remedy

Materials:

1. PL162: bark & wood

3. PL345: all parts

2. PL270: leaf

4. AN22: nest

Preparation & Application: Boil in water and consume.

1.9 ก้นช้างจ้อด (K) ก้นงูกัด (R)

Traditional healers: Herbalist (Y11)

Description : Protection from snake bite.

Treatment 1. (Y11)

Herbal remedy

Materials: 1. PL195: bark & wood 2. PL331: root

Preparation & Application: Boil in water and ingest. Medicine active for 7 days.

2. Acute and accidental injuries

2.1 อางตะติ / ห้างตะติ (K) กระดูกหัก (R); ต้อยตะติ จิ้งตะติ (K) แขนหักและขาหัก (R); แบลงตะติ (K); ยืนตะติ (K); กำต้อยตะติ (K); ช่องทะและ (K) ขาคัด (R); เกรีย, ห้างติ (K); เกล็ดขัดยอก (R); อางเคลื่อน (K) กระดูกเคลื่อน (R)

Traditional healers: Herbalists, blowing doctors. A few blowing doctors specialize in this health condition and do not treat any other health conditions. (Y10, Y14, B1, B3, B4, B5, B6, B10, B11, B13, B14)

Symptoms : Painful, swollen limbs. The bone may stick out of skin or limb may be twisted unnaturally. One healer stated that bones usually break in the middle.

Type/Cause of illness: Physiological origin: results from physical accident.

Possibility of death : Healers state both affirmative (B13, B14) and negative (Y14, B4, B14) for broken bones. All healers state, negative, for twisted joints.

Treatment dietary restrictions: None.

Treatment: All blowing doctors and one herbalist use blowing techniques with incantation. Most blowing doctors use typical blowing treatment. Sometimes bone must be manipulated back into place before beginning treatment and a bamboo splint is usually used to stabilize the injury. Some doctors use a topical oil and/or herbal medicine to accompany blowing treatment. Sometimes the injury is massaged regularly, especially in the case of twisted joints or dislocated bones. One herbalist did not use a blowing treatment, but used oil and an incantation instead. Blowing treatments are usually conducted twice a day, until injury has healed. The number of betel chews that are used for each session, varies among healers. The incantation that is used to put bones back into place is called เป้าจอด.

If patient has gone to the hospital and received a cast, most healers must remove this to blow on the injury. Other healers can blow ‘through’ the cast, however, injury will take longer to heal. Most healers state that it takes 1 week for recovery. All healers state that younger people heal faster than older people.

Restrictions: One healer stated this blowing treatment can be used to treat cows and chickens, but not pigs and dogs. The patient cannot go under a container holding drinking water and under a clothesline.

Treatment 1. (B1)

One leaf of *Piper betle* with one smear of white lyme on it is tied into a tube with a piece of white cotton. This is given to the patient to keep. The healer chews a betel chew consisting of *Piper betel* leaf with white lyme, *Areca catechu* nut, and bark of มะหาด (PL261, *Artocarpus lacucha*) and uses this to blow onto the injury, in conjunction with an incantation. After the blowing treatment, sesame oil is spread over the injury. This treatment is conducted twice a day until the injury has healed.

Treatment 2. (B10)

Healer uses sesame oil made by an old woman who no longer menstruates. He recites an incantation and blows on the sesame oil, then applies this oil to the injury.

Treatment 3. (Y14)

Three types of oil: sesame oil (PL93), castor oil (น้ำมันละหุ่ง), and oil made from egg yolk (AN4: boil 4 - 5 eggs and pound the yolks into a fine paste and until the oil separates out). Use a homemade cotton roll to apply the oil to the injury. Then, light two large candles and recite an incantation while dripping the candle wax onto the injury. Leave this wax for 4-5 days before removing it.

2.2 A. ย่ำยา, อินทกะหน่อง (K) ช้ำใน (R)

Traditional healers : Herbalist, blowing doctors (Y5, B2, B13, B15)

Symptoms: Patients are tired, lack energy, have aches and pains (ปวด/เจ็บ (R)) in different parts of the body (รตเชิล (K)) or in the bones (เจ็บกระดูก (R)) depending on the area of injury, show bruising and swelling on the outside of body (ฟกช้ำ (R) บวม (R) อะแล้ว (K)), cannot walk (คนที่เดินไม่ได้ (R) ฐึย (K)) due to aching muscles and tendons (เส้น), have pain when breathing (หายใจไม่ออก (R) ตะโง๊ะปุเรอะ (K)).

Type/Cause of illness : Physiological origin: results from physical accident.

Possibility of death : Affirmative.

Treatment dietary restrictions: cold water; squid (ปลาตุก), shrimp.

Treatment: All healers use consumed herbal remedies. Blowing doctors also use a typical blowing treatment and sometimes massage.

Treatment 1. (Y5)

A. Herbal remedy

Materials:

- | | |
|---------------------|---------------------|
| 1. PL120: heartwood | 3. PL199: heartwood |
| 2. PL140: heartwood | 4. FU1: all parts |

Preparation & Application: Boil and consume or bathe in the medicine.

B. Herbal remedy

Materials: 1. FU1: all parts

Preparation & Application: Soak in alcohol and consume. This is the best way to prepared this medicine.

Treatment 2. (B2)

A. Blowing treatment: Blow 7 ခံ, reducing one each session, twice a day. If the patient has not recovered, then begin the blowing cycle again until the patient has healed.

B. Herbal remedy

Materials:

- | | | |
|---------------------|---------------------|---------------------|
| 1. PL99: heartwood | 3. PL101: heartwood | 5. PL103: heartwood |
| 2. PL100: heartwood | 4. PL102: heartwood | |

Preparation & Application: Sand into alcohol and consume.

Treatment 3 (B13)

A. Herbal remedy

Materials:

- | | | |
|----------------------|---------------------|------------------|
| 1. PL38: bark & wood | 5. PL130: roots | 9. PL233: root |
| 2. PL41: roots | 6. PL136: heartwood | 10. PL234: root |
| 3. PL100: heartwood | 7. PL137: heartwood | 11. PL364: roots |
| 4. PL101: heartwood | 8. PL169: roots | |

Preparation & Application: Sand into water and consume.

B. Herbal remedy: Remedy is used only on the first day of the accident.

Materials: 1. AN19: 30 mL of fresh

Preparation & Application: Mix with one shot of alcohol (เหล้า) and consume in evening.

C. Blowing treatment: typical treatment conducted twice a day.

Treatment: 4. (B15)

A. Blowing treatment: Some patients are treated with blowing treatment only.

B. Massage treatment: Some patients, depending on the injury, are treated with massage. Six plant species (unknown) are pounded and put into a cloth. This is placed over boiling water and steam is allowed to pass through it. Then, it is used as a compress to press upon the injury.

C. Herbal remedy: Remedy used for patient who are suffering a great deal.

Materials: 1. PL207: woody stem
2. PL30: heartwood
3. PL318: nut เม็ด

Preparation & Application: Boil and consume.

D. Herbal remedy: Patients who are having trouble breathing as a result of their injury are given this remedy.

Materials: 1. PL273: root 2. AN19: fresh blood

Preparation & Application: Mix together with alcohol (เหล้า) and consume.

B. โย-ถ, อัง, อะ (K) บวม, ฟกช้ำ (R)

Traditional healers: Herbalists, blowing doctors (Y5, Y6, B2, B3, B4, B5)

Symptoms: Aches and pains in the body as a whole. Swollen and aching parts of the body, such as arms and legs, stomach, waist and lower back, and ribs. Evident bruises on the skin.

Type/Cause of illness: Physiological origin: usually caused by accident.

Possibility of death: The herbalists state, Affirmative, but this is rare. The blowing doctors state, Negative. However, if the patient eats the wrong food, they will never get better.

Treatment dietary restrictions: fermented foods, chicken and rat meat.

Treatment: Herbalists use herbal treatments. All blowing doctors use a blowing treatment, and two incorporate an herbal medicine.

Treatment 1. (Y5)

Herbal remedy

Materials: 1. PL350: bark & wood 2. PL82: bark & wood

Preparation & Application: Boil and consume

Treatment 2. (Y6)

Herbal remedy

Materials: 1. PL190: bark

Preparation & Application: Sand into water and use topically, often.

Treatment 3. (B2)

A. Blowing treatment: typical treatment

B. Herbal remedy

Materials:

- | | |
|---------------------|---------------------|
| 1. PL99: heartwood | 4. PL102: heartwood |
| 2. PL100: heartwood | 5. PL103: heartwood |
| 3. PL101: heartwood | |

Preparation & Application: Sand into alcohol and consume. Patient usually recovers within a week.

Treatment 4. (B4)

A. Blowing treatment: typical treatment

B. Herbal remedy:

Materials: 1. PL287: leaves

Preparation & Application: Pound the leaves and place topically.

2.3 เตี้ยกะต้วลั่ว (K) น้ำร้อนลวก (R)

Traditional healers: Blowing doctor (B13)

Type/Cause of illness: Physiological origin: results from physical accident.

Possibility of death: Affirmative.

Symptoms: Injured area is aching, hot, and so painful that the patient cannot move.

Treatment dietary restrictions: chicken and beef.

Treatment 1. (B13)

A. Blowing treatment: Typical treatment

B. Herbal treatment

Materials:

- | | | |
|-----------------|-----------------------|-----------------|
| 1. PL79: roots | 4. PL209: bark & wood | 7. PL331: roots |
| 2. PL122: roots | 5. PL281: roots | 8. AN31: shell |
| 3. PL130: roots | 6. PL323: roots | |

Preparation & Application: Boil in water and consume.

2.4 อูกาด (K) ไฟไหม้ (R)

Traditional healers: Blowing doctor (B13)

Possibility of death: Affirmative.

Diagnosis: Results from physical accident.

Treatment dietary restrictions: chicken and beef.

Treatment: Typical blowing treatment.

2.5 แผลสด (R)

Traditional healers: Herbalists, blowing doctors (Y3, Y5, Y13, B7)

Type/Cause of illness: Physiological origin: results from physical accident.

Possibility of death: Negative. However, death is possible if injury becomes infected.

Treatment dietary restrictions: None.

Treatment: One herbalist uses topically applied herbal medicine. The remaining healers use a blowing treatment, usually incorporating *Piper betle* leaf, *Areca catechu* nut and lyme.

Notes: One herbalist (Y5) used to use an herbal remedy consisting of one plant called หว่าน

จอด (pink flowers and long leaves), but it has since become extinct in the local area.

However, this plant can be found in the city as a decorative plant.

Treatment 1. (Y3)**A. Herbal remedy**

Materials: 1. PL55: head

Preparation & Application: Pound into a fine powder, then pack into the wound.

B. Herbal remedy

Materials: 1. PL216: leaf

2. PL345: leaf

3. AN30: slaked lime, fingerfull

Preparation & Application: Pound the leaves and soak in warm water with the slaked lime. After applying the medicine, do not expose the injury to sunlight.

2.6 ส่าอะกาเดียมอาทอง, อางเกียม ตะทอง (K) ก้างติดคอ (R)

Traditional healers: Blowing doctors (B2, B10, B13, B14)

Type/Cause of illness: Physiological origin. Results from physical accident.

Possibility of death: Negative.

Treatment dietary restrictions: None.

Treatment: Most healers recite an incantation and blow into water, then patient drinks the water to dislodge the object. One healer blows directly onto the patient's throat. One healer knows ten different incantations to treat this problem. One healer stated a number of superstitious methods for removing the object, including using the paw of a cat to rub the patient's throat or throwing water onto the roof of a house and collecting the water for the patient to drink.

2.7 จามาลอ (K) คนที่กินพิษ, ฐกยาพิษ ยาสั่ง (R)

Traditional healers: Herbalists (Y3, Y4, Y5)

Symptoms: The patient has high fever and seizures, and their fingernails are black.

Type/Cause of illness: Accident or physical ailment.

Possibility of death: Affirmative.

Treatment dietary restrictions: None.

Treatment: Ingested herbal remedies.

Treatment 1. (Y3)**Herbal remedy**

Materials: 1. PL307: Root the size of the tip of the pinky finger.

Preparation & Application: Sand only a little bit of the root, less than 5 swipes, into water and drink. If too much is used, it will cause the patient to defecate uncontrollably.

Treatment 2. (Y5)**Herbal remedy**

Materials: 1. PL342: bark & wood 2. PL350: bark & wood

Preparation & Application: Sand and consume.

2.8 บูดอบบรอง (K) เมฆหล้า (R)

Traditional healers: Herbalists, blowing doctor (Y3, Y4, Y8, B9)

Type/Cause of illness: Physiological origin.

Possibility of death: Negative.

Treatment: Ingested herbal medicine.

Treatment 1. (Y3)**Herbal remedy**

Materials: 1. PL21: head 2. PL188: fruit

Preparation & Application: Slice thinly (ผ่านหัวเป็นแผ่นบางๆ) and chew fresh.

Treatment 2. (Y8)**Herbal remedy**

Materials: 1. PL301 red flower: root 2. PL394: juice from stalk, stalk

Preparation & Application: Mix together and consume.

2.9 ป้องกันการบาดเจ็บของข้อ (R)

Traditional healers: Herbalist (Y5)

Treatment: Ingested herbal medicine used to protect joints from injury, for example, a boxer may consume this medicine in preparation for a boxing match.

Treatment 1. (Y5)**Herbal remedy**

Materials: 1. PL314: head

Preparation & Application: Sand into water and consume.

3. Gynecological health conditions**3.1 หมาดขาว (Y) ตกขาว (R)**

Traditional healers: Herbalists, blowing doctor (Y5, Y13, Y14, B10)

Symptoms: Affects only women. The uterus aches. One healer states that the vagina itches a lot, and there is a yellow discharge from the vagina. Another healer states that it is smelly, but does not itch.

Type/Cause of illness: Physiological origin: caused by a cut in the uterus.

Possibility of death : Affirmative. Vagina can become infected until there is nothing left. The illness can become a lethal cancer.

Treatment dietary restrictions: fermented fish paste, papaya, chicken

Treatment : Healers use herbal treatment for ingestion and to steam the vagina.

Treatment 1. (Y5)**A. Herbal remedy**

Materials:

- | | | |
|----------------|----------------|----------------|
| 1. PL76: root | 4. PL258: root | 7. PL341: head |
| 2. PL77: root | 5. PL285: root | 8. PL394: stem |
| 3. PL178: root | 6. PL292:head | |

Preparation & Application: Boil in water and use steam to steam vagina.

B. Herbal remedy

Materials:

- | | | |
|----------------|---------------|----------------|
| 1. PL11: root | 3. PL73: root | 5. PL178: root |
| 2. PL72: roots | 4. PL76: root | |

Preparation & Application: Boil in water and drink.

Treatment 2. (Y13)**Herbal remedy**

Materials:

- | | |
|--------------------------|-----------------------------------|
| 1. PL75: all parts, root | 4. PL305 (white): all parts, root |
| 2. PL79: all parts, root | 5. PL323: entire plant, root |
| 3. PL84: all parts, root | 6. PL379: all parts, root |

Preparation & Application: Boil in water and consume.

3.2 ตกเลือด (R)**Traditional healers** : Herbalists (Y1, Y11)**Symptoms** : Health condition is related to an abnormal menstruation.**Treatment 1. (Y11)****Herbal remedy**

- Materials:
1. PL407: entire plant
 2. PL251: entire plant
 3. PL393: sugar น้ำตาลแดง

Preparation & Application: Boil and consume.

3.3 ปวดท้อง เวลาที่มีระดู (R)**Traditional healers**: Herbalist (Y5)**Symptoms**: Menstrual cramps and stomachache during menstruation.**Type/Cause of illness**: Physiological origin: caused by the uterus.**Possibility of death**: Affirmative.**Treatment dietary restrictions**: None.**Treatment 1. (Y5)****Herbal remedy**

Materials:

- | | | |
|----------------|---------------|---------------|
| 1. PL72: roots | 3. PL76: root | 5. PL11: root |
|----------------|---------------|---------------|

2. PL73: root

4. PL178: root

Preparation & Application: Boil and consume. Additionally, patient should drink hot water.

3.4 มดลูกเคลื่อน (R)

Traditional healers: Herbalist (Y3)

Symptoms: The uterus falls out of the vagina. Patient hurts in the waist. Similar to the health condition (8.6) in men when their intestines fall down into their testicles.

Possibility of death : Negative.

Treatment 1. (Y3)

Herbal treatment

Materials:

1. PL157: leaf, root

3. PL312: head

2. PL230: all parts

4. PL360: leaf

Preparation & Application: Use equal amounts of the raw materials and pound finely.

Mix with water and drink twice a day, morning and evening.

3.5 ลอดกอน, อีดูสะโบน (K) มดลูก, ชักมดลูก (R)

Traditional healers: Herbalists (Y5,Y11)

Symptoms: Women who have just given birth. This treatment is used to put uterus back into place and to clean out the uterus.

Type/Cause of illness: Physiological origin. Symptoms occur after giving birth.

Possibility of death : Affirmative.

Treatment dietary restrictions: pickled foods and fermented fish paste.

Treatment: Both herbalists use an ingested herbal remedy, and one healer uses an herbal steam bath as well.

Treatment 1. (Y5)

A. Herbal remedy

Materials:

- | | | |
|----------------|----------------|----------------|
| 1. PL76: root | 4. PL258: root | 7. PL341: head |
| 2. PL77: root | 5. PL285: root | 8. PL394: stem |
| 3. PL178: root | 6. PL292: head | |

Preparation & Application: Boil in water and use the steam to steam the vagina.

B. Herbal remedy

Materials:

- | | | |
|----------------|---------------|----------------|
| 1. PL11: root | 3. PL73: root | 5. PL178: root |
| 2. PL72: roots | 4. PL76: root | |

Preparation & Application: Boil in water and drink.

Treatment 2. (Y11)

Herbal remedy

Materials: 1. PL312: head

Preparation & Application: Use fresh. Chew and drink with hot water.

3.6 เลาะกอนกรอ (K) (คนที่)คลอดลูกยาก (R)

Traditional healers: Blowing doctor (B14)

Possibility of death: Negative.

Treatment dietary restrictions: None.

Treatment: Blow with incantation onto patient's stomach and massage stomach.

3.7 กูอู (K) อู่ไฟ (R)

Traditional healers: Herbalists, spirit healer (as a midwife) (Y1, Y2, Y8, Y12)

Symptoms: This treatment is taken to increase the strength and appetite of a woman who has just delivered a baby. After a woman delivers a baby, she traditionally lays on a platform above a heat source for at least a week. An herbal remedy is used to compliment or replace this treatment.

Type/Cause of illness: Physiological origin. Occurs after a woman has a baby.

Possibility of death: Affirmative. Can bleed to death.

Treatment dietary restrictions: tuna fish (ปลาทู), fermented fish paste, eel, snake-head fish

Treatment: All healers use ingested herbal remedies.

Treatment 1. (Y2). This remedy can be used in place of ‘staying on the fire.’

Herbal remedy

Materials:

- | | | |
|--------------------------|--------------------------|----------------|
| 1. PL35: root/ heartwood | 4. PL269: all parts, but | 6. PL286: root |
| 2. PL232: all parts | bark | 7. PL305: root |
| 3. PL263: heartwood | 5. PL324: root | |

Preparation & Application: Boil in water and consume.

Treatment 2. (Y12). This remedy can be used in place of ‘staying on the fire.’

Herbal remedy

Materials:

- | | |
|---------------------------------|--------------------------|
| 1. PL100: heartwood; use little | 6. PL361: root; use alot |
| 2. PL101: heartwood; use little | 7. AN27: shell |
| 3. PL279: wood; use very little | 8. AN31: shell |
| 4. PL289: root; use alot | |

Preparation & Application: Sand with water and consume.

3.8 เด็กไม่ยอมกินนมแม่ (R)

Traditional healers: Spirit healer (P2)

Symptoms: Children will not breast feed.

Type/Cause of illness: Spritual origin

Treatment: Ceremony.

3.9 เลี้ยงลูกไม่ได้ (R)

Possible synonym in Western medical terminology:

Traditional healers: Blowing doctor, spirit healer (B9, P3)

Symptoms: Mother can not carry a child to the full term of pregnancy.

Type/Cause of illness: Spritual orgin.

Treatment: Blowing doctor use a typical blowing treatment. Spirit healer conducts a spirit ceremony and blowing treatment to chase evil spirits away. He ties the stem or root of ต้นผีพราย around the patients neck to protect the patient from spirits.

3.10 ทำให้ผู้หญิงเป็นระดู (R)

Traditional healers: Herbalist (Y5)

Description: Woman who is unable to become pregnant.

Treatment 1. (Y5)

Herbal remedy

Materials: 1. PL7: main root-- the one pointing down

Preparation & Application: Boil and ingest.

4. Fevers

4.1 A. ตะอี่, ตะเกาะ (K) ตะเกี๊าะ (Y) ไข้ (R); จะกะตำ (K) ตั้วกะเตา (Y) ตั้วร้อน (R)

Traditional healers: Herbalists, blowing doctors, spirit healers (Y2, Y3, Y5, Y7, Y8, Y10, Y12, Y13, B12, B7, B10, P4, Aj3, Aj4)

Symptoms : Fever is accompanied with headache and dizziness and can be a high and long lasting fever. Patient has a hot body and head (ร้อนตัว (R) จะกะเตา (K) and unquenchable thirst. If a patient has a very hot fever, bumps will appear on the body and bumps and ulcers will appear in the mouth. Patient can shift from feeling hot to cold, and generally uncomfortable. The patient may not know him/herself.

One healer (Y5) distinguishes a fever called ไข้จับสัน ((R)) สกอตแลน (K) in which the patient feels hot all the time. It is a physical ailment. The healer does not distinguish a specific treatment for this fever. It is assumed that the treatments listed here can be used.

Type/Cause of illness: 1. Physiological origin, for example, ‘ate the wrong food.’ 2. Spiritual origin, for example, caused by ‘house’ or ‘field’, LPF spirits, or evil spirits.

Possibility of death: Affirmative, especially if the patient is old.

Treatment dietary restrictions: snake-head fish, small fresh water fish (ปลากระเดียด), cold foods such as, papaya, beans (ถั่ว), cucumbers, guava fruit, coconut and watermelons, and hot or cold water.

Treatment: Herbalists use herbal remedies for ingestion and to bathe the patient. Spirit healers advise patients to make offerings to spirits or organize a LPF ceremony to mollify spirits. Blowing healers and one herbalist used blowing treatments, usually a typical blowing treatment, to cure the fever as a physical ailment or to chase away evil spirits. One blowing doctor used an herbal remedy of 30 plants (unknown) in conjunction with the blowing treatment.

Note: It is likely that these treatments can be used to treat all types of fevers.

Treatment 1. (Y2) Must examine symptoms to determine specific materials.

A. Herbal remedy: Cool medicine to treat hot body.

Materials:

- | | | |
|---------------------|---------------------|----------------|
| 1. PL103: heartwood | 3. PL399: heartwood | 5. AN26: scale |
| 2. PL132: heartwood | 4. AN18: coral | |

Preparation & Application: Sand with water and drink.

B. Herbal remedy: ‘Hot’ medicine to treat chills (see treatments for ‘cool body’).

C. Herbal remedy: Treat a long lasting fever.

Materials:

- | | | |
|--------------------------|------------------------|------------------------|
| 1. PL26: heartwood | 8. PL101: heartwood | 15. PL263: heartwood |
| 2. PL35: root, heartwood | 9. PL103: heartwood | 16. PL265: root |
| 3. PL75: root | 10. PL132: bark & wood | 17. PL286: root |
| 4. PL60: heartwood | 11. PL181: root | 18. PL329: bark & wood |
| 5. PL77: root | 12. PL220: stem, root | 19. PL330: bark & wood |
| 6. PL84: root | 13. PL222: bark | 20. PL331: root |

7. PL100: heartwood 14. PL238: heartwood 21. PL399: heartwood

Preparation & Application: Sand different amounts of the plants into water. Use to bathe and/or eat.

Treatment 2. (Y5) Remedy choice depends on plant availability and trial and error.

A. Herbal remedy: Healer will try this remedy first

Materials: 1. PL126: heartwood 2. PL320: heartwood

Preparation & Application: Soak in water and consume.

B. Herbal remedy : Healer will try this remedy second.

Materials: 1. PL141: root

2. PL289: root

3. PL354: root

Preparation & Application: Soak in water and consume

C. Herbal remedy : This remedy is used to treat high fever.

Materials: 1. PL95: leaves, bark 2. PL371: epiphyte

Preparation & Application: Scrub the leaves together and soak in water. Soak a towel in the water and place on patients head.

Preparation & Application: Soak the bark in water and drink to encourage defecation

D. Herbal remedy: This is a good remedy, but often hard to find.

Materials: 1. PL72: roots 2. PL73: root

Preparation & Application: Boil in water and drink.

E. Herbal remedy : Appropriate for hot fever. This is a ‘cold’ medicine.

Materials: 1. PL182: heartwood

Preparation & Application: Boil in water and drink.

F. Herbal remedy

Materials: 1. PL316: roots (best), bark & wood, leaf

Preparation & Application: Soak in water and consume.

G. Herbal remedy: Treats ulcers in mouth (เป็นกลาง(K) caused by hot fever

Materials: 1. PL275: fruit

Preparation & Application: Use fresh and chew in mouth.

H. Herbal remedy : Reduces hot fever.

Materials: 1. PL33: all parts

Preparation & Application: Scrub plant into water and use towel to wipe down patient's body.

I. Herbal remedy : Reduces hot fever.

Materials: 1. PL276: root

Preparation & Application: Soak in water and consume

Treatment 3. (Y7)**A. Herbal remedy** : Healer uses this remedy first.

Materials: 1. PL171: heartwood

2. PL243: heartwood, root

3. PL253: heartwood, root

Preparation & Application: Sand in water and consume.

B. Herbal remedy: Healer uses this remedy second.

Materials:

1. PL58: heartwood 3. PL186: heartwood 5. PL289: root

2. PL171: root 4. PL187: heartwood 6. PL379: heartwood

Preparation & Application: Sand in water and consume.

C. Herbal remedy : Healer may also use this remedy second.

Materials: 1. PL97: root

Preparation and Application: Soak in water and consume.

Treatment 4. (Y8)**Herbal remedy** : used to treat hot body.

Materials:

1. PL8: root 4. PL124: root 6. PL406: root

2. PL87: root 5. PL192: root

Preparation & Application: Boil and consume.

Treatment 5. (Y12)

Herbal remedy

Materials:

- | | |
|---------------------------------|--------------------------|
| 1. PL100: heartwood; use little | 5. PL361: root; use alot |
| 2. PL101: heartwood; use little | 6. AN27: shell |
| 3. PL279: wood; use very little | 7. AN31: shell |
| 4. PL289: root; use alot | |

Preparation & Application: Sand into water and consume.

Treatment 6. (Y13)**Herbal remedy :**

Materials:

- | | |
|----------------------------------|-----------------------------|
| 1. PL6: bark & wood, root | 4. PL323: bark & wood, root |
| 2. PL84: bark & wood, root | 5. PL379: root |
| 3. PL299: bark & wood; root best | |

Preparation & Application: Boil and let it cool, then drink.

B. ตะกอกใจ, อีปรง, ตะกาะใจ (K) ไซ้จับสั้น, ไซ้ป่า, ไซ้มาลาเรีย, ไซ้หมากไม้ (R)**Traditional healers:** Herbalists, spirit healers (Y2, Y5, Y5, Y6, Y11, P3, Aj3)**Symptoms:** Patient feels hot and then, cold, and shivers or shakes (ซัก (R) อีตึด (K).

Patient must be in blankets all the time.

Diagnosis: Physical ailment or can be caused by spirits.**Possibility of death:** Affirmative.**Treatment dietary restrictions:** Same as listed in health condition 4.1A**Treatment:** Herbal remedy is ingested or used to bathe patient's body. Spirit healers may advise patient to organize a LPT ceremony or make offerings to mollify offended spirits. One herbalist conducted a ceremony to chase an evil spirit out of the patient's body.**Treatment 1. (Y2)** Must examine the symptoms to decide exactly what medicine to use, for example, if the patient is hot or cold.

A. Herbal remedy: Cool medicine to treat hot body

Materials:

- | | | |
|---------------------|---------------------|----------------|
| 1. PL103: heartwood | 3. PL399: heartwood | 5. AN26: scale |
| 2. PL132: heartwood | 4. AN18: coral | |

Preparation & Application: Sand into water and consume.

B. Herbal remedy: Hot medicine to treat chills (see remedy for health condition 4.5.)**C. Herbal remedy:** suitable for treating a long lasting fever

Materials:

- | | | |
|--------------------------|------------------------|------------------------|
| 1. PL26: heartwood | 8. PL101: heartwood | 15. PL263: heartwood |
| 2. PL35: root, heartwood | 9. PL103: heartwood | 16. PL265: root |
| 3. PL75: root | 10. PL132: bark & wood | 17. PL286: root |
| 4. PL60: heartwood | 11. PL181: root | 18. PL329: bark & wood |
| 5. PL77: root | 12. PL220: stem, root | 19. PL330: bark & wood |
| 6. PL84: root | 13. PL222: bark | 20. PL331: root |
| 7. PL100: heartwood | 14. PL238: heartwood | 21. PL399: heartwood |

Preparation & Application: Sand different amounts of the plants. Mix with water and consume or use to bathe.

Treatment 2. (Y5)**Herbal remedy**

Materials: 1. PL110: heartwood 2. PL126: heartwood

Preparation & Application: Soak in water and consume.

Treatment 3. (Y11)**A. Herbal remedy**

Materials: 1. PL40: leaf, bark & wood 2. PL345: leaf, bark & wood

Preparation & Application: Boil in water and consume.

B. Herbal remedy

Materials: 1. PL57: rhizome

2. PL345: root

3. PL394: stem

Preparation & Application: Boil in water and consume.

C. ตะโก๊ะเรื่อรัง (K) ไข้ฮักเสบ (R)

Traditional healers: Herbalist (Y3)

Symptoms: Sore throat, pain in bones.

Diagnosis: Physical ailment.

Possibility of death: Affirmative, if the fever carries on for a long period.

Treatment dietary restrictions: Same as foods for health condtion 4.1A.

Treatment 1. (Y3)**Herbal remedy**

Materials: 1. PL22: all parts

Preparation & Application: Boil in water and consume.

D. ไข้ไทฟอยด์ (R/K)

Traditional healers: Herbalist (Y5)

Symptoms: The patient has fever and feel very hot. But hospital physician will deteremine that patient has no fever— no abnormal body temperature. Patient has no appetite and sometimes throws-up, but can defecate.

Type/Cause of illness: Physiological origin

Treatment dietary restrictions: Same as foods for health condtion 4.1A.

Treatment: Herbal remedy for ingestion and bathing.

Treatment 1. (Y5)

A. Herbal remedy: Healer tries this remedy first.

Materials: 1. PL126: heartwood 2. PL110: heartwood

Preparation & Application: Soak in water and consume.

B. Herbal remedy: Healer will try this remedy second.

Materials: 1. PL141: root

2. PL289: root

3. PL354: root

Preparation & Application: Soak in water and consume.

E. ตะเถาะ ท้มระดู (K) ไข้, ไข้ทับระดู (R)

Traditional healers: Herbalist (Y12)

Symptoms: Fever associated with women. Patients has seizures (ชัก) and feels cold.

Type/Cause of illness: Physiological origin.

Possibility of death: Affirmative.

Treatment dietary restrictions: Ice or cold foods.

Treatment: A woman with seizures (ชัก) must be treated with ‘cold medicine’ (ย่ำเย็น), which is used to treat health condition 4.4, because she is hot inside. If patient is cold, then more hot medicine should be added to the remedy. The amount of medicine must be measured carefully. Same treatment as for health condition 5.9. The patient must not get injections.

Treatment 1. (Y12)

Herbal remedy

Materials:

- | | |
|---------------------------------|--------------------------|
| 1. PL100: heartwood; use little | 5. PL361: root; use alot |
| 2. PL101: heartwood; use little | 6. AN27: shell |
| 3. PL279: wood; use very little | 7. AN31: shell |
| 4. PL289: root; use alot | |

Preparation & Application: Sand into water and consume.

Treatment 2. (Y5)

Herbal remedy:

- Materials: 1. PL89: root
2. PL141: root
3. PL354: root

Preparation & Application: Soak in water and consume.

Treatment 3. (Y11)**Herbal remedy**

Materials: 1. PL4: ‘head’

Preparation & Application: Pound and place topically on the child’s head.

4.2 A. เจเทีรียง, เกรีียง (K) ขาง, ขางเด็ก, ไข่เด็ก, ไข่หวัดเด็ก (R)

Traditional healers: Herbalists, blowing doctors (Y2, Y3, Y4, Y5, Y11, B3, B12)

Symptoms : This illness is most common among children, especially around 2-3 years old, although it can affect adults. Children will have a hot body, headache, bumps and ulcers in mouth and on tongue, show symptoms of a cold and cry a lot. The patient can suffer from loss of appetite and become very thin. Itchy bumps (ตุ่ม) and ulcers can appear on their skin, face, and throat. Feces will be pellet-shaped or watery. The patient will feel hot inside their body, suffer from headaches, and have flatulence. One healer states that patient will have no fever, but will sweat profusely. Babies will often their discomfort by crying a lot. This illness is more mild than health condition 4.3 but stronger than health condition 4.2 B.

Type/Cause of illness : Physiological origin. One young patient became afflicted with the illness, because the mother ate the ‘wrong foods’ and transferred these foods to the child during breast feeding.

Possibility of death: Affirmative. If illness lasts a long time, patient can die. One healer stated, negative, and that the patient would only get very thin.

Treatment dietary restrictions: fermented fish paste, tunafish (ปลาทู), snakehead fish, and chicken.

B. เกรีียงบีด / เกรีียงแก็ด, เทรีียง (K) ขางตานขโมย (R)

Traditional healers : Herbalists (Y2, Y3, Y12)

Symptoms: Similar to health condition 4.2A, but more mild.

Type/Cause of illness Physiological origin.

Possibility of death: Negative. It is usually a short illness, and therefore rarely lethal.

However, if the illness lasts for a long time it can become health condition 4.2A among children or cancer among adults, which can both lead to death.

Treatment dietary restrictions: Same as listed in health condition 4.2A.

Treatment for above health conditions: Most healers use herbal medicines that are ingested or used to bathe the body. One blowing doctor used only a typical blowing treatment to blow at the child's head and then to the stomach.

Treatment 1. (Y2)

Herbal remedy

Materials: 1. PL146: bark; most important plant in the remedy
2. PL235: bark

Preparation & Application: Cover in salt, roast, and then soak in water. Consume or use to bathe the bathe.

Treatment 2. (Y3) Healer experiments with different remedies to identify one that is successful with the patient.

A. Herbal remedy

Materials: 1. PL167: bark
2. PL239: bark
3. PL395: bark & wood

Preparation & Application: Soak in water and consume.

B. Herbal remedy

Materials: 1. PL188: fruit

Preparation & Application: Soak in water and consume.

C. Herbal remedy

Materials: 1. PL75: root 2. PL259: root

Preparation & Application: Sand or soak medicine in water. Patient bathes in or consumes medicine.

Treatment 3. (Y5)

Herbal remedy

Materials: 1. PL401: bark

Preparation & Application: Cut 7 pieces of branch to 1 inch lengths, then remove the bark from the heartwood. Push the pieces of bark inside of balls of sticky rice, then roast over a fire. Soak in water and consume.

Treatment 4. (Y12)

Herbal remedy

Materials:

- | | |
|----------------------|--|
| 1. PL16: cloves | 4. PL160: young shoot |
| 2. PL44: young shoot | 5. PL180: stem; big as tip of pinky finger |
| 3. PL66: rhizome | |

Preparation & Application: Prepare seven pieces of each medicine. Boil with water in a bamboo stalk. Consume about half a quart of the medicine.

4.3 ອະແຮບ (K) ອີ່ສຸກອີ່ໄສ (R)

Traditional healers: Herbalists, blowing doctors (Y2, Y5, Y6, B12, B13)

Symptoms: Occurs mostly among children around 12 years old. Symptoms include, hot fever with red itchy bumps on skin all over body (ອອກຖຸ່ນ), fever and blisters in the mouth, swollen legs which makes it difficult for the patient to walk, lack of energy, swollen eyes, and overall discomfort. This illness can afflict a patient more than once. It is much stronger than health condition 4.2 (ໜາງ). There are two different types: a. Small blisters that usually appear on the face. b. Big blisters.

Type/Cause of illness: Physiological origin. One healer stated that the hospital doctor diagnosed ‘fungus in brain’ and predicted that the patient would die shortly, but the healer diagnosed this illness as health condition 4.3 and cured the patient.

Possibility of death: Affirmative. The patient can die quickly.

Treatment dietary restrictions: The patient should not touch hot water, smell alcohol, or bathe in cold water.

Treatment: Herbal remedy for ingestion and bathing. Blowing doctors also use a blowing treatment.

Treatment 1. (Y2)

Herbal remedy

Materials:

- | | | |
|---------------------|---------------------------|----------------|
| 1. PL71: root | 4. PL103: heartwood | 7. PL234: root |
| 2. PL100: heartwood | 5. PL220: root, all parts | 8. PL329: bark |
| 3. PL101: heartwood | 6. PL233: root | 9. PL330: bark |

Preparation & Application: Sand or soak in water and consume or apply topically.

Treatment 2. (Y5)**A. Herbal remedy**

Materials: 1. PL82: heartwood 2. PL350: heartwood

Preparation & Application: Boil in water and consume or bathe body. Usually requires 2-3 pots for a successful treatment.

B. Herbal remedy

Materials: 1. PL126 white & red : heartwood 2. PL320: heartwood

Preparation & Application: Soak in water and consume or bathe body.

C. Herbal remedy

Materials: 1. PL88: heartwood, root 2. PL218: heartwood

Preparation & Application: Soak in water and bathe body.

D. Herbal remedy: This is a 'cold' remedy and useful for treating fevers.

Materials: 1. PL182: heartwood 2. PL355: heartwood

Preparation & Application: Boil in water and consume.

Treatment 3. (B13)**A. Herbal remedy**

Materials:

- | | | |
|----------------------|---------------------|------------------|
| 1. PL38: bark & wood | 5. PL130: roots | 9. PL233: root |
| 2. PL41: roots | 6. PL136: heartwood | 10. PL234: root |
| 3. PL100: heartwood | 7. PL137: heartwood | 11. PL364: roots |
| 4. PL101: heartwood | 8. PL169: roots | |

Preparation & Application: Sand into water and consume.

B. Herbal remedy

Materials: 1. PL1: root

2. PL119: root

3. PL273: root

Preparation & Application: Soak roots in water for 1 hour. Consume or bathe in water.

C. Blowing treatment: Typical treatment

4.4 กะเตาหนึ่งกะดี, จะกะตำ (K) ตั้วกะเตา (Y) ตั้วลอน, ร้อนใน (R)

Traditional healers: Herbalists (Y4, Y12)

Symptoms: Patient feels hot all the time, and thirsty, dizzy, feverish, headache, and nauseated. This illness is linked closely with health condition 4.1.

Type/Cause of illness: Physiological origin: Heat originates from the stomach and then comes up to the patient's head and makes them dizzy.

Possibility of death: Affirmative.

Treatment dietary restrictions: hot water.

Treatment 1. (Y12)

A. Herbal remedy: All are cool medicines.

Materials:

- | | |
|----------------|----------------|
| 1. AN16: piece | 3. AN31: shell |
| 2. AN27: shell | 4. M14: piece |

Preparation & Application: Sand with water and drink.

B. Herbal remedy

Materials:

- | | |
|---------------------------------|--------------------------|
| 1. PL100: heartwood; use little | 5. PL361: root; use alot |
| 2. PL101: heartwood; use little | 7. AN27: shell |
| 3. PL279: wood; use very little | 8. AN31: shell |
| 4. PL289: root; use alot | |

Preparation & Application: Sand into water and consume.

4.5 จะกะเจด, จะแฉัด, ตั้วจะแงะ (K) ตั้วจะแงะ (Y) ตั้วยี่น, ยาร้อน (R)

Traditional healers : Herbalists (Y2, Y3, Y7)

Symptoms: Patient has a fever but no rise in body temperature. Patient has a headache and lacks energy and feels tired.

Diagnosis : Physical ailment.

Possibility of death: Negative. Some healers state, Affirmative, but it is rare.

Treatment dietary restrictions: Many things food, especially cold foods, like bananas and papaya.

Treatment : Herbal remedies for ingestion or bathing the body to reduce heat.

Treatment 1. (Y2)

A. Herbal remedy

Materials: 1. PL35: heartwood

2. PL323: root

3. PL324: root

Preparation & Application: Boil or Sand into water and consume.

B. Herbal remedy

Materials: 1. PL145: branch 2. PL408: root; leaves for bathing

Preparation & Application: Sand root and consume.

Preparation & Application: Scrub the leaves of PL408 into water and use to bathe.

Treatment 2. (Y7)

Herbal remedy

Materials: 1. PL171: heartwood

2. PL243: heartwood, root

3. PL253: heartwood, root

Preparation & Application: Sand into water and consume

5. Pain and febrile illnesses

5.1 ไม่เขี้ยว* (K) เบาหวาน (R)

Traditional healers: Herbalists (Y1, Y2, Y3, Y4, Y5, Y6, Y8, Y10, Y13, Y14)

Symptoms: This illness can occur among both males and females. Usually the patient is obese, but thin people can have this illness as well. When the patient eats, they may have a stomachache. Other signs are constipation, flatulence, lack of energy, tires easily, open sores on the body, swollen head, nails may fall off, skin lacerations that heal with great difficulty, bright yellow urine, and aching joints, arms, legs and lower back and waist. If the illness lasts for a long time it is called เบาหวานกินกระดูก or diabetes ‘that eats the bones.’ If the

illness is very strong, the person will have itchy bumps all over the body. If the patient is obese, these bumps will burst. If the patient is thin, then the bumps will itch, but not burst. This illness is similar to health condition 13.12 but not as severe.

Herbalist **Y14** recognizes two types of this health condition:

1. **เบาหวานเปียก:** The patient is obese and may have seizures (ชัก). The patient cannot eat sticky rice or it will make it harder for the patient to get better.
2. **เบาหวานแห้ง:** The patient is thin.

Type/Cause of illness: Physiological origin. Two healers stated that this illness is usually diagnosed by the hospital, and the patient will come to the healer with the diagnosis.

Possibility of death : Affirmative, but can take a long time. Death can be caused by eating the wrong foods.

Treatment dietary restrictions: Sugarcane, sweets, salty food. Fruits can be eaten, but only a little bit. Patient should eat sour foods.

Treatment: All the healers use ingested herbal remedies for treatment. Healers state that a patient who has had diabetes for more than 20 years should take the herbal remedy for a longer period, such as six weeks. The patient should check their blood sugar level (at the hospital) and if it drops, then the herbal remedy is successful. Herbalist **Y12** states that if the herbal treatment is continued then all symptoms of diabetes will be cured entirely.

Treatment 1. (Y2)

Herbal remedy: This remedy can be used to treat every kind of disease.

Materials:

- | | |
|--------------------|---------------------|
| 1. PL94: heartwood | 3. PL193: roots |
| 2. PL107: root | 4. PL298: heartwood |

Preparation & Application: Boil in water and consume.

Treatment 2. (Y3)

A. Herbal remedy:

Materials:

- | | |
|--------------------|---------------------|
| 1. PL22: all parts | 3. PL238: heartwood |
| 2. PL165: root | 4. PL397: root |

Preparation & Application: Use three handfuls (กำ) of the small aerial roots (รากที่ข้อย่น้อย). Boil in water and consume one pot, then visit the healer again for a check up.

Remedy should be used only until the patient's sugar level drops.

B. Herbal remedy

Materials: 1. PL319: fruit rind.

Preparation & Application: Dry and boil in water. Consume the medicine until the sugar level reduces, and then stop using the medicine.

Treatment 3. (Y5)

A. Herbal remedy : Healer will try this remedy first.

Materials: 1. PL146: heartwood. The most important plant in this remedy.

2. PL211: branch

3. PL212: branch

Preparation & Application: Boil in water and consume.

B. Herbal remedy: Healer will try this remedy second.

Materials: 1. PL16 (a year old, กวาปี): leaf

2. PL146: heartwood; most important plant in remedy

Preparation & Application: Pound the clove or leaves of garlic and boil in water, then consume.

Treatment 4. (Y6)

Herbal remedy

Materials: 1. PL63: 1 กำ of fresh millets (ข้าวสาร)

2. PL79: roots

3. PL401: bark & wood

Preparation & Application: Boil in water and consume only a minimal amount.

Treatment 5. (Y11)

A. Herbal remedy: This remedy is the fastest acting remedy.

Materials: 1. PL107: all parts; first parboil with hot water and then dry.

2. PL157: all parts

Preparation & Application: Boil in water and consume.

B. Herbal remedy: This remedy is a slower acting remedy. The specific plants must be

chosen to suit the patient's symptoms.

Materials:

- | | |
|--------------------------------------|---------------------------|
| 1. PL144: งาม (male), fruit (female) | 3. PL180: stem |
| Important plant in remedy. | 4. PL186: water from root |
| 2. PL162: stem | 5. PL213: stem, fruit |

Preparation & Application: Boil in water and consume.

Treatment 6. (Y13)

Herbal remedy: Treatment can be taken with insulin and other remedies.

Materials:

- | | |
|--------------------|----------------|
| 1. PL31: all parts | 3. PL250: root |
| 2. PL70: root | 4. PL393: stem |

Preparation & Application: Boil in water and consume.

Treatment 7. (Y14)

A. Herbal remedy: Specifically used to treat sub-type เบาหวานปลาย

Materials:

- | | | |
|---------------------------|-----------------------|----------------------|
| 1. PL5: root | 6. PL210: leaves | 11. PL340: leaves |
| 2. PL108: heartwood | 7. PL213: bark & wood | 12. PL360: leaves |
| 3. PL132: heartwood, root | 8. PL267: heartwood | 13. PL375: heartwood |
| 4. PL176: heartwood | 9. PL268: heartwood | 14. PL410: heartwood |
| 5. PL183: heartwood | 10. PL283: heartwood | 15. PL411: heartwood |

Preparation & Application: Boil and consume as a replacement for drinking water. One patient was cured after three weeks.

B. Herbal remedy: Specifically used to treat sub-type เบาหวานแห้ง

Materials:

- | | | |
|---------------------|---------------------|------------------------|
| 1. PL19: heartwood | 6. PL186: heartwood | 10. PL340: leaves |
| 2. PL108: heartwood | 7. PL210: leaves | 11. PL349: bark & wood |
| 3. PL159: root | 8. PL283: heartwood | 12. PL410: heartwood |
| 4. PL176: heartwood | 9. PL360: leaves | 13. PL411: heartwood |
| 5. PL183: heartwood | | |

If the illness is still not better then must add:

14. PL230: entire plant

15. PL391: heartwood

Preparation & Application: Boil and consume as a replacement for drinking water.

5.2 ปานดง (K) ประดง (R); ปั่นดวกะยาล (K) ประดงข้อเข่า ประดงเส้น ประดงข้อ (R)

Traditional healers: Herbalists (Y3, Y4, Y5, Y6, Y7, Y13)

Symptoms: Only effects elderly people. This illness is closely related to health condition 5.4.

The whole body aches, including arms and legs, throat, muscles, back and waist. Patient may feel cold in their arms in legs or on one half of the body, and can not lift their arms or legs. If left untreated, this illness can become more severe as health conditions 5.3 or 5.9.

This illness effecting the knees is less severe than health condition 5.4 effecting the knees. One healer states that this illness ‘eats’ or destroys nails and tendons. Some people may be afflicted for 2-3 years.

Type/Cause of illness : Physiological origin.

Possibility of death : All healers state, Negative, but one healer states, Affirmative.

Treatment dietary restrictions: snake-head fish (ปลาช่อน), bamboo shoot soup, fermented fish paste, spicy papaya salad, beef (water buffalo), ผักขม

Treatment: Most healers use a treatment that is similar or the same as treatments used for ‘aching arms and legs back,’ seizures, and diabetes and tonic for strength. Herbalists use ingested and topical herbal medicine.

Treatment 1. (Y3)

Herbal remedy

Materials:

- | | |
|--------------------|---------------------|
| 1. PL22: all parts | 3. PL238: heartwood |
| 2. PL165: root | 4. PL397: root |

Preparation & Application: Boil and consume one pot, then visit healer again.

Treatment 2. (Y3) Used especially to treat the knees

A. Herbal remedy

Materials: 1. PL22: all parts

Preparation & Application: Boil in water and consume.

B. Herbal remedy

Materials: 1. PL295: root

Preparation & Application: Boil in water and consume.

Treatment 3. (Y5)

A. Herbal remedy

Materials: 1. PL403: bark 2. PL257: bark

Preparation & Application: Sand and mix with rice water, then consume.

B. Herbal remedy: Remedy to treat aching arms and legs.

Materials: 1. PL2: rhizome 2. PL3: rhizome

Preparation & Application: Pound together, then apply topically to arms and legs

C. Herbal remedy : Remedy to treat aching knees.

Materials: 1. PL189: bark, heartwood 2. PL190: bark, heartwood

Preparation & Application: Sand with rice water and place topically on knees.

Treatment 4. (Y6)

A. Herbal remedy

Materials: 1. PL169: root.

Preparation & Application: Boil and consume.

B. Herbal remedy

Materials: 1. PL405: bark & wood

Preparation & Application: Pound and boil in water to make two pots of medicine. Then place medicine into a cloth as a compress and press on the afflicted parts of the body.

Treat the patient morning and evening.

Treatment 5. (Y7)

A. Herbal remedy

Materials: 1. PL51: heartwood

2. PL305: root

3. ย่ำร้อน (purchased herbal medicine): one spoonful

Preparation & Application: Boil in water and consume.

B. Herbal remedy

Materials: 1. PL114: heartwood

2. PL115: heartwood

3. ยารวอน (purchased herbal medicine) : one spoonful

Preparation & Application: Boil in water and consume.

C. Herbal remedy

Materials:

1. PL190: bark

3. PL51: heartwood

2. PL366: heartwood

4. PL115: heartwood

Preparation & Application: Boil in water and consume.

Treatment 6. (Y11)

A. Herbal remedy

Materials: 1. FU1: all parts

2. PL402: root

Preparation & Application: Boil in water and drink.

Treatment 7. (Y13)

Herbal remedy: This remedy causes the patient defecate, but will not make them tired. It costs 25 B a treatment.

Materials:

1. PL9: bark & wood, root

3. PL305 (black): bark & wood

2. PL127: bark & wood

4. PL396: bark & wood, root

Preparation & Application: Boil and consume, usually one pot is sufficient.

Treatment 8. (Y14)

Herbal remedy

Materials:

1. P5: root

6. PL213: bark & wood

11. PL340: leaves

2. PL108: heartwood

7. PL267: heartwood

12. PL360: leaves

3. PL132: heartwood, root

8. PL268: heartwood

13. PL375: heartwood

4. PL176: heartwood

9. PL210: leaves

14. PL410: heartwood

5. PL183: heartwood

10. PL283: heartwood

15. PL411: heartwood

Preparation & Application: Boil together and consume.

5.3 កម្ម (Y) កម្ម (R)

Traditional healers : Herbalists (Y8, Y13)

Symptoms: Difficult to defecate and urinate. Patient breaks out in sweat, urine is very yellow, and the patient feels tired inside their body. This is different from health condition 5.2, although this can become health condition 5.3.

Type/Cause of illness: Physiological origin.

Possibility of death: Affirmative, in the case that the illness becomes paralysis, then the patient may die.

Treatment: Ingested herbal medicines. Herbalist **Y13** states that the patient should be treated with the remedy for health condition 5.2 before taking this remedy.

Treatment 1. (Y8)

A. Herbal remedy

Materials: 1. PL266: heartwood 2. PL300: heartwood

Preparation & Application: Boil in water and consume.

B. Herbal remedy

Materials:

- | | |
|---------------------|---------------------|
| 1. PL51: heartwood | 4. PL382: heartwood |
| 2. PL155: heartwood | 5. PL383: heartwood |
| 3. PL269: heartwood | |

Preparation & Application: Boil in water and consume.

Treatment 2. (Y13)

Herbal remedy

Materials:

- | | |
|----------------------|----------------------------|
| 1. PL208: root, stem | 3. PL354: roots |
| 2. PL341: 'head' | 4. PL388: root, leaf, stem |

Preparation & Application: Boil and consume. Medicine will make urine a white color.

5.4 อีกอง, อีเยิง, อีจะวง (K) ปวดขา (R); มีปะก้อ (K) ปวดข้อเข่า ปวดเข่า ปวดหัวเข่า (R); อัมพาตะ, อียั้งอีตอง (K) ปวดขาปวดแขน (R); อีเบลง (K) ปวด/เจ็บแขน (R)

Traditional healers: Herbalists, blowing doctors, spirit healers (Y2, Y3, Y7, Y1, B5, P1, P4)

Symptoms: This illness is similar to health condition 5.2, but more severe. Limbs can ache to the degree of paralysis. Sharp jabbing pains in the legs and feet.

Type/Cause of illness: 1. Physiological origin, such as from an accident or natural symptom of old age. 2. Spiritual origin: can be caused by a curse or offended spirits.

Possibility of death: Negative.

Treatment dietary restrictions: Chicken.

Treatment: Healers often use treatments that are the same or similar for treating health condition 5.1, 5.2, and 5.9. The type of treatment range widely. Most healers use an ingested or topical herbal remedy, and others incorporate a massage and blowing treatment. Spirit healers use spiritual treatments that consist of making spiritual offerings or building a spirit house. One spirit healer recommend for the patient to visit a monk to remove the curse. The blowing doctor uses a typical blowing methods to treat illness.

Treatment 1. (Y2)

A. Herbal remedy

Materials:

- | | |
|---------------------|---------------------|
| 1. PL100: heartwood | 3. PL132: heartwood |
| 2. PL103: heartwood | 4. PL181: root |

Preparation & Application: Sand and consume everyday.

B. Blowing treatment: typical treatment; healer chews only 1 *cum* (คำ).

Treatment 2. (Y3)

A. Herbal remedy

Materials: 1. PL22: all parts

Preparation & Application: Boil in water and consume.

B. Herbal remedy

Materials: 1. PL295: root.

Preparation & Application: Boil in water and consume.

Treatment 3. (Y7)**Herbal remedy**

- Materials: 1. PL51: heartwood
 2. PL115: heartwood
 3. PL366: heartwood

Preparation & Application: Boil in water and consume 2-6 pots.

Treatment 4. (Y11)**A. Herbal remedy**

- Materials: 1. PL178: all parts
 2. PL195: all parts

Preparation & Application: Soak plant in water and suck on it. Then boil and eat.

B. Spiritual treatment: Incantation and blowing treatment.

Treatment 5. (Y12)

A. Massage treatment: Massages most patients.

B. Herbal remedy: Sometimes used to treat patients, but usually it is not necessary.

- Materials: 1. PL67: root

Preparation & Application: Sand and then use topically.

C. Spiritual treatment: Offerings to appease spirits

5.5 อึ้งแกง, อีแกน, อีอังโกะ, อีเก็ง (K) ปวด/ เจ็บหลัง, ปวดหลัง (R)

Traditional healers : Herbalists (Y3, Y5, Y11, Y13, B3)

Symptoms: Aching back and waist.

Type/Cause of illness: This can be a symptoms of health condition 5.2.

Possibility of death: Negative.

Treatment dietary restrictions: fermented foods

Treatment : Herbalists use an ingested herbal remedy

Treatment 1. (Y5)**A. Herbal remedy**

- Materials: 1. PL34: heartwood.

Preparation & Application: Boil and consume.

B. Herbal remedy

- Materials: 1. PL292: 'head'
 2. PL357: root
 3. PL394: stalk

Preparation & Application: Boil and consume.

Treatment 2. (Y11)**Herbal remedy:**

- Materials: 1. PL53: bark & wood
 2. PL120: heartwood
 3. PL388: corm

Preparation & Application: Boil and consume.

Treatment 3. (Y13)**Herbal remedy**

- Materials: 1. PL69: bark & wood, root 2. PL131: root, leaves

Preparation & Application: Boil and consume.

5.6 บาดค้อ (K) บาดซ้อ (R)

Traditional healers : Herbalist (Y5)

Symptoms: Aching in the joints that is quite painful.

Type/Cause of illness: Physiological origin.

Possibility of death: Negative.

Treatment dietary restrictions: fermented foods

Treatment 1. (Y5)**Herbal remedy**

- Materials: 1. PL337: roots, leaves

Preparation & Application: Boil and put into cloth as a compress. Press onto the afflicted areas of the body.

5.7 อี้แก้ง, อี้เสี้ยน (K) ปวด/เจ็บเส้นเอ็น (R)

Traditional healers: Herbalists, blowing doctors, spirit healers (Y2, Y5, B4, B5, P4)

Symptoms: Health condition can occur among adults and elderly, but not children. Patient will ache throughout the body and especially in tendons and this may cause the patient to have difficulty breathing. This can be a symptom of other diseases, for example, one patient had lung cancer of the lungs and the healer treated the patient for aching and painful tendons and muscles.

Two healers (B4, B5) identify a sub-type of this health condition:

A. เจ็บต้น (R) อีต้น (K) : aching in the lower back, waist and legs. Results from aching and painful tendons and muscles, which is effects entire body.

Type/Cause of illness: 1. Physiological origin. 2. Spiritual origin.

Possibility of death: The majority state, Affirmative, if the wrong medicine is used but it takes a long time. Two blowing doctors state, negative.

Treatment dietary restrictions: One healer lists, cold water, chicken, pork, and beef. But, the majority state that there are no ‘wrong foods.’

Treatment : Herbalists use ingested herbal remedies. Blowing doctors use a typical blowing treatment and massage. One spirit healer recommends the patient to make offerings to the Buddhist temple in order to make merit.

Treatment 1. (Y2)

Herbal remedy The first two plants are enough for the treatment

Materials: 1. PL10: root, plant

2. PL75: root, plant

3. PL158: head; (not used because healer can not find it)

Preparation & Application: Boil or Sand into water and consume.

Treatment 2. (Y5) First choice remedy depends on availability of plants

A. Herbal remedy: Must have PL269 and at least one of the following plants for an active remedy.

Materials:

1. PL71: heartwood

4. PL212: bark & wood

7. PL347: head

2. PL127: heartwood

5. PL269: heartwood

8. PL352: root

3. PL143: heartwood

6. PL346: bark & wood

9. PL368: heartwood

Preparation & Application: Mix with honey or boil with water and consume.

B. Herbal remedy

Materials: 1. PL64: bark & wood
2. PL65: root

Preparation & Application: Boil and consume.

C. Herbal remedy: This is a good remedy but often hard to find, so healer usually uses other remedies.

Materials: 1. PL72: roots
2. PL73: root

Preparation & Application: Boil and consume.

D. Herbal remedy

Materials: 1. PL68: root

Preparation & Application: Boil and consume.

E. Herbal remedy

Materials: 1. PL140: heartwood
2. PL199: heartwood

Preparation & Application: Boil and consume.

Treatment 3. (B15)

A. Blowing treatment: Typical blowing treatment with พะขอก added to the herbal chewing mixture; patient is treated once a day, in the morning or evening.

B. Massage treatment. Only some patients are treated with massage.

Materials: Six plant species (unknown).

Preparation & Application: Pound plants and wrap in a cloth as a compress. Place over boiling water to let steam to pass through, then press on afflicted parts of body.

C. Herbal remedy: Given to patients who are suffering a great deal.

Materials: 1. PL30: heartwood
2. PL207: woody stem
3. PL318: nut ฝัก

Preparation & Application: Boil and consume.

D. Herbal remedy: Given to patients who cannot breathe because of internal injuries.

Materials: 1. PL273: root 2. AN19: blood

Preparation & Application: Mix together with alcohol (เหล้า) and consume.

5.8 โรคชรา, เหน็บชา (R)

Traditional healers: Herbalist, spirit healer (Y2, Y7, P2, P3)

Symptoms: This health condition usually effects only elderly people, however it can affect young people as well. Patients cannot not move arms and legs (ขาแขนชาขา) or move arms and legs with difficulty, they feel tired, weak, lethargic and pain or numbness in their shins, legs, and stomach, and they have little appetite for food and difficulty walking and standing.

Type/Cause of illness: 1. Physiological origin. 2. Spiritual origin: one patient, for example, had made changes in the rice field without asking the spirits first, and these angry spirit were the cause of the illness.

Possibility of death: Affirmative.

Treatment dietary restrictions: None.

Treatment: Herbalists use ingested herbal remedy. Spirit healers conduct a ceremony and offerings to mollify spirits.

Treatment 1. (Y2)

Herbal remedies: The patient is asked to smell the medicine, and medicines which smell good to the patient are used for treatment.

Materials: 1. PL100: heartwood 2. PL103: heartwood

Preparation & Application: Sand and consume.

Treatment 2. (Y7)

A. Herbal remedy: Healer uses this remedy first.

Materials: 1. PL144: root 2. PL393: sugar (น้ำตาล)

Preparation & Application: Soak in 1 quart of alcohol (40% proof). Consume in morning and evening.

B. Herbal remedy: Healer uses this remedy second.

Materials: 1. PL305 (male & female) : root

Preparation & Application: Boil and consume.

5.9 อัมพาต (K/R)

Traditional healers: Herbalist (Y3, Y4, Y6, Y10, Y12, Y13)

Symptoms: Patients cannot move parts or half of their body.

Type/Cause of illness: 1. Pysiological origin. 2. Spiritual origin: offended spirits, for example, fighting among blood relations. This illness is caused by lack of blood running to the brain.

Possibility of death: Affirmative. A patient can die within 6 days (Y6).

Treatment dietary restrictions: ผักขม, chicken, snake meat, beef

Treatment: Herbal remedy for ingestion or applied topically. Spirit heaer uses ceremonies, such as making offerings and building a spirit house to appease offend spirits. Patient should also exercise by moving slowly.

Treatment 1. (Y3)

Herbal remedy

Materials: 1. PL22: all parts

Preparation & Application: Boil in water or pound into a powder and add to water.

Consume medicine three times daily.

Treatment 2. (Y6)

Herbal remedy

Materials: 1. PL405: bark & wood

Preparation & Application: Pound and boil in water to make 2 pots of medicine. Then place medicine in cloth and press on the afflicted parts of the body as a compress. Treat patient morning and evening.

Treatment 3. (Y10)

Herbal remedy

Materials: 1. PL14: heartwood

2. PL35: heartwood

3. PL54: rhizome

Preparation & Application: Boil and consume

Treatment 4. (Y12)

Herbal remedy

Materials:

1. PL100: heartwood; use little

5. PL361: root; use alot

2. PL101: heartwood; use little

6. AN27: shell

3. PL279: wood; use very little

7. AN31: shell

4. PL289: root; use alot

Preparation & Application: Sand in water and consume.

Treatment 5. (Y13)

Herbal remedy

Materials: 1. PL144: ก้านใบ (leaf vagina)

2. PL228: root

3. PL298: bark & wood, root

Preparation & Application: Boil in water and consume.

5.10 กลอมนพ (K) โรคนิว, ไตนิว, โรครไต (R)

Traditional healers: Herbalists (Y3, Y11, Y5)

Symptoms: There are rocks in urinary tract, which makes it difficult, painful, and sometimes impossible to urinate. The urine is cloudy and sometimes small rocks are emitted with the urine. These complications may cause the patient's entire body may ache, and especially in the waist and feet.

Herbalist **Y5** recognizes four sub-types, arranged from strongest to weakest:

1. No name given: The strongest and most difficult form to treat, and most lethal. The urinary rocks have spikes and look like mulberry fruit. This healer cannot cure the patient, and the patient must seek surgery at the hospital.

2. 'rocky' *niew* (นิวหิน): Rocks are emitted with the urine. Healer can treat this illness.

If patient does not use an herbal remedy then tweezers must be used to pull the rocks out.

3. **No name given:** Aching along the backbone. Patients may have seizures and become crazy.

4. **‘lime (mineral)’ *niew* (น้ำปูน)** : Rocks with lines on the surface are emitted with the urine. This type of *niew* is the easiest to treat.

Type/Cause of illness: Physiological origin.

Possibility of death: Affirmative. One healer states that it is difficult. Another healer states that death is possible if the kidneys or the ‘mother’ rock bursts.

Treatment dietary restrictions: fermented foods, duck, chicken, fermented fish paste, and spicy papaya salad

Treatment: All the healers use ingested herbal remedies which aim to pass the stones out of the urinary track. One healer states that the ‘mother’ rock must be passed out of the body in order for the patient to recover.

Treatment 1. (Y3)

A. Herbal remedy

Materials: 1. PL78: root
 2. PL284: root
 3. PL341: เหน้ง (apical meristem)

The following plant is added if the stones are very difficult to pass

4. PL68: root, stem, leaf.

Preparation & Application: Boil and consume. Usually takes about a week to get better.

B. Herbal remedy

Materials: 1. PL22: all parts (ทั้ง 5).

Preparation and application: Take whole plant and boil or pound into a powder and add to water. Consume each day, 3 times/ day.

Treatment 2. (Y5)

A. Herbal remedy

Materials: 1. PL320: root 2. PL398: root

Preparation and application: Boil and consume.

B. Herbal remedy

- Materials: 1. PL90: root
 2. PL178: root
 3. PL389: root

Preparation & Application: Boil or soak in alcohol until alcohol becomes colored, then consume.

C. Herbal remedy

Materials:

- | | |
|-----------------------|-----------------------|
| 1. PL139: bark & wood | 3. PL212: bark & wood |
| 2. PL211: bark & wood | 4. PL269: bark & wood |

Preparation & Application: Boil and consume.

D. Herbal remedy

Materials:

- | | |
|---------------------------|---------------------------|
| 1. PL258: root | 3. PL388: root |
| 2. PL320: root, heartwood | 4. PL398: root, heartwood |

Preparation & Application: Boil and consume.

E. Herbal remedy

- Materials: 1. PL357: root 2. PL394: bark & wood

Preparation & Application: Boil and consume.

Treatment 3. (Y11)**A. Herbal remedy**

- Materials: 1. PL27: bark & wood 2. PL321 red: leaf

Preparation & Application: Boil and consume 5-6 pots.

B. Herbal remedy

- Materials: 1. PI2: small piece
 2. PL257: root
 3. PL341 (Singapore, สิงคโปร์): 'head'(หน่อ)

Preparation & Application: Pound together and consume.

Symptoms: Hives, blisters or white itchy spots on the skin.

Type/Cause of illness: Pysiological origin

Treatment: Topical herbal medicines.

Treatment 1. (Y5)

Herbal remedy

Materials: 1. PL70: leaf 2. AN30: a finger full of slaked lime

Preparation & Application: Pound and mix together with human urine, then wrap a stick with cloth and use to apply the medicine topically.

Treatment 2. (Y8)

Herbal remedy

Materials: 1. M17

Preparation & Application: Apply topically.

Treatment 3. (Y11)

Herbal remedy

Materials: 1. PL282: leaves
2. PL308: bark & wood
3. M12: small piece

Preparation & Application: Chop up plants and dry, then pound into powder. Add M12 and boil together in hot water. First, break the skin of the infected areas, then use white cloth to apply medicine topically, by wiping infected area.

6.2 โรคผิวหนัง (R)

Traditional healers: Herbalist (Y11)

Symptoms: Blisters and rashes on skin (มือเปื้อย), that climb up limb (ลามไปตามแขน).

Type/Cause of illness: Physiological origin. Caused by ‘yellow water is not good’ (น้ำเหลืองไม่ดี).

Treatment 1. (Y11)**Herbal remedy**

Materials: 1. PL198: roots

Preparation & Application: Pound and soak in water to make one bottle of medicine. Then apply topically.

6.3 ทุดลม, มุนมาน, ปรี, เกิดภูมิ, มูเมะ (K) ลมพิษ, ไข้ทูต (R)

Traditional healers: Herbalists (Y3, Y5, Y11, Y12, B4)

Symptoms: Similar to health condition 6.1. Patient has red itchy hives (เป็นผื่นคัน (T) เสาะชอย (K) with white skin that peels off; all over the body. Patient is in great discomfort. The illness can be inside and outside of body. If it is inside, the patient has a stomachache.

Type/Cause of illness: Physiological origin: caused by bacteria.

Possibility of death: Most healers state, Negative. Some healers state, affirmative. The patient can die if he/she eats the wrong foods or if the illness is inside the body. If the illness is outside the body then the patient cannot die.

Treatment dietary restrictions: Pork, fermented fish paste, chicken, and alcohol. If these foods are eaten that patient can die or the skin will itch even more and the patient will take a long time to get better.

Treatment: Healers use herbal remedies for ingestion or bathing and smoking the afflicted area.

Treatment 1. (Y3)**Herbal remedy**

Materials: 1. PL238: heartwood, root

2. PL363: fruit

3. AN13: Internal cocoon after silk thread has been removed

Preparation & Application: Boil or soak in water. Patient consumes or bathes in the medicine.

Treatment 2. (Y5)

A. Herbal remedy: Healers uses this remedy first.

Materials: 1. PL45: leaves, or use old banana leaves (ใบกล้วยเหลืออง) as substitute

2. PL138: leaves

3. PL281: all parts

Preparation & Application: Boil in water and consume or bathe in the medicine.

B. Herbal remedy

Materials: 1. PL63: stem, leaves; เฟื่อง (L) ฟาง (T) left sitting for a year

Preparation & Application: Burn under patient and allow smoke to run across patient's body.

Treatment 3. (Y11)

Herbal remedy

Materials: 1. PL17: fruit

2. PL83: heartwood

3. PL120: heartwood

Preparation & Application: Boil in water and consume.

Treatment 4. (Y12)

Herbal remedy

Materials:

1. PL132: heartwood

3. PL223: root

2. PL177: water

4. PL394: stalk; must dry before using

Preparation & Application: Sand in water and consume.

Treatment 5. (B4)

Herbal remedy

Materials: 1. PL175: leaf.

Preparation & Application: Boil and use to bathe.

6.4 A. แลนกา, มะม่วง, อะแสดง, ตะรอยปี, แอะ (K) อาก (Y) ฝี่, ฝี่หนอง, ฝี่อักษบ, แผลฝี่ (R)

Traditional healers: Herbalists, blowing doctors (Y5, Y6, Y7, Y8, Y11, B2, B3, B4, B6, B7)

Symptoms: Abscesses in this category are considered the most general type, which are swollen and return frequently. One healer states there are varieties of these

abscesses, that are similar to health condition 6.5. These include, fire (อุ (K)) and water (เด็ยะ (K)) abscess. Healers are capable of treating all types of abscess, even abscesses caused by health condition 13.12 (called แม่จ้ำง or กะหรี) which appear in the lymph node areas.

Type/Cause of illness: Physiological origin.

Possibility of death: Negative; it is difficult for the patient to die. Some healers state, Affirmative. If the medicine is wrong for the patient or the abscess becomes infected the patient can die easily.

Treatment dietary restrictions: snakehead fish, eel, small fresh water fish (ปลาเด็ด), fermented fish paste, chicken, and frogs (กบ เขียด). If these foods are eaten, then the abscess will itch and not heal.

Treatment: Herbal remedy for soaking the body, applying topically and ingestion. Almost all remedies require the use of rice water as the vehicle for the medicine. Blowing doctors use a blowing treatment with *Piper betle* leaf, *Areca catechu* nut and slaked lime and incantation.

Treatment 1. (Y2)

Herbal remedy

Materials: 1. PL264: leaf

2. PL365: leaf

Preparation & Application: Add bits of material left over in the betel chew basket and boil together in water. Soak afflicted part of the body. The infected area will feel cool and comfortable. The abscess is soaked until the abscess breaks open.

Treatment 2. (Y5) Healer chooses the first remedy based on convenience—plants that are most available. All of the remedies are good, but the success of the remedy depends on the patient.

A. Herbal remedy:

Materials: 1. PL161: rhizome

Preparation & Application: Sand into rice water and apply topically.

B. Herbal remedy

Materials: 1. PL90: root 2. PL389: root

Preparation & Application: Sand into rice water and apply topically.

C. Herbal remedy

Materials: 1. PL408: root

Preparation & Application: Sand into rice water and apply topically.

D. Herbal remedy

Materials: 1. PL310 : ‘head’

Preparation & Application: Sand into rice water and apply topically.

E. Herbal remedy

Materials: 1. PL311: ‘head’

Preparation & Application: Sand into rice water and apply topically with a bit of cotton.

F. Herbal remedy

Materials: 1. PL404: root

Preparation & Application: Sand into rice water and apply topically.

Treatment 3. (Y6)

Herbal remedy

Materials: 1. PL408: root

Preparation & Application: Sand into rice water and apply topically. After treating the abscess 2-3 times, the patient should recover.

Treatment 4. (Y7)

Herbal remedy

Materials: 1. PL44: root

2. PL77: root

3. PL370: root

Preparations & Application: Sand and apply topically. After abscess breaks, apply more remedy.

Treatment 5. (Y8)**A. Herbal remedy**

Materials:

- | | |
|---------------------|---------------------|
| 1. PL124: heartwood | 3. PL156: heartwood |
| 2. PL134: bark | 4. PL385: heartwood |

Preparation & Application: Sand into rice water and apply topically.

B. Herbal remedy

Materials: 1. PL98: leaf

2. PL291: leaf

3. PL309: leaf

Preparation & Application: Pound fresh and apply topically.

Treatment 6. (Y11)**Herbal remedy**

Materials: 1. PL289: root 2. PL407: all parts; roast first.

Preparation & Application: Boil in water and consume.

Treatment 7. (Y13)**Herbal remedy**

Materials: 1. PL75: root

2. PL305 (white): root

3. PL379: root

Preparation & Application: Sand into rice water and apply topically.

Treatment 8. (B4)**A. Blowing treatment:** typical treatment.**B. Herbal remedy**

Materials: 1. PL287: root

Preparation & Application: Pound fresh and apply topically.

Treatment 11.(B13)

A. Blowing treatment: typical treatment.

B. Herbal remedy

Materials:

- | | | |
|-----------------|-----------------------|-----------------|
| 1. PL79: roots | 4. PL209: bark & wood | 7. PL331: roots |
| 2. PL122: roots | 5. PL281: roots | 8. AN31: shell |
| 3. PL130: roots | 6. PL323: roots | |

Preparation & Application: Boil in water and soak afflicted area in medicine.

B. อะแสดงเอียน (K) ฝีหัวเอียน, ฝีปลาไหล (R)

Traditional healers: Herbalists (Y5, Y11)

Symptoms: This is a stronger than the health condition 6.4A. Abscesses occur at the lymph node areas, like the armpit and pubic area, and has many heads that are very deep in the skin.

Type/Cause of illness: Physiological origin.

Possibility of death: Affirmative. if the medicine is wrong.

Treatment dietary restrictions: fermented fish paste

Treatment: Herbal remedy to steam or treat topically.

Treatment 1. (Y5)

Herbal remedy

Materials: 1. PL121: leaf 2. AN21: whole

Preparation & Application: Boil medicine in rice water and steam abscess.

Treatment 2. (Y11)

Herbal remedy

Materials: 1. PL224: root

2. AN25: cobwebs in grass roof shingles (ชักใยอยู่ในหญ้าคา)

3. AN32: blood

Preparation & Application: Mix together and apply topically to abscess. It will break open and heal.

C. จากระทง (K) ฝีประอาก ฝีปลาต่อ (R)

Traditional healers: Herbalist (Y5)

Symptoms: This is a more difficult to treat than the previous sub-types of this health condition. The symptoms can appear anywhere on the body. The patient will feel pain that races from the head to the feet.

Type/Cause of illness: Physiological origin.

Possibility of death: Affirmative, more easily than the previous abscesses.

Treatment dietary restrictions: snake-head fish (ปลาช่อน).

Treatment 1. (Y5)

Materials: 1. PL358: fruit.

Preparation & Application: Sand the fruit and apply topically.

D. ปกตะกอง (K)

Traditional healers : Herbalist (Y5)

Symptoms: Abscess appears on the neck, underneath the jaw in the tonsil area. This illness is more difficult to treat than the preceding types of abscesses.

Type/Cause of illness: Physiological origin.

Possibility of death: Affirmative. Abscess can squeeze patient's neck until death.

Treatment dietary restrictions: fermented fish paste

Treatment 1. (Y5)

Herbal remedy

Materials: 1. PL317: Root & 'head'

Preparation & Application: Sand into rice water and apply topically.

6.5 กะไลส-น อะเทื่อ-ล, เอาหวัด, อาวัด (K) งูสวัด (R)

Traditional healers: Herbalist, blowing doctors (Y2, Y4, Y6, Y14, B2, B3, B4, B7, B8, B13)

General symptoms: Many swollen blisters with pus will appear on the skin on any part of the body. Blisters are similar to blisters caused by health condition 4.3. The patient will have a fever and feel hot. This health condition cannot heal naturally. Even though the blisters on the skin have disappeared, the illness will still be inside the body and the patient must take remedies to bring the illness outside of the body for treatment.

One main type (A) of this health condition and four sub-types (B-E) have been identified among healers. These are described in more detail below. Healer **B13** lists 4 types, **B4** lists two types, and **Y2** lists three types.

A. เอาหวัด (K) ฐุสวัต (R)

Traditional healers: Y2

Symptoms: There are blisters (ตุ่ม เปื่อย), bumps, and itchy hives on the skin. The infection will be swollen and feel very hot to the patient. The patient will be in great pain throughout their entire body. The infection will spread around the body easily.

B. ฟ่าน้ำ, เอาหวัดเดียะ, ฐุสหวัดน้ำ, บ่าน้ำ (K) ฐุสวัต (R)

Traditional healers: Herbalist, blowing doctors (Y2, B2, B4, B13)

Symptoms: Sometimes the infection will show as white spots on the skin, and the patient will not feel any pain at all. Other times blisters with clear water appear and the patient will ache around the area of the infection. The infection will not feel hot to the patient. It does not spread around the body, and is usually found on the ventral parts of the body. The patient will feel a stinging sensation if the infection is touched.

C. ฟ่านไฟ (R) เอาหวัดดู, ฐุสหวัดไฟ, บ่านไฟ (K)

Traditional healers : Herbalist, blowing doctors (Y2, B2, B4, B13)

Symptoms: This is more painful and difficult to treat than ฟ่านเดียะ. The blisters with clear water will feel very hot to the patient and ache a lot. The patient's entire body

will be hot and painful. The blisters are usually found on the dorsal part of the body. If a patient has both ‘water’ and ‘fire’ *Gnu-sawat*, then the patient will die.

D. อาวัดพรีด (K) ฐสวัตใหญ่ (R)

Traditional healers : blowing doctor (B13)

Symptoms: This is the strongest sub-type. The patient will be in great pain and the symptoms are very difficult to treat. Skin blisters will be very large.

E. อาวัดหกต (K) ฐสวัตน้อย (R)

Traditional healers : blowing doctor (B13)

Symptoms: This is characterized with small blisters.

Type/Cause of illness : Physiological origin.

Possibility of death : Affirmative. Western doctors do not understand this illness and this is dangerous, because the patient can easily die given the wrong medicine. The patient can also die if the patient eats the ‘wrong food,’ the blisters encircle the patients body, or the patient is afflicted for a long time. Before the patient dies, the patient will feel very hot all over their body and tight in the chest

Treatment dietary restrictions: Chicken, beef, alcohol, shrimp, and eel.

Treatments: Healers use a combination of herbal remedies for ingestion and bathing the afflicted area and a blowing treatment. Most of the healers use a general treatment to treat all types of this illness. The only exception is herbalist **Y2** who uses different treatments according to the type of health condition.

Treatment 1. Treat health condition 6.5 A (Y2)

A. Herbal remedy

Materials: 1. PL335: leaves

Preparation & Application: Dry roast the leaves until burnt, then soak in rice water and apply topically to the afflicted area.

B. Herbal remedy

Materials: 1. PL63: dry roasted rice grains

2. PL250: endosperm
3. PL393: sugar (น้ำตาลทราย or น้ำอ้อย)

Preparation & Application: Mix together and consume.

C. Blowing treatment: Typical treatment

D. Herbal remedy

Materials: 1. PL201: leaves.

Preparation & Application: Crush leaves and mix with rice water, then apply topically to infected area. Patient must experiment with both male and female plant to find the plant that works best for their illness. Medicine will make the patient's infection feel cool and comfortable.

Treatment 2. (Y2) Treat health condition 6.5 B & C

Herbal remedy

- Materials: 1. PL264: bark
2. PL365: leaf
 3. AN17: spine

Preparation & Application: Boil in water and consume.

Treatment 3. (Y5)

A. Herbal remedy

Materials: 1. PL63: millets

Preparation & Application: Healer chews and blow on the infection without incantation.

B. Herbal remedy:

Materials: 1. PL376: head

Preparation & Application: Healer chews and blows without incantation.

Treatment 4. (Y6)

A. Herbal remedy

Materials: 1. PL197: root

Preparation & Application: Sand into water and apply topically to infection. Medicine should be placed around infection and pushed towards the center. If medicine is pushed

from one side, then infection will move towards other side.

B. Blowing treatment. Healer uses only incantation.

Treatment 5. (Y14)

Herbal remedy

Materials: 1. PL144: female flower (จวบ)

2. PL228: Dry outer most bark of stem (เกตุติด เปลือกโพธิ์แห้ง)

Preparation & Application: Sand and apply topically.

Treatment 6. (B2)

A. Blowing treatment: typical treatment

B. Herbal remedy

Materials: 1. PL28: root

Preparation & Application: Sand, then place on injury.

Treatment 7. (B4)

A. Herbal remedy

Materials: 1. PL228: bark

Preparation & Application: Sand and apply topically.

B. Blowing treatment

Materials: 1. PL363 : endosperm, dry

Preparation & Application: Healer chews and blows on afflicted area for 2-3 days.

Treatment 8. (B13)

A. Blow treatment : typical treatment

B. Herbal remedy

Materials:

- | | | |
|-----------------|-----------------------|-----------------|
| 1. PL79: roots. | 4. PL209: bark & wood | 7. PL331: roots |
| 2. PL122: roots | 5. PL281: roots | 8. AN31: shell |
| 3. PL130: roots | 6. PL323: roots | |

Preparation & Application: Boil in water and consume.

6.6 เท้าเปื่อย (R)

Traditional healers : Herbalist (Y11)

Symptoms: Skin falls and peels off of feet.

Type/Cause of illness : Physiological origin.

Treatment 1 (Y11)

Herbal remedy

Materials: 1. MI2: small pieces

Preparation & Application: Crush and apply topically.

7. Respiratory system disorders

7.1 วัณโรค (K) โรคปอด (R)

Traditional healers: Healers (Y3, Y12)

Symptoms: Patient aches in the chest, has a headache, coughs (เหาะ (K) ไอ (R)), and blood can emit from the mouth (เลือดออกทางปาก).

Type/Cause of illness: 1. Physiological origin. 1. Spiritual origin: offended house and field spirit and ancestors.

Possibility of death: Affirmative.

Treatment dietary restrictions: chicken, pickled foods

Treatment: Ingested herbal remedy. Spirit healers use ceremony and make offerings.

Treatment 1. (Y3)

Herbal remedy

Materials: 1. PL77: root 2. PL379: root

Preparation & Application: Sand or boil in water and consume.

Treatment 2. (Y12)

Herbal remedy

Materials:

- | | |
|--|-----------------|
| 1. PL7: root | 4. PL394: stalk |
| 2. PL209: heartwood; most important plant of remedy | 5. AN7: piece |
| 3. PL292: head | 6. M16: piece |

Preparation & Application: Boil in water and consume

Treatment 3. (Y11)

Herbal remedy (Treat cough)

Materials: 1. PL321 (red): root

Preparation & Application: Sand into water and consume.

7.2 หอบหืด, หืดะ (K) หอบหืด, หืดะ (R)

Traditional healers : Herbalists (Y3, Y5, Y8, Y11, Y13)

Type/Cause of illness: Physiological origin.

Possibility of death : Affirmative, but takes a long time.

Treatment dietary restrictions: cold water.

Treatment : Ingested herbal remedy.

Treatment 1. (Y3)

Herbal remedy

Materials: 1. PL68: all parts

Preparation & Application: Boil in water and consume.

Treatment 2. (Y5)

Herbal remedy

Materials:

- | | | |
|---------------------|---------------------|------------------------------|
| 1. PL43: root | 3. PL212: heartwood | 5. AN24: hair (ขน) from tail |
| 2. PL211: heartwood | 4. PL392: root | |

Preparation & Application: Sand or soak (do not boil) in water and consume.

Treatment 3. (Y8)

Herbal remedy

Materials: 1. PL301 red flower : root

Preparation & Application: Boil in water and consume one glass a day.

Treatment 4. (Y11)**Herbal remedy**

Materials: 1. PL13: all parts, legume

2. PL83: fruit

3. FU1: all parts

Preparation & Application: Boil in water and consume.

8. Gastro-intestinal disorders**8.1 A. กระเพาะ (R/K)**

Traditional healers: Herbalist (Y2, Y3, Y5, Y8, Y12, Y14)

Symptoms: Effects both children and adults. Swollen stomach, gassy stomach (โปรง , ปี่วะพุง, อีป้ง (K) ท้องอืด ท้องผูก ท้องเฟ้อ (R)), flatulence (แต่ (K) ผายลม (R) สะโอยผอม (Kh)), loss of appetite and weight, constipation, sore throat, pain in bones, hot feeling in stomach, aching stomach and have a feeling that food is not digesting properly. If patient consumes food, it will cause stomachache or vomiting. One herbalist believes that this health condition is often mistaken as health condition 13.11, therefore he also treats health condition 13.11 as health condition 8.1A

Type/Cause of illness: 1. Physiological condition. Originates from ‘wind’ (ลม) in the stomach that is pushing the food up.

Possibility of death: Affirmative, but only if the illness occurs for a very long time or the patient eats the wrong food (ของแสดง)

Treatment dietary restrictions: spicy food, alcohol, beef, pickled foods, rotten, fermented or salty foods, like fermented fish paste, and junk food.

Treatment: All healers use consumed herbal medicines to aid with ingestion (แจะระบาย (K) ยาระบาย (R)) or topical use.

Treatment 1. (Y2)

A. Herbal remedy: Patient is given this medicine first to induce defecation (ถ่ายยา).

Materials: 1. PL29: bark & wood

Preparation & Application: Dry first, then boil. If remedy is not successful, then use the plant fresh to make medicine more potent.

B. Herbal remedy: If the patient has defecated, then the patient is given this remedy to treat gassy stomach (ท้องอืด) and flatulence.

Materials:

- | | | |
|---------------------|--------------------------------------|----------------|
| 1. PL60: heartwood | 4. PL132: heartwood | 7. PL168: root |
| 2. PL92: all parts | 5. PL329: bark; important ingredient | 8. AN18: piece |
| 3. PL103: heartwood | 6. PL399: heartwood | 9. AN26: scale |

Preparation & Application: Sand and consume about 1 large quart.

C. Herbal remedy

Materials:

- | | | |
|--------------------------|------------------------|------------------------|
| 1. PL26: heartwood | 8. PL101: heartwood | 15. PL263: heartwood |
| 2. PL35: root, heartwood | 9. PL103: heartwood | 16. PL265: root |
| 3. PL60: heartwood | 10. PL132: bark & wood | 17. PL286: root |
| 4. PL75: root | 11. PL181: root | 18. PL329: bark & wood |
| 5. PL77: root | 12. PL220: stem, root | 19. PL330: bark & wood |
| 6. PL84: root | 13. PL222: bark | 20. PL331: root |
| 7. PL100: heartwood | 14. PL238: heartwood | 21. PL399: heartwood |

Preparation & Application: Sand different amounts of materials into water, then consume.

Treatment 2. (Y3)**A. Herbal remedy**

Materials:

- | | | |
|-----------------------|-------------------------------|------------------------|
| 1. PL108: bark & wood | 4. PL172: root, bark & wood | 8. PL344: root |
| 2. PL116: root | 5. PL282: root; use minimally | 9. PL358: bark & wood |
| 3. PL152: root | 6. PL297: root | 10. PL369: bark & wood |

7. PL332: bark & wood

Preparation & Application: PL282 should make up one-third of the medicine. Sand and pound into a fine powder or chop the plant into small pieces. Add the medicine to water, then consume.

B. Herbal remedy

Materials: 1. PL282: fruit

Preparation & Application: Suck on the rind.

C. Herbal remedy

Materials:

- | | | |
|----------------------|------------------------|------------------------|
| 1. PL14: bark & wood | 12. PL118: fruit | 23. PL282: fruit |
| 2. PL15: heartwood | 13. PL132: heartwood | 24. PL290: bark & wood |
| 3. PL18: heartwood | 14. PL202: root | 25. PL302: fruit |
| 4. PL46: heartwood | 15. PL205: heartwood | 26. PL321: fruit |
| 5. PL49: 'head' | 16. PL209: heartwood | 27. PL325: root |
| 6. PL66: rhizome | 17. PL215: fruit | 28. PL334: leaf |
| 7. PL91: leaf | 18. PL216: stem | 29. PL363: heartwood |
| 8. PL96: bark & wood | 19. PL219: bark & wood | 30. PL380: heartwood |
| 9. PL100: heartwood | 20. PL227: heartwood | 31. PL390: leaf |
| 10. PL103: heartwood | 21. PL236: leaf | 32. PL400: leaf |
| 11. PL113: root | 22. PL269: bark & wood | |

Preparation & Application: Pound or grind, then boil. Also eat eel (best), chicken, and beef while being treated.

D. Herbal remedy

Materials: 1. PL22: all parts

Preparation & Application: Boil in water and consume.

Treatment 3. (Y5)**A. Herbal remedy**

Materials:

- | | |
|-----------------|------------------------|
| 1. PL204: root | 3. PL314: 'head' |
| 2. PL223: roots | 4. PL353: leaves, root |

2. PL281: root or stem

4. PL377: root

6. PL388: head

Preparation & Application: Boil and consume.

B. Blowing treatment: Healer recites an incantation and blows on patient's stomach. After patient leaves, the healer blows on his own leg each day as part of the treatment.

B. อีปุง (K) ปวดทอง (R)

Traditional healers: Blowing doctors, spirit healer (B7, B10, B12, P4)

Symptoms: Patient experiences aching and swelling in the stomach, uterus and large intestine that also includes weight loss, lack of energy and appetite, lethargy, unresponsive (ซึม), physical discomfort, fever, sleeplessness. Patient may be pregnant and have a painful abdomen or stomachache.

Type/Cause of illness: Spiritual origin: patient may have offended spirits at the rice fields (ผิดเจ้าที่เจ้านา) by making changes at rice field or cursing/yelling at the spirits.

Treatment: The blowing doctors use a blowing treatment and incantation to chase away spirits. One blowing doctor uses a sanded medicine (unknown species) to treat the symptoms. Spirit healers advise the patient to make offerings to spirits or merit at the Buddhist temple.

8.2 แขนงพุง, ลกปุง (K) ท้องร่วง, ท้องปืด, ถ่ายท้อง (R)

Traditional healers: Herbalists, spirit healer (Y3, Y5, Y8, P4)

Symptoms: Stomachache and diarrhea.

Type/Cause of illness: Physiological origin. Spirit origin: offended spirits of rice field.

Possibility of death: Affirmative.

Treatment dietary restrictions: pickled garlic (กระเทียมดอง)

Treatment: Herbal remedy. Spirit healer recommended a patient's family to make offerings to the spirit at the rice fields.

Treatment 1. (Y3)

Herbal remedy

Materials: 1. PL147: all parts

Preparation & Application: Scrub the plant in water and consume 1 spoonful.

Treatment 2. (Y5)

A. Herbal remedy: Used to induce defecation.

Materials: 1. PL81: root

2. PL200: bark

Preparation & Application: Grill bark over fire and soak in water, then consume water.

B. Herbal remedy

Materials: 1. PL353: leaves, root 2. AN21: all parts

Preparation & Application: Boil and consume the water

Treatment 3. (Y8)

Herbal remedy

Materials: 1. PL177: bark

Preparation & Application: Cover with salt, roast on the fire until it is dry, then soak in water. Consume water.

8.3 ขี้เป็นเลือด (R) กลวงสาม (K)

Traditional healers: Herbalist (Y5)

Symptoms: Defecating blood

Type/Cause of illness: Physiological origin.

Possibility of death: Affirmative

Treatment dietary restrictions: frogs and some species of fish

Treatment: Ingested herbal medicine

Treatment 1. (Y5)

A. Herbal remedy

Materials: 1. PL271: roots

Preparation & Application: Boil in water and consume the water.

B. Herbal remedy

Materials: 1. PL200: bark

Preparation & Application: Grill the bark over a fire and soak in water, then consume the

water.

C. Herbal remedy

Materials: 1. PL7: root

Preparation & Application: Boil in water and consume water.

D. Herbal remedy

Materials: 1. PL353: young shoots 2. AN21: all parts

Preparation & Application: Pound together, then chew and consume.

8.4 ขี้หมากเหลือง (R)

Traditional healers: Herbalist (Y5)

Symptoms: Eyes and face are yellow, because the patient will have lack of blood.

Type/Cause of illness: Physiological origin.

Possibility of death: Affirmative.

Treatment dietary restrictions: chicken and beef

Treatment: Ingested herbal medicine.

Treatment 1. Y5

A. Herbal remedy: (Healer no longer uses remedy because it is too difficult to find.)

Materials: 1. AN8: bones

Preparation & Application: Burn and then crush finely. Mix with honey and roll into pellets. Consume.

8.5 อาเจียน (R)

Traditional healers: Herbalist, spirit healer (Y8, P4)

Type/Cause of illness: 1. Physiological origin; 2. Spiritual origin: Rebirth of ancestor.

Treatment: Consumed herbal remedy. Wrist-tying ceremony and offerings to appease spirits.

Treatment 1. (Y8)

Herbal remedy

Materials: 1. PL374: root, leaf.

Preparation & Application: Boil and consume water.

8.6 กลารู, โดระกา, กานตรู (K) กลารู (Y) ไล่เลื่อน, ไล่ลงท่า (R)

Traditional healers : Herbalists, blowing doctors (Y7, Y11, B4, B5)

Symptoms: No energy (หอบ) and easily tired. Men will ache in the testicles.

Type/Cause of illness: Physiological origin. Illness can be caused by doing hard manual labor.

Possibility of death : Affirmative.

Treatment dietary restrictions: None.

Treatment: Ingested herbal medicine. Blowing doctors use a typical blowing treatment and massage (at the testicles and pushing upwards).

Treatment 1. (Y7)

Herbal remedy

Materials: 1. PL305 (male & female) : root

Preparation & Application: Sand with water and consume.

Treatment 2. (Y11)

Herbal remedy

Materials: 1. PL196: heartwood

Preparation & Application: Boil in water and consume.

8.7 สะดวง (Y) ริดสีดวง, ริดสีดวงทวาร, ริดสีดวงลำไส้ (R)

Traditional healers : Herbalists (Y1, Y3, Y4, Y5, Y10, Y11, Y13, Y14)

Symptoms: Lump protrudes from the anus and/or there are sores around anus. It is painful to defecate, and blood comes out during defecation. If illness is very strong, patient will be nauseated and blood will flow from the anus.

Type/Cause of illness: Physiological origin. It can be caused if a person drinks whisky and beer together.

Possibility of death : Affirmative, but it is difficult to die.

Treatment dietary restrictions: whisky, catfish, and duck.

Treatment : Ingested herbal remedy.

Treatment 1. (Y3)

Herbal remedy

Materials: 1. PL50: root, leaf 2. PL281: root

Preparation & Application: Boil and consume water.

Treatment 2. (Y5)

Herbal remedy

Materials:

- | | |
|---------------------------------|-----------------|
| 1. PL80: 'head' | 3. PL256: root |
| 2. PL208 (with no thorns): root | 4. PL394: stalk |

Preparation & Application: Boil in water and consume.

Treatment 3. (Y11)

Herbal remedy

Materials: 1. PL180: stem; steam first

2 PL363 : root

3. AN22: nest (ꠘꠘ)

Preparation & Application: Boil in water and consume.

Treatment 4. (Y13)

Herbal remedy

Materials:

- | | |
|-----------------------------|-------------------------------------|
| 1. PL322: root | 4. PL305 (white): bark & wood, root |
| 2. PL178: root, stem | 5. PL260: bark & wood, root |
| 3. PL379: root, bark & wood | |

Preparation & Application : Boil in water and consume.

Treatment 5. (Y14)

Herbal treatment

Materials:

- | | |
|--|------------------|
| 1. PL226: bark & wood | 3. PL254: bark |
| 2. PL250 with young plant shoot: endosperm | 4. PL292: 'head' |

Preparation & Application: Dry and pound together into a powder. Put into capsules and consume.

9. Otolaryngeal disorders

9.1 ภาวะหลอด / ภาวะลม (K) คอตีบ (R)

Traditional healers: Herbalists (Y4, Y7, Y12)

Symptoms: Throat closes up and the patient has difficulty breathing, talking, swallowing, eating and drinking. The patient may also have seizures.

Type/Cause of illness: Physiological origin.

Possibility of death: Affirmative, in the case that the patient cannot breathe.

Treatment dietary restrictions: fermented fish paste, chicken

Treatment: Ingested herbal remedy.

Treatment 1. (Y7)

Herbal remedy

Materials:

- | | | |
|---------------|----------------|----------------------------|
| 1. PL12: root | 3. PL77: root | 5. AN5: foot (เดือย) |
| 2. PL75: root | 4. PL353: root | 6. AN15: nail (เล็บ), foot |

Preparation & Application: Sand in water and consume. .

Treatment 2. (Y12)

Herbal remedy: Must use a spoon to place in the patients mouth, so that the patient will not swallow his/her tongue.

Materials: 1. AN5: foot (เดือย) 2. AN1: jaw bone (คาง)

Preparation & Application: Sand in water. It is best for patient to swallow the medicine, but usually the patient can only hold the treatment in their mouth.

9.2 ตะกอนโป๊, กองบัว (K) คอพอก (R)

Traditional healers: Herbalists, blowing doctors (Y3, Y5, Y11, B4, B5)

Symptoms: Swollen neck, and often exhibiting a large protruding bump.

Type/Cause of illness: Physiological origin.

Possibility of death: The herbalists state, affirmative. The patient can die if the illness goes further into other parts of the body, but this is rare. The throat can also become so swollen (อะป้าปลองปลอง (K), คอบวม (R)) that it constricts and prevents breathing. The blowing doctors state, negative.

Treatment dietary restrictions: None.

Treatment : Herbal remedy is ingested or applied topically. Both blowing doctors use a typical blowing treatment. One healer states that he can only treat this illness if it is still small and in the beginning stage.

Treatment 1. (Y3)

Herbal remedy

- Materials: 1. PL51: bark & wood, root
 2. PL301: bark & wood
 3. PL384: bark & wood (hard to find)

Preparation & Application: Prepare this in 2 PL384 : 2 PL51: 1 PL301 ratios. Consume once each day, before going to sleep for the night.

Precautions: If the patient ingests too much PL384 or combines the remedy with western medicine, it will cause the patient to defecate constantly. The patient must drink 1-2 cups of hot water to remedy this side effect. If the patient ingests too much PL301, it can cause a heart attack. Therefore, when the patient has been cured from the goiter, the patient must stop taking the remedy immediately.

Treatment 2. (Y5)

Herbal remedy

- Materials: 1. PL74: rhizome 2. PL174: rhizome

Preparation & Application: Pound fresh and apply topically to afflicted area.

Treatment 3. (Y11)

Herbal remedy

- Materials: 1. PL250: oil
 2. AN28: oil; not necessary but increases effectiveness of remedy

Preparation & Application: Apply topically.

9.3 อีตะกัว (K) คางตุ้ม / คางทும், ปวดคอ, เป็นสารพาก (R)

Traditional healers : Blowing doctors. B2, B4, B5, B10

Symptoms: Patient will experience a sore throat and aching in their ears. It is similar to health condition 9.2, because the neck swells up on either side under the jaw.

Type/Cause of illness : Physical ailment and caused by spirits.

Possibility of death : Negative.

Treatment : All healers use a typical blowing treatment. One healer uses a unique treatment involving blowing methods.

Treatment 1. (B4)

Blowing treatment

Materials: 1. PL216: leaf 2. AN30: slaked lime

Preparation & Application: Wipe slaked lime on the leaf. Then speak this incantation: อะ อะ อะ นะ โหม พุทธชายะ and blow on the leaf. Wipe the ฆูน across the neck once, and then break the leaf and throw it away.

9.4 เป็นกลาง (K) ปากเปื่อย (R)

Traditional healers : Herbalists (Y3, Y4, Y5, Y11)

Symptoms : Patient has painful bumps (อินต๊ะ (K) คุ่มบนลิ้น (R)), blisters, and sores on and under the tongue and inside the mouth and their saliva runs.

Type/Cause of illness: Physiological origin, which can be caused by health conditions 4.1, 4.2, and 13.1. It can also be caused by ‘being cursed’ (ถูกของ).

Possibility of death: Affirmative, for example, patient cannot open mouth to eat.

Treatment dietary restrictions: fermented fish paste, papaya, chicken, pork, beef.

Treatment : Most of the healers use an herbal mouthwash or give the patient a medicinal plants to hold in the mouth. Healers also use a blowing treatment. A ceremony and offerings can be used to treat the illness if it is caused by spirits. If the afflicted area is healing, the blisters will become itchy and then peel off. If blisters are the result of ‘being

cursed,' one healer mentioned superstitious methods of treatment, such as placing a sarong over the head and walking under a house seven times.

Treatment 1. (Y3)

Herbal remedy

Materials: 1. PL188: fruit

Preparation & Application: Mix with lime juice and wash out the mouth.

Treatment 2.(Y5)

A. Herbal remedy: Healer tries this treatment first.

Materials: 1. PL191: bark

Preparation & Application: Suck and chew. If this treatment is not successful, then the healer uses the next remedy.

B. Herbal remedy: Healer tries this treatment second.

Materials: 1 PL86: bark

Preparation & Application: Suck and chew.

C. Herbal remedy: Used to treat ulcers in mouth that result from hot fever:

Materials: 1. PL275: fruit

Preparation & Application: Chew fresh.

Treatment 3. (Y5) Used to treat blisters in mouth caused by 'being cursed.'

A. Spiritual treatment: Make offerings.

B. Herbal treatment

Materials: 1. PL346: bark & wood

Preparation & Application: Sand in water and consume.

Treatment 4. (Y11)

A. Blowing treatment. Healer uses incantation only.

B. Herbal treatment

Materials:

1. PL106: bark & wood

4. PL281: root

2. PL125: bark & wood

5. PL339: seeds

3. PL228: leaves

6. PL372: fruit, leaves

Preparation & Application: Scrub (ขยี้) leaves into water. Pound the remaining medicines together, then steam over hot water. Mix both medicines together. Use cotton to apply medicine by soaking cotton in water and then placing in patient's mouth to hold (อม).

Bumps will become itchy and peel off (ลอก), which indicates the patient is recovering.

9.5 อีกะเนง (K) ปวดฟัน (R)

Traditional healers: Herbalists (Y5, Y11)

Symptoms: Aching and pain around teeth and gums.

Type/Cause of illness: Physiological origin.

Treatment: Herbal remedy that is chewed.

Treatment 1. (Y5)

A. Herbal remedy

Materials: 1. PL199: leaf

Preparation & Application: Chew fresh.

B. Herbal remedy

Materials: 1. PL204: root

Preparation & Application: Chew fresh.

Treatment 2. (Y11)

Herbal remedy

Materials: 1. PL2: piece

2. PL345: any part

3. PL407: rhizome

Preparation & Application: Chew fresh.

9.6 กะเนง (K) ทะเนง (Kh) รำมะนาด (R)

Traditional healers: herbalists (Y2, Y12)

Symptoms: Effects mostly women. Blood comes out from gums and teeth. Similar to health condition 13.11, because it persists for a long time and is difficult to treat.

Type/Cause of illness: Physiological origins.

Possibility of death: Affirmative & Negative

Treatment dietary restrictions: tunafish (ปลาทู), fermented fish paste, eel, snakehead fish, and alcohol

Treatment : Ingested herbal remedy.

Treatment 1. (Y2)

Herbal remedy

- Materials:
1. PL35: heartwood
 2. PL132: heartwood
 3. PL181: root

Preparation & Application: Sand and consume.

Treatment 2. (Y12)

Herbal remedy

Materials:

- | | |
|----------------------|---|
| 1. PL16: cloves | 4. PL160: young shoot (ยอด) |
| 2. PL44: young shoot | 5. PL180: stem, as big as tip of pinky finger |
| 3. PL66: rhizome | |

Preparation & Application: Seven pieces of each medicine is placed into a bamboo with water and boiled. Then, patient consumes half a quart of medicine, which is sufficient for recovery.

9.7 กะเนาะเฮาะ (K) ปากเบี้ยว (R)

Traditional healers: Herbalist (Y3)

Symptoms: Crooked mouth.

Type/Cause of illness: Spiritual origin. Result of bad karma.

Possibility of death: Negative.

Treatment: Ceremony and offerings (ทำสังฆทาน) at Buddhist temple.

9.8 ตะเนาะมะนะ (K) ปากเหม็น (R)

Traditional healers: Herbalist (Y13)

Symptoms: Bad breath, especially in the morning.

Type/Cause of illness: Physiological origin.

Possibility of death: Negative.

Treatment 1 (Y13)

Herbal remedy

Materials: 1. PL379: all parts

Preparation & Application: Boil in water and consume before going to sleep. In the morning, the patient will not have a bad breath.

10. Illnesses associated with seizures

10.1 มองละ (K) โรคลมบ้าหมู, ลมชัก (R)

Traditional healers: Herbalists, blowing doctor (Y1, Y3, Y4, Y7, B12)

Symptoms: Seizures, shaking, speaking gibberish, and foaming at the mouth. Two healers identified specialized types of seizures found in adults or children (see below)

Type/Cause of illness: 1. Physiological origin, which can be caused by ‘eating the wrong food’ (กินของผิด). 2. Spiritual origin.

Treatment: Ingested herbal remedy. The blowing doctor conducts a blowing treatment and spiritual ceremony to chase away evil spirits.

Treatment 1. (Y3)

A. Herbal remedy: This remedy is prepared in two steps.

Materials:

- | | |
|----------------|----------------|
| 1. PL37: root | 3. PL315: root |
| 2. PL163: root | 4. PL388: root |

Preparation & Application: Boil in water and consume. If this remedy is correct for this disease the patient will urinate often.

5. PL39: bark & wood

Preparation & Application: Boil in water; consume to ‘wash out’ system (ยาล้าง).

B. Herbal remedy

Materials: 1. PL48: all parts

2. PL133: all parts

3. PL164: all parts

Preparation & Application: Prepare the plants in 4 baht weights, then boil in water and consume.

C. Herbal remedy

Materials: 1. PL244: bark & wood

2. PL246: heartwood

3. PL252: heartwood

Preparation & Application: Boil in water and consume.

Treatment 2. (B12)

A. Blowing treatment: Typical treatment

B. Spiritual treatment

Materials: 1. PL112: bark & wood

Preparation & Application: Tie black and white thread around the plant, then tie around the patient’s neck.

10.2 A. ชัก (K/Y/R)

Traditional healers: Herbalist, spirit healer (Y7, P4)

Symptoms: Effects only adults. Half of body is shaking and convulsing with seizures.

Legs and arms have no feeling (ชา).

Diagnosis: Physical ailment

Possibility of death: Affirmative. Can die in one day.

Treatment: Herbalists prepare ingested herbal remedies. Spirit healers advise patients to organize 3-day ceremony (ตั้งแพรว) and make merit at a Buddhist temple.

Treatment 1. (Y7)**Herbal remedy**

- Materials: 1. PL51: heartwood
 2. PL305 (M & F): root
 3. ยาร้อน (mixture of purchased medicine): one spoonful

Preparation & Application: Boil in water and consume 4-5 pots.

B. เด็กชัก (K/R)

Traditional healers: Herbalists (Y3, Y7)

Symptoms: Effects only children. Seizures, fever and hot body.

Diagnosis: Physical ailment.

Possibility of death: Affirmative.

Treatment: Edible and topical herbal remedy.

Treatment 1. (Y3)**Herbal remedy**

Materials: 1. PL194: heartwood

Preparation & Application: Sand into water and consume.

Treatment 2. (Y7)**Herbal remedy**

Materials: 1. PL206: leaf

2. PL274: leaf

Preparation & Application: Soak in water; apply topically to back and head.

11. Sensory System Disorders**11.1 มาดกะเขา, มัดตะเรา (K) ตาแดง, เจ็บตา (R)**

Traditional healers: Herbalists, blowing doctors (Y5, Y13, B2, B4, B8, B10, B14)

Symptoms: Can afflict animals and people. Red or painful eyes.

Type/Cause of illness: Physiological origin.

Possibility of death: Most healers state, Negative, but one states, affirmative.

Treatment dietary restrictions: chilies and fermented fish paste. These will cause the eyes to itch and ache.

Treatment: All healers use a blowing treatment to blow into the eyes. The herbalists do not use an incantation and depend on a specific type of medicinal plants. On the other hand the blowing doctors usually rely on the incantation. They all use an incantation, and some combine the use of medicinal plants. It is notable that all the healers deviate from their typical methods for treating health conditions. The herbalists use only blowing treatments. Blowing doctors use different materia medica from the typical treatment, only the *Piper betle* leaf, or no materials at all.

Treatment 1. (Y5)

A. Blowing treatment

Materials: 1. PL82: leaves

Preparation & Application: Pound and squeeze into water. Put on a leaf, then roll it into a tube and blow the medicine into the patient's eyes.

B. Blowing treatment:

Materials: 1. PL80: heartwood

Preparation & Application: Heartwood is peeled off and dried. The patient smokes the medicine and covers his/her head with a cloth and exhales the smoke so that it passes into the eyes.

Treatment 2. (Y13)

Blowing treatment

Materials: 1. PL89: root

Preparation & Application: Use one root. Healer chews the medicine and blows into the patient eyes (without incantation).

Treatment 3. (B2)

Blowing treatment

Materials: 1. PL72 root; 7 pieces (1" lengths);

2. Betel chew (PL363, PL216, AN30)

Preparation & Application: Healers chews, recites and incantation and blows into the

patients eyes. The healer must treat before eating so that food that has just been eaten, such as chilies, will not be blown into eyes. The patient will recover in about four days.

Treatment 4. (B4)

Blowing treatment

Materials: 1. PL16: clove 2. PL216: leaf

Preparation & Application: Healer chews the garlic, recites incantation, then blows through the rolled up leaf into the patient's eyes.

11.2 ไส้มีองแกะ (K) ตาลัน (R)

Traditional healers: Herbalist (Y11)

Symptoms: Short-sightedness

Type/Cause of illness: Physiological origin.

Treatment 1. (Y11)

Herbal remedy

Materials: 1. PL36: all parts

2. PL393: sugar (น้ำตาลแดง); not necessary but helpful

Preparation & Application: Boil in water and consume.

11.3 อีกะตอ-ล (K) ปวด/เจ็บ หู (R)

Traditional healers : Herbalist (Y5)

Symptoms : Pain and aching in inner ear.

Type/Cause of illness : Physiological origin.

Possibility of death : Negative

Treatment dietary restrictions : fermented fish paste

Treatment 1 (Y5)

Herbal remedy

Materials: 1. PL338 (red & white varieties) flower or 'head'

Preparation & Application: Squeeze water from flower or 'head' and drip (หยอด) into ear.

12. Spiritual illnesses

12.1 เขี้ยว (K) ยาม (Y) เด็กร้องไห้ (R)

Traditional healers: Herbalists, blowing doctors, spirit healers (Y5, Y7, Y13, B7, B8, B9, B10, P1, P2, P3, P4)

Symptoms: Small children cry constantly and show loss of appetite, stomachache, illness, and general discomfort. Children may be sitting normally, and then suddenly start to cry. They become more and more pale, and can die within 2 hours. Sometimes the patient exhibits odd behaviour, for example, carrying a bag everywhere or not allowing people to enter the house.

Type/Cause of illness: Spiritual origin, for example, patient is possessed by an evil spirit, spirits of relatives are seeking to take the child (death), a spirit is hungry and wants to eat (offerings), or a 'house' or 'field' spirit has been offended. If the child exhibits strange behaviour, the child may be a rebirth of an ancestor.

Possibility of death: Affirmative. Patient can die very quickly.

Treatment dietary restrictions: None.

Treatment: Herbalists use herbal remedies for ingestion. The blowing doctors use a blowing treatment and incantation, with or without *Piper betle* leaf, *Areca catechu* nut and slaked lime, and often tie a string with an incantation around the patients neck for protection. Spirit healers conduct a ceremony and advise the patient's family to make offerings, build a spirit house, change some behavior to appease the spritis, or provide the patient with an item from the time of the ancestor, in the case that the child is a rebirth of an ancestor. Both blowing doctors and spirit healers may conduct ceremonies and treatments regularly on *Wan Phrat* to protect children against spirits and chase away spirits.

Treatment 1. (Y5)

A. Herbal remedy

- Materials: 1. PL292: head; good to add, but not necessary
 2. PL343: bark & wood, root; primary plant for remedy
 3. PL394: stalk

Preparation & Application: Boil in water and consume to chase away evil spirits.

B. Spiritual treatment:

Materials: 1. PL204: bark & wood, roots

Preparation & Application: Prepare the plant parts in three equal pieces. Four pieces of black cotton thread and 3 or 5 pieces of white cotton thread are tied around the roots. This amulet should be kept close to the patient for protection against spirits.

C. Blowing remedy

Materials: 1. PL204: bark & wood, roots

Preparation & Application: Healer chews, recites an incantation and blows over the patient to chase away evil spirits.

Treatment 2. (Y7)

Herbal remedy

Materials: 1. PL97: root

Preparation & Application: Soak root in water and have children drink.

Treatment 3. (Y13)

Herbal remedy

Materials: 1. PL166: root

Preparation & Application: Tie the root to the bed of the patient.

12.2 กัดโอมง, โมง (K) ประสาท, บ้า, บะสารถ้อน, ความดัน (R)

Traditional healers: Herbalists, blowing doctors, spirit healers (Y1, Y2, Y3, Y4, Y11, B10, P1, P2)

Symptoms: One patient was addicted to amphetamines, and was considered crazy. Patient may also sit very still and not move, drink a lot of alcohol, cannot walk or remember people, talks all the time, has a bad memory, hallucinate and other signs of mental instability.

Type/Cause of illness : 1. Physiological origin. The illness can be naturally occurring or caused by addiction to drugs or naturally occurring. 2. Spiritual origin. The illness can be caused by offended house, field, and LPF spirits or a spirit may be coming to 'stay' with the patient.

Possibility of death: Affirmative, but very difficult.

Treatment: Herbalists often use remedies that are tonics for increasing strength. Herbalists use herbal remedies that are ingested. The blowing doctor gives a blowing treatment with or without the plant materials (*Piper betle* leaf, *Areca catechu* nut and slaked lime) and with an incantation to chase away spirits and advises the patient to make offerings to spirits. The spirit healer recommends for a patient to seek out another healer to remove curse, conducts a spirit ceremony, or advises the patient to make offerings in order to appease offended spirits.

Treatment 1. (Y2)

Herbal remedy

Materials:

- | | | |
|---------------------|---------------------|---------------------------|
| 1. PL60: heartwood | 4. PL149: heartwood | 7. PL220: root, all parts |
| 2. PL84: root | 5. PL103: heartwood | 8. PL328: bark & wood |
| 3. PL100: heartwood | 6. PL132: heartwood | |

Preparation & Application: Sand into water and consume as much as possible.

Treatment 2. (Y3)

A. Herbal remedy

- Materials:
1. PL48: all parts
 2. PL133: all parts
 3. PL164: all parts

Preparation & Application: Use 1 baht weight of each plant. Boil in water and consume.

B. Herbal remedy

Materials:

- | | |
|---------------------|----------------|
| 1. PL50: root | 3. PL323: root |
| 2. PL132: heartwood | 4. PL374: root |

Preparation & Application: Boil in water and consume.

C. Herbal remedy

Materials: 1. PL333: เหง้า

Preparation & Application: Soak, boil, or Sand in water and consume.

D. Herbal remedy

Materials:

- | | |
|---------------------|-----------------------|
| 1. PL140: heartwood | 3. PL172: bark & wood |
| 2. PL148: root | 4. PL351: bark & wood |

Preparation & Application: Boil in water and consume.

E. Spirit treatment: Patient makes offerings (ทำสังฆทาน) to appease spirits.

12.3 กัณฑ์ฆมด (K) กัณฑ์กัณฑ์พราย (R) (see health condition 12.1)

Traditional healers: Herbalists, blowing doctors, spirit healers (Y5, Y11, Y12, B8, B12, P3, Aj3)

Description: Treatment used to protect new born babies from spirits, ensure overall good health for the next few years for a single person or family, and chase away evil spirits.

Type/Cause of illness: Spiritual origin.

Possibility of death : Healers state both, Affirmative and Negative.

Treatment dietary restrictions: Oranges, papaya, boiled egg, spicy papaya salad.

Treatment: Blowing doctor **B12** conducts a typical blowing treatment for both the mother and child. Then, he ties the plant part around the neck of the mother and child. Another spirit healer uses a similar method by conducting a similar blowing treatment with incantation and tying a stem of กลอยจืด (PL21) around the patient's neck. This type of treatment is often conducted on *Wan Phrat* for small children until they three years old.

Blowing doctors conduct a blowing treatment and ceremony for new born babies, which involve incantation and plant materials such as thorns and lemongrass. Another spirit healer conducts a ceremony to 'accept the spirit of the child' (รับขวัญเด็ก). Other spirit healers conduct LPT ceremonies to protect a household from spirits.

12.4 เวียนหัว เวียนตา, เป็นลม (R)

Traditional healers: Spirit healers (P4, Aj1)

Symptoms: Patient suffers from dizziness, fainting, and headache and tires easily.

Type/Cause of illness: Spiritual origin, such as offended house, field spirits and spirits of ancestors.

Treatment : Patient is advised to mollify spirits by making offerings at a spirit house or altar, make merit at a Buddhist temple by getting blessed with holy water and wearing white clothes, and organize a LPT ceremony.

12.5 ป่วย, ไม่สบาย (R)

Traditional healers : Blowing doctors, spirit healers (B10, P1, P2, P4, P7, Aj1, Aj3)

Symptoms: Patient is ill and tired and has aching eyes and body, overall physical discomfort, lack of energy, headache, fever, and stomachache. Symptoms carry on for a long time with no relief.

Type/Cause of illness: Spiritual origin. Spirits of the house and field and LPT spirits can be offended by making changes in the rice field without permission, fighting among family members, and marriage without paying the proper respects to the spirits. Other causes may be that the patient's spirit (ขวัญ) has gone, patient is close to death, a spirit is coming to 'stay' with the patient, and a spirit wants to take the patient (death).

Possibility of death: Affirmative.

Treatment dietary restrictions: Depends on the patient.

Treatment: Blowing doctors conduct ceremonies on *Wan Phrat* for treatment, by reciting incantation and blowing on the patient's head and tying a white cotton string around the patient's neck. Spirit healers advise the patient to take certain actions such as, make offerings to mollify offended spirits, make merit at the Buddhist temple, and organize a LPT ceremony.

12.6 ภาวะหูแว่ว (K) พูดไม่ได้ (R)

Traditional healers: Blowing healer, spirit healers. (B15, P2, P4)

Symptoms: Patient is unable to speak.

Possibility of death: Affirmative.

Type/Cause of illness: Can be the result of an acute accident. In the case that no accident has occurred, it may result from spirit interference such as, evil spirits, LPT spirits, or ancestral spirits.

Treatment dietary restrictions: None.

Treatment: The Blowing doctor can only treat patients who have been affected by an injury.

In this case, the healer uses a typical blowing remedy, with the bark of *พะยอบ* included in the chew, until the injury has healed.

Spirit healers advise the patient to conduct a ceremony to pay respects to spirits and make offerings to the spirits, rectify bad behavior on the patient's part and ask for forgiveness via offerings, or organize a LPT ceremony.

12.7 No name given

Traditional healers: Herbalists, blowing doctor, spirit healers (Y11, Y13, B10, P2, P3)

Symptoms: Inability to speak, stand or sit, open eyes, eat or drink, sleep.

Type/Cause of illness: Spiritual origin. The illness may be caused by possession by evil spirits (ปลอบเข้า, T, มะนะมุด, ปุยกะโมย, K), offended LPT spirits, house spirits, or ancestors, and a spirit asking for food and drink (offerings).

Possibility of death: Affirmative.

Treatment: Patient advised to organize ceremonies, such as LPT ceremony, and make offerings to mollify spirits. Blowing doctor conducts blowing treatment to chase away spirits. Healer will recite an incantation and ties cotton string around the wrists and ankles to induce the patient to say the spirit's name, which will cause it to leave. The two herbalists use ingested herbal remedies to exorcise evil spirits.

Treatment 1. (Y11)

Herbal remedy: Exorcise evil spirits.

Materials: 1. PL249: root

Preparation & Application: Sand into water and consume. The patient will say the spirit's name and the spirit will leave the patient.

Treatment 2. (Y13)

Herbal remedy: Exorcise evil spirits.

Materials: 1. AN11: dried head

Preparation & Application: Sand with lime juice and place medicine in the mouth of the patient.

12.8 No name given

Traditional healers: Spirit healers (P2, P4)

Symptoms: A variety of symptoms, for example, one patient suddenly had feelings to sing and dance and another patient felt afraid and nervous around her husband, who was strangely irritable.

Type/Cause of illness: Spiritual origin. One patient's son was married without conducting the appropriate ceremonies for the house spirits and the other patient's husband had been cursed (โดนของ).

Treatment: Ceremony and make offerings.

13. Unclassified health conditions

13.1 A. จามาละ / ลอ, เตื่อ, จาลอ, จาลัวะ , งานอั้งเตจาโดย (K) จามาละ / ลอ, ลัว, เลาะสมอด (Y) กิณของผิดตำแลง, อาหาร แสลง/ ตำแลง/ พิด, ของ แสลง/ ตำแลง, กิณอาหารผิด (R)

Traditional healers: Herbalist, blowing doctors (Y2, Y3, Y4, Y5, Y7, Y12, B9, B10, B13)

Symptoms: This is a broad category of disease that effects both men and women. The symptoms of the patient's disease (any type) may become stronger. Patient may have a headache (อึปลอ (K) ซ็อกบา-ล (Kh); stomachache; dizziness (ทะออ, (K) กะอู้ด (Kh), which may become so strong that it induces vomiting; low energy and sleeps a lot; diarrhea (โถ้ลปะปุง (K) เจาะบัวะ / เร็ยะอู้ด (Kh) and vomiting; high fever; seizures; become crazy; and flatulence (โประปุง (K) ฮอ-ล บัวะ / เขิมบัวะ (Kh).

Children who have health condition 4.2 and eat the wrong foods can die.

Type/Cause of illness: Physiological origin. There are two ways to be afflicted with this illness. 1. A person can eat food that is 'wrong' for them, and 2. A person who is ill with another disease can eat food that is 'wrong' for the patient and the disease. This will cause the patient increase the severity of their current illness or develop other symptoms.

Possibility of death : Affirmative. For example, from seizures.

Treatment dietary restrictions: Varies according to the disease and the patient. Cannot eat anything cold. All of the health conditions listed in this glossary have a variable entitled ‘Treatment dietary restrictions’. These are the food that should be avoided or the patient will become afflicted with the symptoms that are described in under this health condition.

Notes: Some healers refer to both this health condition and the following health condition, which is similar but effects women. Therefore it is possible that some of these description and treatments are also applicable to the following health condition.

B. สะมอด, สะบูน, สะโบน (K) เลาะสมอด (Y) ผิดสำบูน / สะบูน, กะบูน (R)

Traditional healers: Herbalists (Y5, Y11, Y12, Y13)

Description: This illness does not afflict men or women who have never given birth. It only effects women who are pregnant, have just given birth, or have given birth at one time in their life. Most women are effected just after they give birth. One healer treats all women who have just given birth, as to ward off the possibility of this illness and to increase their appetite, because new mothers are vulnerable to illness. A sub-type of this illness is called กระบูนหอยอน (R) and it is related to the woman’s menstruation period.

Symptoms: Patient may exhibit vomiting, headache, aching breasts, dizziness, diarrhea, flatulence, low energy, easily tired, fever and health conditions 8.6 and 12.2. New mothers may exhibit no milk for children, low appetite, thinness, and nausea. The uterus feels heavy (to the patient). If the patient can’t open their mouth, it means that the health condition is very strong and that the patient will probably die.

Diagnosis: Physiological origin, related to the uterus and tendons.

Possibility of death: Most healers state, affirmative, and patients can die easily and quickly. One healer states, negative, but patient will become crazy.

Treatment dietary restrictions: Depends on the disease. Pickled foods.

Treatments: All treatments listed below can be used for both types of health conditions

unless otherwise stated. These treatments include, ingested herbal remedy, herbal remedy for bathing the body, massage and blowing treatment. It is notable that even blowing doctors rely on herbal remedies to treat this health condition.

Treatment 1. (Y2)

A. Herbal remedy: The patient is also asked to smell the Sand medicine and whatever smells good to the patient is added.

Materials:

- | | | |
|--------------------------|------------------------|------------------------|
| 1. PL26: heartwood | 8. PL101: heartwood | 15. PL263: heartwood |
| 2. PL35: root, heartwood | 9. PL103: heartwood | 16. PL265: root |
| 3. PL75: root | 10. PL132: bark & wood | 17. PL286: root |
| 4. PL60: heartwood | 11. PL181: root | 18. PL329: bark & wood |
| 5. PL77: root | 12. PL220: stem, root | 19. PL330: bark & wood |
| 6. PL84: root | 13. PL222: bark | 20. PL331: root |
| 7. PL100: heartwood | 14. PL238: heartwood | 21. PL399: heartwood |

Add the following medicine if the blood of the patient is not good.

22. PL203: heartwood

Preparation & Application: Sand different amounts of the plants into water and consume and/or bathe in the medicine.

B. Herbal remedy

Materials:

- | | |
|---|---|
| 1. PL35: heartwood | 7. PL233: root |
| 2. PL60: heartwood; but not necessary | 8. PL234: root, but not necessary |
| 3. PL103: heartwood | 9. PL286: root |
| 4. PL104 red flower: root | 10. PL324: root |
| 5. PL132: heartwood | 11. PL399: heartwood; but not necessary |
| 6. PL220: root or all parts; use minimal amount | |

Preparation & Application: Sand into water and consume.

Treatment 2. (Y5) There are many treatments. Healer tries remedies until she finds one that is ‘right’ for the patient.

A. Massage treatment: All patients are massaged.

B. Herbal remedy: She likes this remedy best, because it is easy to find.

Materials: 1. PL168: root

2. PL77, PL75 & PL76: root (there are 32 different species of ឃីង and the best remedy would include all these species).

Preparation & Application: Boil and consume.

C. Herbal remedy: This is a good remedy, but often hard to find.

Materials: 1. PL72: root 2. PL73: root

Preparation & Application: Boil and consume.

D. Herbal remedy

Materials: 1. PL269: bark & wood, root 2. PL352: root

Preparation & Application: Pound and mix with honey and consume. If there is no honey, then boil with water and ingest. Honey that is collected in April is the best kind of honey to use.

E. Herbal remedy: Used to treat uterus, which can be the cause of the illness.

Materials: 1. PL178: root 2. PL367: root

Preparation & Application: Boil and consume.

F. Herbal remedy

Materials: 1. PL150 (male and female) : roots

Preparation & Application: Boil and consume.

G. Herbal remedy: This remedy treats uterus, which can be the cause of illness.

Materials:

- | | | |
|--------------------|---------------------|---------------------------|
| 1. PL24: heartwood | 3. PL127: heartwood | 5. PL199: bark, heartwood |
| 2. PL65: root | 4. PL143: heartwood | |

Preparation & Application: Boil and consume or bathe in the medicine.

H. Herbal remedy: This remedy is most appropriate for treating women who have just given birth.

Materials: 1. PL140: heartwood

2. PL143: heartwood

3. PL199: heartwood

Preparation & Application: Boil and consume or bathe in the medicine.

Treatment 3. (Y3)**Herbal remedy**

Materials: 1. PL21: root

Preparation & Application: Sand into drinking water and consume.

Treatment 4. (Y7)**Herbal remedy**

Materials: 1. PL142: root .

2. PL171: root

3. PL247: root

Preparation & Application: Sand into drinking water and consume.

Treatment 5. (Y12)**A. Herbal remedy**

Materials:

1. PL100: heartwood; use little

5. PL361: root; use alot

2. PL101: heartwood; use little

6. AN27: shell

3. PL279: wood; use very little

7. AN31: shell

4. PL289: root; use alot

Preparation & Application: Sand into drinking water and consume.

B. Herbal remedy

Materials:

1. PL229: stem

3. AN11: bile (बिलि) from gall bladder

2. PL303: wood

4. MI3: piece

Preparation & Application: Sand into drinking water and consume.

Treatment 6. (B13)**A. Herbal remedy**

Materials:

1. PL79: roots.

4. PL209: bark & wood

7. PL323: :roots

2. PL122: roots 5. PL281: roots 8. AN31: shell
 3. PL130: roots 6. PL331: roots

Preparation & Application: Boil and consume.

B. Herbal remedy

Materials: 1. PL179: roots

Preparation & Application: Boil in water and consume.

C. Blowing treatment: typical treatment

Treatment 7. (Y11)

A. Herbal remedy: Used to treat health condition 13.1 B. during menstruation.

Materials: 1. PL52: heartwood

Preparation & Application: Boil in water and consume.

B. Herbal remedy: Used to treat health condition 13.1 B. during menstruation.

Materials: 1. PL36: all parts

2. PL278: root

3. PL345: all parts

Preparation & Application: Boil in water and consume 3 pots.

C. Herbal remedy: Used to treat health condition 13.1 B. Must take medicine to induce defecation before taking this remedy. There should be blood in feces.

Materials: 1. PL51: bark & wood

2. PL213: bark & wood, fruit

3. There are many other plants used, but not more than 30. Each woman is different and must use different combinations of medicine.

Preparation & Application: Boil and consume.

D. Herbal remedy: Used to treat health condition 13.1 B. Must take medicine to induce defecation before taking this remedy. There should be blood in feces.

Materials: 1. PL140: bark & wood, leaves

2. PL162: bark & wood

3. PL409: bark & wood

Preparation & Application: Boil and consume.

Treatment 8. (Y13) Used to treat health condition 13.1 B.

Herbal remedy

Materials:

- | | |
|-----------------------------|-----------------------------|
| 1. PL6: bark & wood, root | 4. PL323: bark & wood, root |
| 2. PL84: bark & wood, root | 5. PL379: root |
| 3. PL299: bark & wood, root | |

Preparation & Application: Boil and consume one cup while medicine is still hot.

13.2 ตะกั่ว (K) ความอ้วน (R)

Traditional healers : Herbalist (Y3)

Type/Cause of illness: Physiological origin.

Treatment 1. (Y3)**Herbal remedy**

Materials: 1. PL22: all parts

Preparation & Application: Boil in water and consume water.

13.3 พรุณ (K) พยาธิ, พยาธิตัวจิ๋ว, พยาธิใบไม้ (R)

Traditional healers : Herbalists (Y5, Y13, Y14)

Symptoms: Patient is frequently hungry, aches in different parts of the body, especially in the rib area on the right side of the body, and experiences a gassy stomach, tightness in the chest, and hard liver. These symptoms are similar to that of internal cancer, and can often be mistaken as internal cancer or vice versa. This illness can cause liver disease (โรคตับ).

Type/Cause of illness: Physiological origin: Intestinal parasites.

Possibility of death : Most healers state, Affirmative.

Treatment dietary restrictions: None.

Treatment : Ingested herbal medicine to defecate the parasites out.

Treatment 1. (Y5)**Herbal remedy**

Materials: 1. PL386: bark.

Preparation & Application: Boil bark in water. Collect foam, dry, and roll into pellets.

Consume pellets and intestinal worms will be expelled from the body.

Treatment 2. (Y13)

Herbal remedy

Materials:

- | | |
|-----------------------|-----------------------------|
| 1. PL70: root | 3. PL248: bark & wood, root |
| 2. PL145: bark & wood | 4. PL335: root |

Preparation & Application: Boil in water and consume.

Treatment 3. (Y14)

Herbal remedy: This remedy is used to expel the ‘mother’ parasite (ตัวแม่พยาธิ), which is the origin of the illness.

Materials:

- | | |
|-----------------|---------------------|
| 1. PL97: ‘head’ | 3. PL185: heartwood |
| 2. PL140: root | 4. PL348: ‘head’ |

Preparation & Application: Boil together in one bowl of water, and consume 1 tablespoon, twice a day, morning and evening.

13.4 ครรตลอม (K) โรครัดบ (R)

Traditional healers : Herbalists (Y13, Y14)

Symptoms: Patient experiences gassy stomach, tightness in chest, hard liver, and aching in the rib area on the right side of the body, and has yellow eyes.

Type/Cause of illness: Physiological origin: cancer and parasites.

Possibility of death: Affirmative.

Treatment: Ingested herbal medicine. Healer can cure the patient if the illness is a new illness. If patient has been afflicted for a long time, then it is difficult to treat.

Treatment 1. (Y13)

Herbal remedy

Materials:

- | | |
|---------------|----------------|
| 1. PL70: root | 3. PL335: root |
|---------------|----------------|

2. PL248: bark & wood, root

4. PL145: bark & wood

Preparation & Application: Boil in water and consume.

Treatment 2. (Y14)

A. Herbal remedy: The patient is given this remedy first to expel the parasite from the body (ถ่ายพยาธิออกแล้ว). This remedy is prepared in two steps.

Materials:

1. PL97: leaf

3. PL185: leaf

2. PL140: root

4. PL348: leaf

Preparation & Application: Boil together, then add half glass of น้ำหวานเสลดลูบอย

Materials: 1. PL210: leaf

2. PL340: leaf

3. PL360: leaf

Preparation & Application: Pound finely then add to the previously prepared remedy and stir together. This will result in one glass of medicine. Consume a half of glass of medicine before and after meals every day.

B. Herbal remedy: When the patient begins to get better, this remedy is given to the patient to treat the ‘cut’ in the liver (รักษาแผลในตับ)

Materials:

1. PL57: rhizome

3. PL189: bark

2. PL62: rhizome

4. PL394: stem

Preparation & Application: Prepare equal amounts of the medicine and boil together.

Consume the medicine while it is still warm.

13.5 กลอมพรี (K) ขับปัสสาวะ (R)

Traditional healers : Herbalist (Y5)

Symptoms: This is not the same illness as *niew*. The patient experiences a painful stinging sensation when urination or cannot urinate at all.

Diagnosis: Physical ailment.

Possibility of death: Affirmative

Treatment dietary restrictions: fish and chicken

Treatment 1 (Y5)

A. Herbal remedy

Materials: 1. PL356: fresh root.

Preparation & Application: Boil and consume.

B. Herbal remedy

Materials: 1. PL200: bark, root.

Preparation & Application: Soak or boil and consume.

13.6 สดวงม้อก (K) สดวงโม๊ะ (Y) ริดสีดวงจมูก (R)

Traditional healers : Herbalists (Y5, Y10, Y13)

Symptoms : Occurs at the nose, eyes and mouth. It does not protrude from the nose. It is very painful and difficult to breathe—the patient must breathe from the mouth. It smells bad and can cause blindness.

Type/Cause of illness: Physiological origin.

Possibility of death: Affirmative. The patient can die if they take the ‘wrong’ medicine, but this is rare, or if the symptoms prevent them from breathing.

Treatment dietary restrictions: patient cannot touch metal things. When boiling the medicine, they should use a clay pot.

Treatment : Herbal remedy used to smoke the afflicted area or ingested.

Treatment 1. (Y5)

Blowing treatment

Materials: 1. PL323: heartwood.

Preparation & Application: Shave off small slivers and dry. Roll up with dried banana leaves and smoke.

Treatment 2. (Y10)

Herbal treatment

Materials: 1. PL42: bark & wood

2. PL208: woody stalk

3. PL394: stalk

Preparation & Application: Use 7 pieces of each plant; boil in water and consume.

Treatment 3. (Y13)**Blowing treatment**

Materials: 1. PL288: leaves.

Preparation & Application: Chop up the leaves and dry. Then, wrap in banana leaves and smoke.

13.7 อีปรอ (K) ปวดหัว (R)

Traditional healers : Herbalists, blowing doctors (Y2, Y4, Y5, Y12, B8, B10, B13)

Symptoms : Aching head, and sometime on only half of the head

Type/Cause of illness: Spiritual origin.

Possibility of death : Affirmative.

Treatment dietary restrictions: sweet foods and hot water.

Treatment: Herbalists use consumed herbal medicine. One herbalist and all blowing doctors use a typical blowing treatment. The blowing doctors use an incantation as well, and one healer blows at the head to chase away spirits.

Treatment 1. (Y2)**A. Herbal remedy**

Materials:

- | | | |
|--------------------------|------------------------|------------------------|
| 1. PL26: heartwood | 8. PL101: heartwood | 15. PL263: heartwood |
| 2. PL35: root, heartwood | 9. PL103: heartwood | 16. PL265: root |
| 3. PL75: root | 10. PL132: bark & wood | 17. PL286: root |
| 4. PL60: heartwood | 11. PL181: root | 18. PL329: bark & wood |
| 5. PL77: root | 12. PL220: stem, root | 19. PL330: bark & wood |
| 6. PL84: root | 13. PL222: bark | 20. PL331: root |
| 7. PL100: heartwood | 14. PL238: heartwood | 21. PL399: heartwood |

Preparation & Application: Sand into water and consume.

B. Herbal remedy

Materials: 1. PL75: heartwood

2. PL84: root

3. PL104: heartwood

Preparation & Application: Sand or boil into water and consume.

Treatment 3. ปวดหัว (Y5)

Blowing treatment: typical treatment, but with no use of incantation.

Treatment 4. (Y12)

Herbal remedy

Materials:

1. PL100: heartwood; use little

2. PL101: heartwood; use little

3. PL279: wood; use very little

4. PL289: root; use alot

5. PL361: root; use alot

7. AN27: shell

8. AN31: shell

Preparation & Application: Sand into water and consume.

13.8 No name given

Traditional healers : Spirit healers (Aj1)

Symptoms: Comotose.

Type/Cause of illness: Spiritual origin.

Treatment : LPT ceremony.

13.9 ตั้วฮาม (K) เลือดตก (R)

Traditional healers: Herbalists (Y2, Y13)

Symptoms: This illness affects both males and females, and is characterized by blood that flows constantly (ไหลไม่หยุด) from a part of the body. Among males, the blood flows from the nose. Among females, the blood flows from the vagina and can be associated with menstruation, in which the woman menstruates continuously (ระดูออกยี่วิะเจา (Y) ประจำเดือน

ไหลไม่หยุด (R)). The patient has yellow eyes, similar to when a person is suffering from heart disease (หัวใจรั่ว).

Type/Cause of illness: Physiological origin.

Possibility of death: Affirmative.

Treatment dietary restrictions: Females should especially avoid fish (ปลา), eel, shrimp, and small fresh water fish (ปลากะเต็ด).

Treatment: Ingested herbal remedy.

Treatment 1. (Y2)

Herbal treatment

Materials:

- | | | |
|---------------|----------------|-----------------|
| 1. PL75: root | 3. PL84: root | 5. PL331: root |
| 2. PL77: root | 4. PL104: root | 6. PL394: stalk |

Preparation & Application: Boil in water and consume one pot.

Treatment 2. (Y13)

Herbal treatment

- Materials: 1. PL31: all parts
 2. PL63: 7 millets
 3. PL305 (black): bark & wood

Preparation & Application: Rice millets used to trade for กะลิงส้าว and PL305 when collecting from the forest. Healer must also 'ask to trade millets for medicinal plants' (ขอแลกยา) before collecting the plants. Boil both plants in water and consume.

13.10 ความดันเต๋อม, เส้นเลือดฝอยอุดตัน (K) ความดันต่ำ (R)

Traditional healers: Herbalists (Y5, Y14)

Symptoms: Tired, no energy, nauseated, and cannot talk or walk. Patient may be paralyzed on one side of the body.

Type/Cause of illness: Physiological origin.

Possibility of death: Affirmative.

Treatment dietary restrictions : Sweet foods.

Treatment: One healer uses an ingested herbal remedy and the other uses only a blowing treatment with incantation. The patient must keep a balanced diet, similar to health condition 5.1.

Treatment 1. (Y5)

Herbal remedy

Materials: 1. PL151: leaf 2. PL393: sugar (น้ำตาลทราย)

Preparation & Application: Boil in water add a little of the sugar, then consume.

13.11 อัมง (K) มะเร็ง (R)

A.

Traditional healers: Herbalists, spirit healer (Y1, Y3, Y4, Y5, Y10, Y13, Y14, P7)

Symptoms: This disease occurs inside the body only and cannot be seen from the outside of the body. This illness can specifically effect the intestines, bone, liver, uterine, rectal, and kidneys. If it is cancer of the intestines then the patient will have a stomachache. Cancer of the kidneys is exhibited with yellow urine. A patient with cancer of the bones cannot walk and sleeps a lot. One healer stated that if an adult has health condition 4.2B for a long time then the illness can develop into health condition 13.11. Other symptoms include pain and tightness in the chest, gassy stomach, hard liver, and blood exiting the anus. A patient with a hard liver may be misdiagnosed with health condition 13.3 parasites when they are actually afflicted with health condition 13.11, and vice versa.

Type/Cause of illness: 1. Physiological origin. 2. Spiritual origin that may be caused by LPT spirits. This disease is usually diagnosed as internal cancers by a western physician at the hospital. One herbalist stated that he did not believe in internal cancers and believed that these symptoms arose from tight tendons (เส้นตึง).

Possibility of death: Affirmative. Two healers stated that this can be treated only if it is in the beginning stages. If the patient has been afflicted for a long time, then it is very difficult to treat. Three healers state that it is possible to die from this disease, and very quickly. Spirit healer states that her patient was recovering well, until she ate ‘wrong food’ (อาหารผิด) and died as a result.

B.

Traditional healers: Herbalists, blowing doctor (Y2, Y3, Y4, Y5, Y8, B12)

Symptoms: This illness can be seen clearly on the outside of the body, can occur as a swelling or open wound. Can occur in the neck, leg, face, breast, and chin. If the disease occurs in the breast it is called อีตอ in Kui.

Type/Cause of illness : Originates from a physiological condition.

Possibility of death: Affirmative.

Treatment dietary restrictions: Alcohol and pickled foods

Treatment: Herbalists use herbal medicines that are consumed, applied topically or as a compress, and used to steam the afflicted body part. One herbalist used herbal remedies and blowing treatment. The remedy of herbalist (Y2) is used to relax the tendons and induce the patient to defecate out the ‘bad things’. Then, the illness is treated like health condition 8.1A. One blowing doctors used only a blowing treatment and incantation. One spirit healer conducted a LPT ceremony, which was successful until the patient ate some ‘wrong food’ and died. One healer (Y2) stated that he was not very successful with treating health condition 13.11 and usually referred patients to be treated by his uncle who is skilled at this illness.

Treatment 1. (Y2) Neck cancer

Herbal remedy

Materials: 1. PL47: hard roots

2. PL296: heartwood

3. Other plants that healer prefers not to share

Preparation & Application: Mix with water and make into a poultice. Use plastic to wrap

the medicine to the neck for three days. Then squeeze the lump and the ‘bad things’ will come out.

Treatment 2. (Y3)

Herbal remedy

Materials:

- | | |
|------------------|---------------------|
| 1. PL57: rhizome | 3. AN6: entire body |
| 2. PL250: oil | 4. AN29: oil |

Preparation & Application: Chop up the AN6 and PL57 finely and mix with the oils, including sesame oil. Apply topically.

Treatment 3. (Y3)

A. Herbal remedy

Materials: 1. PL253: leaves 2. PL292: head

Preparation & Application: Boil in water and consume.

B. Herbal remedy

Materials:

- | | | |
|----------------------|------------------------|------------------------|
| 1. PL14: bark & wood | 12. PL118: fruit | 23. PL282: fruit |
| 2. PL15: heartwood | 13. PL132: heartwood | 24. PL290: bark & wood |
| 3. PL18: heartwood | 14. PL202: root | 25. PL302: fruit |
| 4. PL46: heartwood | 15. PL205: heartwood | 26. PL321: fruit |
| 5. PL49: ‘head’ | 16. PL209: heartwood | 27. PL325: root |
| 6. PL66: rhizome | 17. PL215: fruit | 28. PL334: leaf |
| 7. PL91: leaf | 18. PL216: stem | 29. PL363: heartwood |
| 8. PL96: bark & wood | 19. PL219: bark & wood | 30. PL380: heartwood |
| 9. PL100: heartwood | 20. PL227: heartwood | 31. PL390: leaf |
| 10. PL103: heartwood | 21. PL236: leaf | 32. PL400: leaf |
| 11. PL113: root | 22. PL269: bark & wood | |

Preparation & Application: Pound or grind, then boil and consume. Healer advises the patient to eat eel (this is the best), chicken, and beef for best results.

B. Herbal remedy

Materials: 1. PL194: Heartwood.

Preparation & Application: Sand into water (do not boil) and consume.

C. Herbal remedy

Materials:

- | | |
|----------------|---------------------------------------|
| 1. PL216: leaf | 3. PL363: endosperm |
| 2. PL345: leaf | 4. AN30: slaked lime mixed with water |

Preparation & Application: Pound and apply topically to the cancer as a compress (พอก) until recovery.

Treatment 4. (Y5)**A. Herbal remedy**

Materials: 1. PL348 (female and male): 'head'

Preparation & Application: Boil in water and consume, steam the afflicted body part, and/or apply topically.

B. Herbal remedy: Specifically used to treat breast cancer.

Materials: 1. PL292: head

Preparation & Application: Pound finely (บด) and apply topically.

C. Herbal remedy

Materials: 1. PL135: all parts

Preparation & Application: Pound and mix with rice water, the apply topically.

Treatment 5. (Y8) Healer usually treats breast cancer and cancer on the face. All of these remedies are used synchronously.

A. Herbal remedy:

Materials:

- | | | |
|----------------|----------------------------|----------------|
| 1. PL173: root | 3. PL301 red flowers: root | 5. PL354: root |
| 2. PL259: root | 4. PL305: root | 6. PL359: root |

Preparation: Boil in water and consume over seven days.

B. Herbal remedy

Materials: 1. PL381: heartwood

2. AN3: skin (หนัง)

3. AN14: shell (กระดอง)

Preparation & Application: Burn and pound into a powder, then apply topically.

C. Herbal remedy

Materials:

- | | |
|------------------------------------|-----------------------|
| 1. PL20: sheath of flower (กาบปลี) | 4. PL291: leaf |
| 2. PL98: leaf | 5. PL376: young shoot |
| 3. PL241: leaf | 6. PL300: leaf |

Preparation & Application: Burn and mix ashes with rice water, then apply topically as a paste or compress.

D. Blowing treatment: Use only an incantation.

13.12 เอดส์ (K/R)

Traditional healers: Herbalists (Y1, Y3, Y10, Y14)

Symptoms: Patient will be quite thin and break out in black spots or itchy blisters all over the body, which eventually burst into open sores. If the disease is ‘inside’ the patient, he/she will become crazy. The illness will ‘eat’ the lungs first, and the patient will cough a lot. The patient will ache in the temples before death.

Type/Cause of illness: Physiological origin. One healer (Y14) diagnoses by thumping on the patients’ stomach, looking in the patient’s eyes, as well as other methods. After he determines that the patient has been cured, he advises the patient to check their blood at the hospital to confirm this diagnosis.

Possibility of death : Affirmative. If the patient has the illness more than a year, then he/she will die. If the patient has been afflicted with the illness for less than a year, then it is possible that they will recover.

Treatment dietary restrictions: pickled and preserved foods (หมัก), sweet foods (ของหวาน), sapodilla plum (ละมุด, *Manilkara sapota*), longan (ลำไย, *Dimocarpus longan*), pork, beef, chicken, seafood, canned fish, alcohol, beer, squid, and other seafood. After the symptoms have disappeared the patient should not drink alcohol and eat clams (หอยแมลง) and squid for 3-5 years.

Treatment: Ingested herbal remedies. Patient should eat oranges, rambutan, mangos, grapes, and fish and exercise often.

Herbalist **Y14** states that the remedy for women is made up of 72 materials, while

men require only 52 materials. Women have more parts of the body that must be treated for disease, for example, the uterus, breast, and blood. The healer received this remedy from his father who recorded his remedies onto palm leaves. This remedy was listed under the heading “โรคกะหรี,” which his father later changed to “โรคเอตตะโส.” The healer was not familiar with this disease, so last year he experimented with the remedy by using it to treat AIDS patients. He found the remedy to be successful and has used it to treat 14 patients. He reports that 10 patient have recovered, one died and three are still undergoing treatment. He charges 2000-3000 B a full treating, depends on the strength of the illness. It takes about 1-2 months to cure the patient.

Plants are prepared by boiling or sanding into water. As a whole, these plants include [Note: Healers were secretive with these remedies and reluctant to share the information. They gave only partial information and possibly invalid names.]:

- | | | |
|---------------------|------------------------------|----------------------|
| 1. PL4: head (Y10) | 5. PL240: root (Y3) | 7. PL280 (Y14) |
| 2. PL25 (Y10) | 6. PL255: roots, leaves (Y3) | 8. PL292: head (Y10) |
| 3. PL109: root (Y3) | | |

14. Tonics

14.1 Tonics to improve overall body functions

A. เบี้ยชะจา (K) เจริญ/บำรุง อาหาร (R)

Traditional healers: herbalists (Y5, Y11)

Symptoms: Loss of appetite, stomachache, and not eating enough.

Diagnosis: Physiological origin.

Possibility of death: Affirmative.

Treatment dietary restrictions: Many different foods, depending on patient.

Treatment: Ingested herbal remedies, which can be used to increase the performance of intestines (บำรุงรอด (K) บำรุงลำไส้ (R)).

Treatment 1. (Y3)

A. Herbal remedy

Materials: 1. PL48: all parts

2. PL133: all parts

3. PL164: all parts

Preparation & Application: Prepare 1 baht weights of each plant and boil in water, then consume.

B. Herbal remedy

Materials:

1. PL50: root

3. PL323: root

2. PL132: heartwood

4. PL374: root

Preparation & Application: Boil in water and consume.

C. Herbal remedy

Materials: 1. PL333: เหง้า

Preparation & Application: Soak in drinking water (ซังน้ำดื่ม). Can also boil or Sand.

Consume.

D. Herbal remedy

Materials:

1. PL140: heartwood

3. PL172: bark & wood

2. PL148: roots

4. PL351: bark & wood

Preparation & Application: Boil in water and consume.

Treatment 2. (Y5)

Herbal remedy

Materials: 1. PL70: root and leaves

2. PL99: heartwood

Preparation & Application: Boil in water and consume.

Treatment 3. (Y11)

Herbal remedy

Materials: 1. PL32: all parts; not necessary for the remedy

2. PL223: root

3. FU1: all parts

Preparation & Application: Boil in water and consume.

B. บำรุงกำลัง (K) บำรุงกำลัง (R)

Traditional healers: Herbalist (Y2, Y3, Y5)

Symptoms: Everyone, especially the elderly, is recommended to consume this remedy regularly. One healer used it to help a patient recover from a drug addiction (ติดยา), whose illness he described as ‘crazy.’ This remedy can treat symptoms of health condition 5.4 and 13.1, people who feel tired (อ่อนเปลี้ย), and increase the performance of muscles and tendons (บำรุงเส้นเอ็น (T) เก่งกะไซ (K) and overall body performance (บำรุงร่างกาย (R)).

Type/Cause of illness: Physiological origin.

Possibility of death: Negative

Treatment dietary restrictions: fermented fish paste, spicy papaya salad, beef, snake-head fish, and pickled foods

Treatment : Ingested and topical herbal remedy.

Treatment 1. (Y2)

Herbal remedy

Materials:

- | | | |
|---------------------|---------------------|------------------------|
| 1. PL60: heartwood | 4. PL103: heartwood | 7. PL220: root, bark & |
| 2. PL84: root | 5. PL132: heartwood | wood |
| 3. PL100: heartwood | 6. PL149: heartwood | 8. PL328: bark & wood |

Preparation & Application: Sand each medicine for about 30 seconds each into water and consume as much as possible

Treatment 2. (Y3)

A. Herbal remedy

- Materials:
1. PL48: all parts
 2. PL133: all parts
 3. PL164: all parts

Preparation & Application: Prepare medicines into 1 baht weights. Boil in water and consume.

B. Herbal remedy

Materials:

- | | |
|---------------------|----------------|
| 1. PL50: root | 3. PL323: root |
| 2. PL132: heartwood | 4. PL374: root |

Preparation & Application: Boil in water and consume.

C. Herbal remedy

Materials: 1. PL333: เหง้า

Preparation & Application : Soak, boil or Sand in water and consume.

D. Herbal remedy

Materials:

- | | |
|---------------------|-----------------------|
| 1. PL140: heartwood | 3. PL172: bark & wood |
| 2. PL148: roots | 4. PL351: bark & wood |

Preparation & Application: Boil in water and consume.

Treatment 3. (Y5)

Herbal remedy

Materials: 1. PL257: bark 2. PL403: bark

Preparation & Application: Sand into rice water and consume.

C. บำรุงเลือด (R)

Traditional healers : herbalists (Y2, Y3,Y14)

Symptoms : Patient has pale face, yellow eyes, and blurry vision. They feel dizzy and faint and may become crazy. Among women who have just delivered a child, the need for this tonic is linked closely to ‘tonic to increase breast milk.’

Type/Cause of illness: Physiological origin caused by the patient not having enough blood. Herbalist Y2 diagnoses by examining skin color of patient’s hands and feet.

Possibility of death : Negative.

Treatment dietary restrictions : None.

Treatment : Ingested herbal remedy to increase quality of the blood.

Treatment 1. (Y2)

Herbal remedy: It is not necessary to include all of these plants.

Materials:

- | | |
|-----------------------------|------------------------------|
| 1. PL84: root, bark & wood | 6. PL171: root, bark & wood |
| 2. PL100: heartwood | 7. PL203: heartwood |
| 3. PL104: root | 8. PL220: heartwood |
| 4. PL132: heartwood | 9. PL322: roots, bark & wood |
| 5. PL170: root, bark & wood | 10. PL399: heartwood |

Preparation & Application: Sand or boil in water and consume.

Treatment 2. (Y3)

A. Herbal remedy

- Materials:
1. PL48: all parts
 2. PL133: all parts
 3. PL164: all parts

Preparation & Application: Prepare medicines in 1 baht weights. Boil in water and consume.

B. Herbal remedy

Materials:

- | | |
|---------------------|----------------|
| 1. PL50: root | 3. PL323: root |
| 2. PL132: heartwood | 4. PL374: root |

Preparation & Application: Boil in water and consume.

C. Herbal remedy

- Materials: 1. PL333: เหง้า

Preparation & Application : Soak, boil or Sand in water and consume.

D. Herbal remedy

Materials:

- | | |
|---------------------|-----------------------|
| 1. PL140: heartwood | 3. PL172: bark & wood |
| 2. PL148: roots | 4. PL351: bark & wood |

Preparation & Application: Boil in water and consume.

14.2 บำรุงเด็ยตอ, บำรุงเต๊ะเตาะ (K) บำรุงเด็ยเต๊ะ (Y) บำรุงน้ำนม (R)

Traditional healers: Herbalists, blowing doctors, spirit healer (midwife) (Y2, Y11, Y13, B9, Aj3)

Symptoms: Women are lacking sufficient breast milk to breast feed their baby (ผู้หญิงเลี้ยงลูกไม่ได้ (R)). Patients have a pale face, blurry vision and feel faint. Menstruation blood looks ‘bad’ or the woman does not menstruate regularly. This symptom is closely linked to ‘bad blood’ and healers must treat the women’s ‘bad blood’ in order to increase the breast milk. As a result, this tonic is the same or used in sync with the tonic for increase the quality of the blood and circulation.

Type/Cause of illness: 1. Physiological origin: women who do not have enough blood or have bad blood circulation. 2. Spiritual origin.

Possibility of death: Negative.

Treatment dietary restrictions: None.

Treatment: Ingested herbal remedies. Blowing doctor uses both ceremony and blowing treatment to chase away bad spirits which many cause illness.

Treatment 1. (Y2)

Herbal remedy: It is not necessary to include all of these plants.

Materials:

- | | |
|-----------------------------|------------------------------|
| 1. PL84: root, bark & wood | 6. PL171: root, bark & wood |
| 2. PL100: heartwood | 7. PL203: heartwood |
| 3. PL104: root | 8. PL220: heartwood |
| 4. PL132: heartwood | 9. PL322: roots, bark & wood |
| 5. PL170: root, bark & wood | 10. PL399: heartwood |

Preparation & Application: Sand or boil in water and eat.

Treatment 2. (Y11)

Herbal remedy

Materials:

- | | |
|-----------------------|----------------|
| 1. PL120: heartwood | 3. PL281: root |
| 2. PL162: bark & wood | 4. FU1: fungus |

Preparation & Application: Boil in water and consume.

Treatment 3. (Y13)

Herbal remedy

Materials: 1. PL84: root

2. PL323: root

3. PL379: root

Preparation & Application: Boil in water and consume.

Treatment 4. (Aj3)

Herbal remedy

Materials:

1. PL23: bark & wood, root

3. PL199: root

2. PL154: root

4. PL387: root

Preparation & Application: Boil in water and consume.

14.3 บำรุงหัวใจ, โรคหัวใจ (R)

Traditional healers: Herbalists (Y3, Y6)

Symptoms: Tired and lethargic, easily irritable, and feverish.

Type/Cause of illness: Physiological origin. Illness is usually diagnosed by hospital.

Possibility of death: Affirmative. They can become so exhausted that they die.

Treatment dietary restrictions: None.

Treatment: Ingested herbal remedy.

Treatment 1. (Y3)

Herbal remedy

Materials: 1. PL129: root, fruit

Preparation & Application: Boil in water and consume.

Treatment 2. (Y6)

Herbal remedy

Materials:

1. PL111: heartwood

4. PL148: bark & wood

7. PL362: bark & wood

2. PL127: bark & wood

5. PL223: root

8. PL373: bark & wood

3. PL143: bark & wood

6. PL384: heartwood

9. PL408: root

Preparation & Application: Boil in water and consume liberally, morning and evening or as much as possible.

14.4 บำรุงผิว (R)

Traditional healers: Herbalist (Y13)

Symptoms: Unattractive skin.

Treatment 1. (Y13)**Herbal remedy**

Materials:

- | | |
|-----------------------------|-----------------------------|
| 1. PL6: bark & wood, root | 4. PL323: bark & wood, root |
| 2. PL84: bark & wood, root | 5. PL379: root |
| 3. PL299: bark & wood, root | |

Preparation & Application: Boil in water and consume while still hot. One cup of medicine is sufficient for results.

14.5 เสาะโรย (K) ผมหร่วง, ผมหด, บำรุงผม (R)

Traditional healers : Herbalist (Y3)

Symptoms : Loss of hair

Type/Cause of illness: Physiological origin.

Possibility of death : Negative.

Treatment 1. (Y3)**Herbal remedy**

Materials: 1. PL164: all parts

Preparation & Application: Pound and mix with alcohol (40% proof). Allow to soak for at least a day, then apply topically (พอก) to the hair three times a day.

14.6 แก้เกิดหมัน (R)

Traditional healers : Herbalist (Y5)

Symptoms : Females who cannot become pregnant.

Type/Cause of illness: Physiological origin. Elders warn women to refrain from walking beneath a falling banana tree, because it can cause infertility.

Possibility of death : Negative.

Treatment dietary restrictions : Pounded bananas, papaya

Treatment : Ingested herbal remedies

Treatment 1. (Y5)

A. Herbal remedy

Materials: 1. PL61: rhizome 2. PL66: rhizome

Preparation & Application : Boil in water and consume.

B. Herbal remedy

Materials: 1. PL258 (male): young shoot, flower, fruit (the best)

Preparation & Application: Steam, consume, or prepare into a salad (ส้มตำ) by chopping and pounding it without washing or removing skin of fruit.

14.7 บำรุงชูกำลังผู้ชาย (R)

Traditional healers : herbalist (Y5)

Symptoms : No 'strength' during sex.

Type/Cause of illness: Physiological origin.

Possibility of death : Affirmative.

Treatment dietary restrictions : None.

Treatment 1. (Y5)

Herbal remedy

Materials: 1. PL90: root 2. PL389: root

Preparation & Application: Soak in alcohol or boil in water, then consume.

15. Veterinary medicine

15.1 No name given (R)

Traditional healers : Herbalist (Y5)

Symptoms : Cattle with aching feet

Type/Cause of illness: Physiological origin.

Treatment (Y5)

Herbal remedy

Materials: 1. PL412 : all parts

Preparation & Application: Boil and pour the remedy over the foot.

APPENDIX G

List of Materia Medica

This is a list of the materia medica that is recorded from healers. The materials are listed alphabetically by Thai characters. Descriptions of the columns are as follows:

- 1) Vernacular names: These are written in Thai characters. Identifiers at the beginning of some names are in parentheses to aid the organization of the materials. Names that are the same have a number listed afterwards to make it unique. R = name used by healers to identify the material as a first response to the methods used to collect data. All other symbols (K = Kui; Y= Yuh; Kh = Khmer; T = Thai; and L = Laos) indicate material names in different languages when specified by the healers.

Material names without symbols in this column are considered 'R' names. Local identifiers, such as กก, เกรื่อ, ตุ่น, ถั่ว, and ผัก are distinguished in parenthesis and are not considered during the alphabetization of the list.

- 2) Scientific name: Plant and animal materials have the family name listed in capital letters. Animal species also include the Phylum and Class in parenthesis.

There are four levels of certainty distinguished.

- A) Scientific names without any labeling have an associated voucher specimen and are considered valid;
 - B) Scientific names in brackets identify plants that were not confirmed (no voucher specimen), although the species name is likely to be correct. These identifications are based on the healers' verbal descriptions of the material or were identified by the researcher and field assistants on the field and not collected as a specimen. However, without a voucher specimen it is not possible to consider these valid identifications
 - C) The label 'c.f.' and 'unknown' is used to identify plants with voucher specimens for which the scientific name is uncertain; and
- 3) Habit: The habit of materials with certainty level A and B was determined according to Smitinand (2001). The habit of materials with certainty level C and D was determined based on healer's descriptions and using abbreviations and definitions established by Smitinand (2001).

- 4) Specim.: Specimens of materials. Pressed plant specimens (fertile and infertile), specimens of raw materials are indicated with 'AV' before each number. Photographs are indicated with 'P' before each number. No specimens were taken of fungus, animal parts, and minerals, but photographs were taken.
- 5) CO: Collection site of the material (see Table 31 for more details). P = Purchased; NF = Nearby forest in local collecting site; FF = Faraway forest in local collecting site; D = Disturbed areas; H = Homegardens; X = Non-local collecting sites; E = Everywhere.
- 6) TH: Healer codes (see Tables 5-9 for more details)
- 7) HC: Health conditions. Numbers correlate to health conditions described in Glossary F; LPT = Material is used in *Lum Pee Taan* ceremony.
- 8) Part: Plant parts are abbreviated as follows: rhz = rhizome; rt = root; lf = leaf; fr = fruit; sd= seed; clv = clove; hw = heartwood; bk&w = bark and wood.
- 9) Preparation: these terms are defined in section 4.3. ႁႃ = handful of medicine
- 10) Application: these are detailed here.

PLANTAE (Cont.)

PLANTAE

| Code | Local names | Scientific name | Speci. | CO | TH | HC | Part | Preparation | Application |
|------|-------------------------------------|---|---------------------------|----|-----|----------|---------|-------------|--------------------------------|
| PL1 | (ต้น)กรวยป่า, กล้วยไม้ | <i>Casearia grewiifolia</i> Vent. var. <i>grewiifolia</i> FLACOURTIACEAE | AV253, AV341, AV337 | NF | B13 | 4.3 | rt | Soak(water) | Consume; Bathe |
| PL2 | กระชาย (1) | [<i>Globba</i> sp. ZINGIBERACEAE] | | NF | Y5 | 5.2 | rhz | Pound fresh | Topical |
| PL3 | กระชาย (2) | <i>Globba</i> sp. ZINGIBERACEAE | AV163 | NF | Y5 | 5.2 | rhz | Pound fresh | Topical |
| PL4 | กระชายดำ | <i>Kaempferia parviflora</i> Wall. ex Baker ZINGIBERACEAE | P1 | H | Y11 | 4.1 | rhz | Pound fresh | Topical |
| | | | | H | Y10 | 13.12 | rhz | Boil | Consume |
| PL6 | กระเจาน (K/R) | <i>Limonia acidissima</i> L. RUTACEAE | AV199 | D | Y13 | 4.1,14.4 | rt, all | Boil | Consume cool Consume hot |
| | | | | | | 13.1 | " | " | |
| PL8 | กระเจา | | | | Y8 | 4.1 | rt | Boil | Consume |
| PL9 | กำมะเขือ (Y) กระดุกไส้ขาว (R) | unknown | AV200 | D | Y13 | 5.2 | rt, all | Boil | Consume |
| PL10 | กระดุกอึ้ง (1) | <i>Dendrolobium triangulare</i> (Retz.) Schindl. supsp. <i>triangulare</i> FABACEAE | AV33 | NF | Y2 | 5.7 | rt, all | Boil, Sand | Consume |
| PL11 | กระดุกอึ้ง (2) | unknown | AV307 | D | Y5 | 3.1,3.3 | rt | Boil | Consume |
| PL12 | กะโตลแตล (K/Y) (ผัก)กระโดนเดี่ยว | <i>Careya herbacea</i> Roxb. LECYTHIDACEAE | AV320 | D | Y13 | 9.1 | rt, all | Sand(water) | Consume |
| | | | | | | 4.3 | " | " | Consume; Soak; Topical |

PLANTAE (Cont.)

| Code | Local names | Scientific name | Speci. | CO | TH | HC | Part | Preparation | Application |
|------|-----------------------------------|--|--------|------|-----|----------------------------------|-----------|---|---|
| | (R) | | | | | 12.2, 14.1, 14.2 13.1,13.7 | " " | " Boil, Sand | Consume " |
| PL13 | ไปปลเสก (K) (ผัก)กระถิน (R) | [<i>Leucaena leucocephala</i> (Lam.) de Wit FABACEAE] | | D | Y11 | 7.2 | lf, all | Boil | Consume |
| PL14 | กระท่อมเลือด, กระทุ้งเลือด (R) | [<i>Stephania venosa</i> Spreng. MENISPERMACEAE] | P2 | FF | Y3 | 8.1, 13.11 | bk&w | Pound, then Boil | Consume |
| | | | | FF | Y10 | 5.9 | bk&w | Boil | Consume |
| PL16 | กระเทียม (K) กระเทียม (R) | [<i>Allium sativum</i> L. ALLIACEAE] | | H/P | Y5 | 5.1 5.1 | lf clv | Boil Pound, then Boil | Consume Consume |
| | | | | H/P | Y12 | 9.6 | clv | Boil 7 pieces inside bamboo stalk | Consume half a quart |
| | | | | H/P | B4 | 11.1 | clv | Healer recites incantation, then Chews Fresh | Healer blows remedy through <i>P.</i> <i>betle</i> leaf into eyes |
| PL17 | ระกาย (K) กระบก (R) | [<i>Irvingia malayana</i> Oliver ex Bennett IRVINGIACEAE] | | NF/D | Y11 | 6.3 | fr | Boil dried plants | Consume |
| PL18 | กระปือเจ็ดตัว (K/R) | [<i>Excoecaria cochinchinensis</i> Lour. var. <i>cochinchinensis</i> EUPHORBIACEAE] | | FF | Y3 | 8.1, 13.11 | hw | Pound, then Boil | Consume |
| PL19 | กระเบา | [<i>Hydnocarpus anthelminthicus</i> Pierre ex Laness. FLACOURTIACEAE] | | P | Y14 | 5.1 | hw | Boil | Consume liberally |

PLANTAE (Cont.)

| Code | Local names | Scientific name | Speci. | CO | TH | HC | Part | Preparation | Application |
|------|---------------------------------------|---|---------------|----|-------------|------------|-----------------------|---|------------------------------|
| PL20 | กล้วย | [<i>Musa sapientum</i> L. MUSACEAE] | | H | Y5 | 6.3 | old lv | Boil | Consume; Bathe |
| | | | | H | Y8 | 13.11 | fl sheath | Burn, mix ashes with rice water | Topical |
| | | | | H | Aj (all) | LPT | fr, lf, st, sucker | symbol | symbol |
| PL21 | รางจืด, กล้วยกลอย (K) กลอยจืด (R) | <i>Dioscorea hispida</i> Dennst. var. <i>hispida</i> DIOSCOREACEAE | AV243 | NF | Y3 | 13.1 | bk&w, rt | Soak(water) | Consume |
| | | | | | | 1.2 | bk&w | Sand(lime) | Topical |
| | | | | | | 1.3 | rt | " | " |
| | | | | | | 2.8 | " | Fresh | Chew and Consume |
| | | | | H | Y12 | 12.3 | rt | Healer recites incantation & ties medicine with string | Medicine tied around neck |
| PL23 | ปะแน (K) เกี๋ยดลิ้น (1), เตี้ย (R) | <i>Phyllodium pulchellum</i> (L.) Desv. FABACEAE | AV5, AV159 | D | Y1 | 13.1 | rt | Boil | Consume |
| | | | | NF | Y5 | 13.1 | rt | Boil | Consume |
| | | | | NF | Aj3 | 14.2 | bk&w, rt | Boil | Consume |
| PL26 | กะเจียวพาน, ต้น ราชคัศ (K) | <i>Brucea javanica</i> (L.) Merr. SIMAROUBACEAE | AV35 | NF | Y2 | 4.1, 8.1 | hw | Sand(water) | Consume; Bathe |
| | | | | | | 13.1, 13.7 | " | " | Consume |
| PL27 | เกลียน, เกีย-ล (K) (เถา)กะดัน (R) | unknown ANNONACEAE | AV280 | NF | Y11 | 5.10 | bk&w | Boil | Consume 3 pots |

PLANTAE (Cont.)

| Code | Local names | Scientific name | Speci. | CO | TH | HC | Part | Preparation | Application |
|------|--|--|--------|------|-----|--|---------------|--------------------------|-------------------------------------|
| PL28 | กะทมเดี่ยวะ(K) กะทมน้ำ, เพกา, ต้นลิ้นฟ้า (R) | [<i>Oroxylum indicum</i> (L.) Kurz BIGNONIACEAE] | | NF/D | B2 | 6.5 | rt | Sand | Topical |
| PL30 | คัลหลวงตะคืด (K) (ไม้)กะยุง, ไม้คานหัก (R) | [<i>Dalbergia cochinchinensis</i> Pierre ex Laness FABACEAE] | P3 | NF | B15 | 2.2 | hw | Boil | Consume |
| PL31 | กะลิงช้าง (Y) | unknown | AV196 | D | Y13 | 5.1, 13.9 | all | Boil | Consume |
| PL32 | กะวาน | [sp.] <i>Amomum</i> sp. ZINGIBERACEAE | | X | Y11 | 14.1 | all | Boil | consume |
| PL33 | กะสองเตียบ (K) | <i>Peperomia pellucida</i> (L.) Kunth PIPERACEAE | AV296 | NF | Y5 | 4.1 | all | Scrub | Wipe body |
| PL35 | กัณออ, กรันออ, ลำโตก, สมัดร็อน | unknown | P4 | X/P | Y2 | 4.1, 8.1 13.1, 4.5, 9.6, 13.7 3.7 | hrt " " | Sand(water) " Boil | consume or bathe consume " |
| | | | | FF | Y10 | 5.9 | hrt | Boil | consume |
| PL36 | (ต้น)กับไค (K) | unknown | AV155 | D | Y11 | 13.1, 11.2 | all | Boil | Consume 3 pots |
| PL37 | ก้านเหลือง (K/R) | [<i>Nauclea orientalis</i> (L.) L. RUBIACEAE] | | NF | Y3 | 10.1 | rt | Boil | Consume |
| | | | | NF | Y1 | 5.1, 8.7 | hw | Boil | Consume |
| PL38 | กาฝากต้นหม่อน | cf. <i>Dendrophthoe pentandra</i> (L.) Miq. LORANTHACEAE | AV252 | HG | B13 | 2.2, 4.3 | bk&w | Sand | Consume |
| PL39 | กาฝากมะม่วง | [<i>Dedrophthoe pentandra</i> (L.) Miq. LORANTHACEAE] | | H | Y3 | 10.1 | bk&w | Boil | Consume |

PLANTAE (Cont.)

| Code | Local names | Scientific name | Speci. | CO | TH | HC | Part | Preparation | Application |
|------|---|---|------------------------|----|-----|-------------------|--------------|-----------------------------------|-------------------------|
| PL42 | ภาพพฤษณ์ | <i>Cassia javanica</i> L. subsp. <i>agnes</i> (de Wit) K.Larsen FABACEAE | AV101 | D | Y10 | 13.6 | bk&w | Boil 7 pieces | Consume |
| | | | | D | B11 | 2.1 | sd | Chew Fresh | Healer blows on patient |
| | | | | D | Aj | LPT | lf, fl | fresh | symbol (decorative) |
| PL43 | (ดอก)เกด, กาลาเกด | <i>Pandanus tectorius</i> Parkinson PANDANACEAE | P5 | H | Y5 | 7.2 | rt | Sand, Soak | Consume |
| | | | | H | Aj | LPT | bract | fresh | symbol (decorative) |
| PL44 | แก, แก่ | [<i>Cananga latifolia</i> (Hook.f. & Thomson) Finet & Gagnepain ANNONACEAE] | | D | Y12 | 9.6 | ys | Boil 7 pieces inside bamboo stalk | consume; half a quart |
| | | | | D | Y7 | 6.4 | rt | Sand | Topical |
| PL50 | ดูยเกา, ดูยวาง (K) ไก่อแดง, ไก่อดำ, ไก่อขาว (R) | cf. <i>Sericocalyx schomburgkii</i> (Craib.) Bremek. ACANTHACEAE | AV15, AV16 | H | Y3 | 8.7 12.2, 14.1 | hw rt, lf | Boil " | Consume " |
| PL51 | โศยเลีย (K) กัลปิงสะบิง (Y) ขนามปลัด (Y/K) กำแพงเจ็ดชั้น, ตาไก่ ขอบกระดิ่ง (R) | <i>Salacia chinensis</i> L. CELASTRACEAE | AV120, AV279, P6 | D | Y3 | 9.2 | bk&w | Boil | Consume before sleeping |
| | | | | NF | Y4 | 5.2, 13.4 | hw | Boil | Consume |
| | | | | | | 5.11 | " | Boil; Pound & Soak (alcohol) | Consume, 2 pots |
| | | | | D | Y7 | 5.2, 10.2 | hw | Boil | Consume |

PLANTAE (Cont.)

| Code | Local names | Scientific name | Speci. | CO | TH | HC | Part | Preparation | Application |
|------|---|--|--------|----|-----|----------------|------|--|-------------------------------|
| | | | | NF | Y8 | 5.3, 5.11, 8.1 | hw | Boil | Consume |
| | | | | NF | Y11 | 13.1, 8.1 | hw | Boil | Consume |
| PL52 | ขนุน | [<i>Artocarpus heterophyllus</i> Lam. MORACEAE] | | H | Y11 | 13.1 | hw | Boil | Consume |
| | | | | H | Y1 | 5.1 | hw | Tie medicines with white, black, & red string. Boil until water is red | Consume warm, 2-3 bowls a day |
| PL54 | ขมิ้นเครือ | [<i>Combretum acuminatum</i> Roxb. COMBRETACEAE] | | NF | Y4 | 5.11 | rhz | Boil; Pound & Soak (alcohol) | Consume, 2 pots |
| | | | | NF | Y10 | 13.3 | rhz | Boil | Consume |
| PL55 | ขมิ้นจระเข้ (K) ขมิ้นชัน (R) | [<i>Curcuma longa</i> L ZINGIBERACEAE] | | H | Y3 | 2.5 | rhz | Pound into fine powder | Pack into wound |
| | | | | H | Aj | LPT | rhz | Symbol | symbol (perfume, cleanser) |
| PL56 | ขมิ้นดำ, ว่าน | <i>Curcuma aeruginosa</i> Roxb. ZINGIBERACEAE | P8 | H | P6 | 13.12 | rhz | Soak(alcohol) | Consume |
| | | | | H | Y8 | 8.7 | rhz | Soak(alcohol) | Consume |
| PL57 | ปะติยลตุม, ขมิ้น ปะโลม (K) ขมิ้น อ้อย, ขมิ้นหัวสูง, ขมิ้นหัวใหญ่ (I) | [<i>Curcuma zedoaria</i> (Christm.) Roscoe ZINGIBERACEAE] | | H | Y3 | 13.11 | rhz | Pound Fresh, mix with oils | Topical |
| | | | | H | Y11 | 4.1 | rhz | Boil | Consume |
| | | | | P | Y14 | 13.3, 13.4 | rhz | Boil in equal parts | Consume |

PLANTAE (Cont.)

| Code | Local names | Scientific name | Speci. | CO | TH | HC | Part | Preparation | Application |
|------|--|---|--------|----|-----|---|--------------|---|---|
| PL58 | กัลชะยัว (K/Y) (ต้น)ชะยัว (R) | unknown | AV325 | P | Y7 | 4.4 | hw | Sand(water) | Consume |
| PL59 | (ต้น)ขัดมอน (Mal & Fem plants) | [<i>Sida rhombifolia</i> L. MALVACEAE] | | NF | Y14 | 8.1 | rt | Boil | Consume |
| PL60 | ข่าต้น | [<i>Cinnamomum iners</i> Reinw. ex Blume LAURACEAE] | P9 | P | Y2 | 13.1, 8.1, 12.2, 13.7, 14.1 4.1, 8.1 | hw " | Sand(water) " | Consume Consume; Bathe |
| PL61 | คำเลิง (K) ข่าโบราณ (R) | <i>Alpinia malaccensis</i> (Burm. f.) Roscoe ZINGIBERACEAE | AV88 | H | Y5 | 14.6 | rhz | Boil | Consume |
| PL62 | ข่าใหญ่ | [<i>Alpinia siamensis</i> K. Schum. ZINGIBERACEAE] | | D | Y14 | 13.3, 13.4 | rhz | Boil in equal parts | Consume |
| PL63 | ข้าว (R) ข้าวสาร: คี่เกา (Y) ; ฟาง: อันซ้อะ(K) เฟื่อง (R) | [<i>Oryza</i> sp. GRAMINEAE] | | H | Y5 | 6.5 | end | Healer Chews Fresh | Healer blows on patient |
| | | | | H | Y13 | 13.9 | end | Fresh | Ceremony: trade to collect from forest |
| | | | | H | Y6 | 5.1 | seed husk | Boil | Consume, minimally |
| | | | | H | Y2 | 6.5 | end | Dry roast, mix with other medicines | Consume |
| | | | | | | 6.3 | st | Dry, then Burn | Run smoke across body |

PLANTAE (Cont.)

| Code | Local names | Scientific name | Speci. | CO | TH | HC | Part | Preparation | Application |
|------|---|---|---|-----|-----|------------|-------------------------|--|--------------------------|
| | | | | H | Aj | LPT | seed husk, millet | free; millet can be made into whisky | symbol |
| PL64 | (กก)ข้าวไถ่ | <i>Vitex glabrata</i> R.Br. LABIATAE | AV295 | NF | Y5 | 5.7 | bk&w | Boil | Consume |
| PL65 | โดยน้ึก, โกงกะตาม (Y) ข้าวจี, ข้าวแห้ง, กำมปู, แสมใบ, ดอกลิง (R) | <i>Grewia abutilifolia</i> W. Vent. ex Juss. TILIACEAE | AV74, AV97, AV294, AV323, AV339 | NF | Y5 | 5.7 | rt | Boil | Consume |
| | | | | | | 13.1 | " | " | Consume; Bathe |
| | | | | D | Y13 | 2.5 | rt | Boil | Topical |
| | | | | NF | B13 | 5.7 | rt | Boil | Consume |
| PL66 | ขิง (R) กะชาย (K) | [<i>Zingiber officinale</i> Roscoe ZINGIBERACEAE] | | H/P | Y5 | 14.6 | rhz | Boil | Consume |
| | | | | H/P | Y3 | 8.1, 13.11 | rhz | Pound & Boil | Consume |
| | | | | H/P | Y12 | 9.6 | rhz | Boil inside bamboo stalk | Consume, half a quart |
| PL68 | ส่อนเจาะ (K) (ต้น) ขี้หนอน, ต้นหาง หมาจิ้งจอก (R) | <i>Sopubia fastigiata</i> Hiern SCROPHULARIACEAE | AV60 | D | Y3 | 7.2, 5.10 | rt | Boil | Consume |
| | | | | NF | Y5 | 5.7 | rt | Boil | Consume |
| PL69 | ขี้หนู (K/Y/R) | <i>Diospyros borneensis</i> Hiern EBENACEAE | AV257, P10 | D | Y13 | 5.5 | bk&w | Boil | Consume |
| | | | | D | Y4 | 5.11 | bk&w, rt | Boil; Pound & Soak(alcohol) | Consume, 2 pots |
| PL70 | ขี้เหล็ก, | [<i>Senna siamea</i> (Lam.) | | H | Y5 | 14.1 | rt, lf | Boil | Consume |

PLANTAE (Cont.)

| Code | Local names | Scientific name | Speci. | CO | TH | HC | Part | Preparation | Application |
|------|---|--|---------------------------|----|-----|-------------------------------|------|---|--|
| | ขี้เหล็กใหญ่ | H.S.Irwin & Barneby FABACEAE] | | | | 6.1 | lf | Pound Fresh and mix with urine | Topical: apply medicine with stick wrapped in cloth |
| | | | | H | Y13 | 5.1, 13.4 | rt | Boil | Consume |
| PL71 | ขี้เหิน, ซายเลน, กะเจียน, ผักแสน | <i>Polyalthia cerasoides</i> (Roxb.) Benth. & Hook.f. ex Bedd. ANNONACEAE | AV247 | D | Y2 | 4.3 | rt | Sand(water); Soak(water) | Consume; Topical |
| | | | | D | Y5 | 5.7 | bk&w | Boil; mix with honey | Consume |
| PL72 | ขี้อันแดง, ต้นก้นไก่, ขี้ครอก | <i>Urena lobata</i> L. MALVACEAE | AV160, AV185, AV204 | NF | Y5 | 3.1, 3.3, 3.4, 4.1, 5.7 | rt | Boil | Consume |
| | | | | D | B2 | 11.1 | rt | Healer Chews Fresh 7 pieces (1") with betel chew | Healer blows into eyes |
| PL73 | (ต้น)ขี้อันเหลือง, ขี้ครอก, ชะมดต้น | <i>Abelmoschus moschatus</i> (L.) Medik. subsp. <i>moschatus</i> MALVACEAE | AV161 | NF | Y5 | 3.1, 3.3, 3.5, 4.1, 5.7 | rt | Boil | Consume |
| PL74 | (ต้น)ขลุ | [<i>Globba</i> sp. ZINGIBERACEAE] | | NF | Y5 | 9.2 | rhz | PF | Topical |
| PL75 | เขือลกะเขา, เขือลกะเขา, กัลเขลเบาะ (Y) เข็มขาว (1) (R) | cf. <i>Ixora ebarbata</i> Craib RUBIACEAE | AV36, AV55 | H | Y2 | 4.1, 8.1 | rt | Sand(water) different amounts | Consume; Bathe |
| | | | | | | 13.1, 5.7, 13.7 | " | Boil, Sand | Consume |
| | | | | | | 13.9 | " | Boil | consume; one pot |

PLANTAE (Cont.)

| Code | Local names | Scientific name | Speci. | CO | TH | HC | Part | Preparation | Application |
|------|---|--|----------------------------------|----|-----|-----------|------|-----------------------------|--------------------------|
| | | | | NF | Y5 | 3.1 | rt | Boil | Consume, Steam vagina |
| | | | | D | Y7 | 9.1 | rt | Sand | Consume |
| | | | | NF | Y13 | 6.4 | rt | Sand(rice) | Topical |
| | | | | | | 3.1 | all | Boil | Consume |
| | | | | NF | Y14 | 13.1 | rt | Boil | Consume |
| PL76 | เข็มนขาว (2) (R) | <i>Holarrhena curtisii</i> King & Gamble APOCYNACEAE | AV73 | NF | Y5 | 13.1, 3.3 | rt | Boil | Consume |
| | | | | | | 3.1, 3.5 | " | " | Steam vagina |
| PL77 | ขาลีขง, จารบัว (K) เข็มนแดง, เข็มนป่า, เข็มน้อย (R) | <i>Ixora cibdela</i> Craib RUBIACEAE | AV12, AV36, AV55, AV205 | NF | Y2 | 13.9 | rt | Boil | Consume, 1 pot |
| | | | | | | 13.7 | " | Boil, Sand | Consume |
| | | | | NF | Y3 | 4.2 | rt | Sand(water); Soak(water) | Consume; Bathe |
| | | | | | | 7.1 | " | Boil, Sand | Consume |
| | | | | NF | Y5 | 13.1 | rt | Boil | Consume |
| | | | | | | 3.1, 3.5 | " | " | Steam vagina |
| | | | | NF | Y7 | 9.1 | rt | Sand(water) | Consume |
| | | | | | | 6.4 | " | " | Topical |
| | | | | NF | Aj | LPT | fl | fresh | symbol (decorative) |
| PL78 | เต้ (K) แวม (I) | [<i>Saccharum arundinaceum</i> Retz. GRAMINEAE] | | NF | Y3 | 5.1 | rt | Boil | Consume |
| PL79 | | <i>Smilax</i> sp. SMILACEAE | AV293 | NF | Y5 | 8.7 | rt | Boil | Consume |

PLANTAE (Cont.)

| Code | Local names | Scientific name | Speci. | CO | TH | HC | Part | Preparation | Application |
|------|---|---|-----------------|-----|-----|------------------------|---------------|--|---|
| | สะโม-ล, วารขมูร (Y) (เครือ)เขื่องตัว ผู้ (R) | | | NF | Y6 | 5.1 | rt | Boil | Consume, minimally |
| | | | | NF | Y13 | 3.1 | all, rt | Boil | Consume |
| | | | | NF | B13 | 2.3, 13.1, 6.4, 6.5 | rt | Boil | Consume |
| PL80 | (เครือ)เขื่อง ตัวเมีย | <i>Smilax</i> sp. SMILACEAE | AV299 | NF | Y5 | 8.7 | bk&w | Boil | Consume |
| | | | | | | 11.1 | bk&w | Peel wood into small strips and Burn | Patient smokes into cloth to pass smoke into eyes |
| PL81 | คีอุม, ต้นอำลา (Kh) | <i>Microcos tomentosa</i> Sm. TILIACEAE | AV167 | NF | Y5 | 8.2 | rt | Grill over fire, then Soak (water) | Consume |
| PL82 | (กก)คณาข (Kh) | <i>Streblus asper</i> Lour. MORACEAE | AV209, AV270 | H | Y5 | 2.2, 4.3 | hw, bk, lf | Boil | Consume; Bathe |
| | | | | | | 11.1 | lf | Scrub, then put onto leaf rolled up into a tube | Healer blows into patient's eyes |
| PL83 | กาลาดิง, กาลาดิง, อาทิง, ตะโกจัน, อาดิง (Y)คะนึ่ง เปลือกดำ (R) | <i>Diospyros</i> sp. EBENACEAE | AV319 | D | Y11 | 6.3 | hw | Boil | Consume, 2 pots |
| PL84 | ปละ (Y) คัดเกล้า (R) | <i>Oxyceros horridus</i> Lour. RUBIACEAE | AV41 | D/H | Y2 | 4.1, 8.1 | rt | Sand(water) different amounts | Consume; Bathe |

PLANTAE (Cont.)

| Code | Local names | Scientific name | Speci. | CO | TH | HC | Part | Preparation | Application |
|------|-------------------------|---|--------|----|-----|--|-----------|--|--------------------------------------|
| | | | | | | 12.2, 14.1, 14.2 13.9 | " | Sand(water) | Consume, liberally |
| | | | | | | 13.1, 13.7 | " | Boil | Consume, 1 pot |
| | | | | D | Y13 | 4.1 | bk&w | Boil, Sand | Consume |
| | | | | | | 3.1 | all parts | Boil | Consume cool |
| | | | | | | 13.1, 14.2, 14.4 | " | " | Consume hot; 1 cup |
| PL85 | คูน | [<i>Cassia fistula</i> L. FABACEAE] | | D | B4 | 2.1, 2.2, 5.7, 6.4, 8.6, 9.2 | hw | Healer Chews Fresh with betel chew | Healer blows on afflicted area |
| | | | | D | B5 | 1.1, 1.4, 1.6, 2.1, 2.2, 5.4, 5.5, 5.9, 8.6, 9.2, 9.3 | hw | Healer Chews Fresh with betel chew | Healer blows on afflicted area |
| | | | | D | Aj | LPT | bk, lv | fresh | symbol |
| PL86 | แค | [<i>Sesbania grandiflora</i> (L.) Pers. FABACEAE] | | H | Y5 | 9.4 | bk | Fresh | Suck & chew |
| PL88 | แคอาว, แคแดง, ลีนป่า | <i>Fernandoa collignonii</i> (D.Dop) Steenis BIGNONIACEAE | AV285 | NF | Y5 | 4.3 | hw, rt | Soak | Bathe |
| PL89 | โคยงู | <i>Achyranthes aspera</i> L. AMARANTHACEAE | AV306 | D | Y5 | 4.1 | rt | Soak | Consume |
| | | | | D | Y13 | 11.1 | rt | Healer Chews Fresh | Healer blows into eyes |
| PL90 | | <i>Leea</i> sp. LEEACEAE | AV297 | D | Y5 | 6.4 | rt | Sand(rice) | Topical |

PLANTAE (Cont.)

| Code | Local names | Scientific name | Speci. | CO | TH | HC | Part | Preparation | Application |
|------|--|---|--------|----|-----|------------|--------|--------------------------------------|---|
| | โคยซี่, ข้าวดอกแตก | | | | | 5.10, 14.7 | " | Soak(alcohol) ; Boil | Consume |
| PL91 | คำฝอย | [<i>Carthamus tinctorius</i> L. COMPOSITAE] | | D | Y3 | 8.1, 13.11 | lf | Pound, then Boil | Consume |
| PL92 | กะระปัด, แกะ-ล ปัด (K) คำมอกหลวง (R) | <i>Gardenia sootepensis</i> Hutch. RUBIACEAE | AV24 | D | Y2 | 4.4, 8.1 | all | Sand(water) | Consume |
| PL93 | วียง (K) งา (R) | <i>Sesamum orientale</i> L. PEDALIACEAE | P11 | H | Y3 | 13.11 | sd oil | Fresh | Topical |
| | | | | H | Y14 | 2.1 | sd oil | Fresh | Topical |
| | | | | H | B1 | 2.1 | sd oil | Fresh | Topical |
| | | | | H | B10 | 2.1 | sd oil | Fresh | Topical |
| PL94 | (ต้น)จิว | [<i>Ceiba pentandra</i> (L.) Gaertn. BOMBACACEAE] | | E | Y2 | 5.1 | hw | Boil | Consume |
| PL95 | จิวป่า, ต้นจิวหนามป้อม | [<i>Bombax insigne</i> Wall. BOMBACACEAE] | | NF | Y5 | 4.1 | lf, bk | Scrub leaves; Soak(water) bark | Soak towel in medicine and place towel on head; consume |
| PL97 | จอร์อัน (K/Y) ผักชี่ข้าง (T) | <i>Asparagus racemosus</i> Willd. ASPARAGACEAE | P12 | NF | Y7 | 4.1, 12.1 | rt | Soak(water) | Consume |
| | | | | H | Y14 | 13.3 | rt, lf | Boil | Consume, 1 swallow in morn. & even. |

PLANTAE (Cont.)

| Code | Local names | Scientific name | Speci. | CO | TH | HC | Part | Preparation | Application |
|-------|-------------|--|-------------------------|-------|--------|-------------------------------------|---------|--|---------------------------|
| | | | | | | 13.4 | lf | Boil | Consume |
| PL99 | จันทน์ขาว | [<i>Tarenna hoaensis</i> Pit. RUBIACEAE] | P13, P14 | FF | Y1 | 13.1 | hw | Sand(water) | Consume, 1 bowl/day |
| | | | | P | Y2 | 13.1, 5.4, 5.8, 12.2 4.1 | hw | Sand | Consume |
| | | | | | | | " | Sand(water) in different proportions | Consume; Bathe |
| | | | | | | 13.7 | " | Boil, Sand | Consume |
| | | | | | | 4.3 | " | Sand; Soak | Consume; Topical |
| | | | | FF | Y4 | 4.4 | rt | Sand | Consume, 1 pot or bowl |
| | | | | NF | Y5 | 14.1 | hw | Boil | Consume |
| | | P | P6 | 12.10 | hw, fr | Sand(water) in equal portions | Consume | | |
| PL100 | จันทน์แดง | <i>Dracaena loureiri</i> Gagnep. DRACAENACEAE | AV116, AV142, P14 | P | Y1 | 13.1 | hw | Sand(water) | Consume, 1 bowl/ day |
| | | | | P | Y2 | 4.1, 8.1 | hw | Sand(water) in different proportions | Consume; Bathe |
| | | | | | | 13.1, 13.7 | " | Boil, Sand | Consume |
| | | | | | | 4.3 | " | Sand(water); Soak(water) | Consume; Bathe |
| | | | | | | 5.4, 5.8, 12.2, 14.1, 14.2 | " | Sand | Consume |
| | | | | P | Y3 | 8.1, 13.11 | hw | Pound, then Boil | Consume |

PLANTAE (Cont.)

| Code | Local names | Scientific name | Speci. | CO | TH | HC | Part | Preparation | Application |
|-------|-------------|--|---------------|----|-----|--------------------------------------|------|--|---------------------------|
| | | | | FF | Y4 | 4.4 | rt | Sand | Consume; 1 pot or bowl |
| | | | | | | 4.2 | hw | " | Mouthwash |
| | | | | P | Y12 | 13.1, 4.1, 4.2, 4.3, 5.9, 13.7 | hw | " | Consume |
| | | | | P | B2 | 2.1, 2.2 | hw | Sand | Consume |
| | | | | P | B13 | 2.2, 4.3 | hw | Sand | Consume |
| | | | | P | P6 | 4.1, 5.11, 12.10 | hw | Sand | Consume |
| PL101 | จันทน์ดำ | <i>Disopyros venosa</i> Wall. A.DC. EBENACEAE | AV117, P14 | P | Y2 | 4.1, 8.1 | hw | Sand(water) in different proportions | Consume; Bathe |
| | | | | | | 13.7 | " | Boil, Sand | Consume |
| | | | | | | 13.1 | hw | " | " |
| | | | | | | 4.3 | " | Sand; Soak | Consume; Topical |
| | | | | P | Y4 | 4.4 | rt | Sand | Consume; 1 pot or bowl |
| | | | | | | 4.2 | hw | Sand | Mouthwash |
| | | | | P | Y12 | 13.1, 4.1, 4.2, 4.3, 5.9, 13.7 | hw | Sand | Consume |
| | | | | P | B13 | 2.2, 4.3 | hw | Sand | Consume |
| | | | | P | P6 | 12.10 | hw | Sand in equal portions | Consume |

PLANTAE (Cont.)

| Code | Local names | Scientific name | Speci. | CO | TH | HC | Part | Preparation | Application |
|-------|---------------|---|--------|----|------------------|------------|------|------------------------------|----------------------------------|
| PL102 | จันทน์เหลือง | [<i>Myristica fragrans</i> Houtt. MYRISTICACEAE] | | P | B2 | 2.1, 2.2 | hw | Sand | Consume |
| PL103 | จันทน์หอม | [<i>Mansonia gagei</i> J.R.Drumm. ex Prain STERCULIACEAE] | AV118 | P | Y1 | 13.1 | hw | Sand(water) | Consume, 1 bowl/ day |
| | | | | P | Y3 | 8.1, 13.11 | hw | Pound, then Boil | Consume |
| | | | | P | Y4 | 4.4 | rt | Sand | Consume, 1 pot or bowl |
| | | | | | | 5.11 | hw | Boil; Pound & Soak(alcohol) | Consume, 2 pots for 100 baht/pot |
| | | | | | | 4.2 | " | Sand | Mouthwash |
| | | | | P | B2 | 2.1, 2.2 | hw | Sand | Consume |
| | | | FF | P6 | 12.10, 13.7, 4.1 | hw | Sand | Consume | |
| PL104 | จุงคาน | unknown | P15 | FF | Y2 | 14.1, 14.2 | rt | Sand | consume |
| | | | | | | 13.9 | " | Boil | consume; one pot |
| | | | | | | 13.1, 13.7 | " | Sand or boil | consume |
| PL105 | ชบา | cf. <i>Hibiscus rosa-sinensis</i> L. MALVACEAE | | H | Aj | LPT | fl | Fresh | symbol (decorative) |
| PL107 | ชะพลู, พลูแดง | <i>Piper sarmentosum</i> Roxb. PIPERACEAE | P16 | H | Y2 | 5.1 | rt | Boil | Consume |
| | | | | H | Y4 | 5.10 | rt | Boil | Consume |
| | | | | H | Y11 | 5.1 | all | Parboil, then dry, then Boil | Consume |
| | | | | H | P6 | 5.1 | rt | Boil | Consume |

PLANTAE (Cont.)

| Code | Local names | Scientific name | Speci. | CO | TH | HC | Part | Preparation | Application |
|-------|-------------------------------|---|----------------|----|-----|------------------------|---------------|---|--|
| PL108 | ซังน้ำว | [<i>Ochna integerrima</i> (Lour.) Merr. OCHINACEAE] | | FF | Y14 | 8.1 | bk&w | Sand(water); Soak(water) small pieces | Consume |
| | | | | | | 5.1, 5.2 | hw | Boil | Consume, liberally |
| PL110 | (ต้น)เชียงใหม่, ก้านเหลือง | <i>Nauclea orientalis</i> (L.) L. RUBIACEAE | AV71, AV298 | NF | Y5 | 4.1 | lf, rt, hw | Soak(water) | Consume |
| PL111 | (ต้น)ชาด | [<i>Dipterocarpus obtusifolius</i> Teijsm. ex Miq. DIPTEROCARPACEAE] | | D | Y6 | 14.3 | hw | Boil | Consume, liberally at morn. & even. |
| PL114 | ชูติ้(เครือ) (K/Y) | [<i>Capparis</i> sp. CAPPARACEAE] | | NF | Y7 | 5.2 | hw | Boil | Consume |
| PL115 | ชูติ้(ต้น) (K/Y) | [<i>Capparis micracantha</i> DC. CAPPARACEAE] | | D | Y7 | 5.2, 5.4 | hw | Boil | Consume |
| PL117 | ดอกตราด ฝางตราด | [<i>Dipterocarpus obtusifolius</i> Teijsm. ex Miq. DIPTEROCARPACEAE] | | D | Y3 | 1.5 | bk&w | Boil | Consume |
| PL118 | ตีปี้ (K/R) | [<i>Piper chaba</i> Hunt PIPERACEAE] | | H | Y3 | 8.1, 13.11 | fr | Pound, then Boil | Consume |
| PL119 | (ดอก)แดง | unknown | AV336 | NF | B13 | 4.3 | rt | Soak | Consume; Bathe |
| PL120 | (ต้น)แดง | [<i>Xylia xylocarpa</i> Taub. var. <i>kerrii</i> (Craib & Hutch) I.C.Nielsen FABACEAE] | | NF | Y5 | 2.2, 3.1, 5.7 | hw | Boil | Consume |
| | | | | NF | Y11 | 5.5, 6.3, 8.1, 14.2 | hw | Boil | Consume |
| | | | | NF | P6 | 13.12 | hw | Boil | Consume |

PLANTAE (Cont.)

| Code | Local names | Scientific name | Speci. | CO | TH | HC | Part | Preparation | Application |
|-------|--|--|--------------------------|------|------|------------------------|--------|---|---|
| PL121 | คิมสะเดียง, คิมสะดิก (Kh) | <i>Breynia glauca</i> Craib EUPHORBIACEAE | AV85 | NF | Y5 | 6.4 | lf | Boil in rice water | Steam afflicted area |
| PL122 | (ต้น)เดือนหา | unknown | AV340 | NF | B13 | 2.3, 13.1, 6.4, 6.5 | rt | Boil | Consume |
| PL124 | เคื่อยไก่อ | unknown | AV98 | D | Y8 | 6.4 | hw | Sand(rice) | Topical |
| PL125 | แต๊ะจ้อ (K) (เถา) คคหมา (R) | [<i>Breynia glauca</i> Craib RUBIACEAE] | P17 | H | Y11 | 9.4 | bk&w | Pound, use hot water to steam medicines | Soak cotton in medicine and place cotton in mouth to hold |
| PL126 | ดองแสงขาว, ต้นตั้งแสง, สะแกแสง | <i>Cananga latifolia</i> (Hook.f. & Thomson) Finet & Gagnepain ANNONACEAE | AV84 | NF | Y5 | 4.3 | hw | Soak(water) | Consume; Soak afflicted area |
| | | | | | | 4.1 | hw | " | Consume |
| PL127 | มดลวย, สะปิงปิง (Y) (ต้น)ตะไก่อ, ขาวไก่อ/ ตาไก่อ (R) | <i>Ardisia symplectifolia</i> (C.Chen) K. Larsen & C.M. Hu MYRSINACEAE | AV31, AV201, AV256 | NF | Y5 | 5.7 | hw | Boil | Consume |
| | | | | | | 13.1 | " | " | Consume; Bathe |
| | | | | | | 5.7 | " | Fresh(honey) | Consume |
| | | | | | | 4.3 | " | Soak(water) | Consume |
| | | | D | Y6 | 14.3 | bk&w | Boil | Consume liberally at morn. & even. | |
| | | | D | Y13 | 5.2 | bk&w | Boil | Consume | |
| PL128 | ตะโก | [<i>Diospyros rhodocalyx</i> Kurz EBENACEAE] | | D | Y11 | 7.2 | fr | Boil | Consume |
| PL129 | ตะขบฝรั่ง (K/R) | [<i>Muntingia calabura</i> L. TILIACEAE] | | H/NF | Y3 | 14.3 | rt, fr | Boil | Consume |

PLANTAE (Cont.)

| Code | Local names | Scientific name | Speci. | CO | TH | HC | Part | Preparation | Application |
|----------|---------------------------------------|---|-----------------------|----|-----|----------------------------------|--------|--|--------------------|
| PL130 | (เครือ)ตะขาบ | <i>Lygodium flexuosum</i> (L.) Sw. SCHIZAEACEAE | AV343 | H | B13 | 2.2, 4.3 | rt | Sand | Consume |
| | | | | | | 2.3, 13.1, 6.4, 6.5 | " | Boil | " |
| PL131 | ตะแวงค้ำปี (Y) ตะไคร้ค้ำปี (R) | [<i>Cymbopogon citratus</i> (DC.) Stapf GRAMINEAE] | | H | Y13 | 5.5 | rt, lf | Boil | Consume |
| PL132 | ตะแวง (K) ตะไคร้ ต้น, สิงโตต้น (R) | <i>Litsea cubeba</i> (Lour.) Pers. LAURACEAE] | P18 | P | Y2 | 4.1, 8.1 | bk&w | Sand(water) in different proportions | Consume; Bathe |
| | | | | | | 13.1, 13.7 | " | Boil, Sand | Consume |
| | | | | | | 5.4, 9.6, 12.2, 14.1, 14.2 | " | Sand | " |
| | | | | | | 8.1, 13.11 | hw | Pound, then Boil | Consume |
| | | | | | | 12.2, 14.1 | " | Boil | " |
| | | | | | | 5.11 | hw | Boil; Soak(alcohol) | Consume, 2 pots |
| | | | | | | 6.3 | hw | Sand | Consume |
| 5.1, 5.4 | hw, rt | Boil | Consume, liberally | | | | | | |
| PL133 | ตะไคร้หอม | [<i>Cymbopogon nardus</i> L. Rendle GRAMINEAE] | | H | Y3 | 10.1 | all | Boil 4 baht weight | Consume |
| | | | | | | 12.2 | " | Boil 1 baht weight | " |
| | | | | | | 14.1 | " | Boil | " |
| PL134 | ตะแบง | [<i>Dipterocarpus intricatus</i> Dyer DIPTEROCARPACEAE] | | NF | Y8 | 6.4 | bk | Sand(rice) | Topical |

PLANTAE (Cont.)

| Code | Local names | Scientific name | Speci. | CO | TH | HC | Part | Preparation | Application |
|-------|------------------------------------|--|--------|----|-----|-------------------|-------------|-----------------------------|--|
| PL135 | ตะโป้, ลูกป้อง (R) ฟิงปอง (Kh) | <i>Physalis angulata</i> L. SOLANACEAE | AV289 | NF | Y5 | 13.11 | all | Pound Fresh (rice water) | Topical |
| PL136 | ตะโป้ตัวผู้, ตะโป้แดง (K) | unknown | P19 | P | B13 | 2.2, 4.3 | hw | sand | consume |
| PL137 | ตะโป้ตัวเมีย, ตะโป้ดำ (K) | unknown | P19 | X | B13 | 2.2, 4.3 | hw | sand | consume |
| PL138 | ตะมั่งจิง (K) ตะมั่งคิ้ว (R) | <i>Croton poilanei</i> Gagnep. EUPHORBIACEAE | AV223 | NF | Y5 | 6.3 | bk&w | Boil | Consume; Bathe |
| PL139 | (เครือ)ตะอาน | [unknown] | | NF | Y5 | 5.10 | bk&w | Boil | consume |
| PL140 | ตับเต่า (K/R) | <i>Nauclea orientalis</i> (L.) L. RUBIACEAE | AV62 | D | Y3 | 12.2, 14.1 | hw | Boil | Consume |
| | | | | D | Y5 | 2.2, 5.7, 13.1 | hw | Boil | Consume; Bathe |
| | | | | D | Y11 | 13.1 | bk&w, lf | Boil | Consume |
| | | | | H | Y14 | 13.3 | rt | Boil in 1 bowl of water | Consume, 1 swallow in morn. & eve. |
| | | | | | | 13.4 | " | Boil | Consume |
| PL141 | ลอมเดีชะคน (K) ตับหมาน้อย (R) | [<i>Cissampelos pareira</i> L. var. <i>hirsuta</i> (Buch.ex DC.) Forman MENISPERMACEAE] | | E | Y5 | 4.1 | rt | Soak | Consume |
| PL142 | ถั่วแฮ (Y) ถั่วแระ, ถั่วแระ (R) | <i>Cajanus cajan</i> (L.) Millsp. FABACEAE | AV316 | D | Y7 | 13.1 | rt | Sand | Consume |

PLANTAE (Cont.)

| Code | Local names | Scientific name | Speci. | CO | TH | HC | Part | Preparation | Application |
|-------|--------------------|--|--------------------------|----------|-----|------------|------------------------------|---------------------------------|-----------------------------|
| PL143 | (ต้น)ตากวาง, | <i>Lagerstroemia macrocarpa</i> Wall. LYTHRACEAE | AV69, AV89 | D, NF | Y5 | 5.7 | hw | Boil; | Consume |
| | เห็นกวาง, แอ้งกวาง | | | | | 13.1 | " | Fresh(honey) Boil | Consume; Bathe |
| | (K) อินทะนิน | | | | | 4.3 | " | Soak | Consume |
| | โlobก (R) | | | | | D | Y6 | 14.1 | bk&w |
| PL144 | กัลตาล (Y) | [<i>Borassus flabellifer</i> L. PALMAE] | | H | Y7 | 5.8 | rt | Soak (1 qt 40 proof alcohol) | Topical, at morn. & eve. |
| | (ต้น)ตาล (R) | | | | | 5.1 | fem. fr, mal. rachill. | Boil | Consume |
| | | | | | | 5.9 | lf vagina | Boil | Consume |
| | | | | | | 6.5 | female fl | Sand | Topical |
| PL145 | ตีนตั้ง, ตีนตุง | <i>Ellipeiopsis cherrevensis</i> (Pierre ex Finet & Gagnep.) R.E.Fr ANNONACEAE | AV255, P20 | D | Y1 | 3.2 | rt | Boil | Consume |
| | | | | D | Y2 | 4.5 | bk&w | Sand | Consume |
| | | | | D | Y13 | 13.4 | bk&w | Boil | Consume |
| PL146 | อาลาง (K) | unknown COMBRETACEAE | AV30, AV125, AV149 | D | Y2 | 4.2 | bark | Soak(water) | Consume |
| | คีนนง (R) | | | X | Y5 | 5.1 | hw | Boil | Consume |
| PL147 | (หญ้า)ตีนนง | [<i>Dactyloctenium aegyptium</i> (L.) Willd. GRAMINEAE] | | E | Y3 | 8.2 | all | Scrub | Consume, 1 spoonful |
| PL148 | | [<i>Alstonia scholaris</i> (L.) R.Br.] | | H | Y3 | 12.2, 14.1 | rt | Boil | Consume |

PLANTAE (Cont.)

| Code | Local names | Scientific name | Speci. | CO | TH | HC | Part | Preparation | Application |
|-------|---------------------------------|---|--------|----|-----|------------|---------|---|------------------------------------|
| | ดินเปีย (K) (ต้น)ดินเป็ด (R) | APOCYNACEAE] | | H | Y6 | 14.3 | bk&w | Boil | Consume liberally in morn. & even. |
| PL149 | คูนกา | <i>Strychnos nux-vomica</i> L. STRYCHNACEAE | AV181 | NF | Y1 | 3.7 | hw | Boil | Consume |
| | | | | NF | Y2 | 12.2, 14.1 | hw | Sand | Consume |
| PL150 | เตย (ตัวผู้ตัวเมีย) | <i>Trema</i> sp. ULMACEAE | AV158 | NF | Y5 | 13.1 | rt | Boil | Consume |
| PL151 | เตยหอม | <i>Pandanus amaryllifolius</i> Roxb. PANDANACEAE | | H | Y5 | 13.10 | lf | Boil | Consume |
| PL152 | (ผัก)เตว, ตับเตว | <i>Cratoxylum maingayi</i> Dyer CLUSIACEAE | AV63 | D | Y3 | 8.1 | rt, lf | Sand(water); Soak(water) small pieces, then Boil | Consume |
| PL153 | (ต้น)ตำแสงแดง, กะทุม | <i>Mitragyna rotundifolia</i> (Roxb.) Kuntze RUBIACEAE | AV72 | NF | Y5 | 4.3 4.1 | hw " | Soak " | Consume Consume; Bathe |
| PL154 | (ต้น)เต้าแล้ง | unknown | AV23 | NF | Aj3 | 14.2 | rt | Boil | Consume |
| PL156 | (เถา)โตระงาม, ส้มป่อยหวาน | <i>Albizia myriophylla</i> Benth. FABACEAE | AV100 | FF | Y8 | 6.4 | bk&w | Sand(rice) | Topical |
| PL157 | ใต้ใบ, มะขามเตี้ย | <i>Phyllanthus amarus</i> Schumach & Thonn. EUPHORBIACEAE | AV326 | E | Y3 | 3.4 | rt, lf | Pound, roll into pellets | Consume, twice a day |
| | | | | E | Y8 | 5.1 | fr | Boil | Consume |
| | | | | E | Y11 | 5.1 | all | " | " |
| | | | | E | Y14 | 5.11 | all | Dry, then Boil | Consume |
| PL160 | พิลา (K) | [<i>Punica granatum</i> L. var. <i>granatum</i> PUNICACEAE] | | H | Y12 | 9.6 | ys | Boil 7 pieces inside | Consume, half a quart |

PLANTAE (Cont.)

| Code | Local names | Scientific name | Speci. | CO | TH | HC | Part | Preparation | Application |
|-------|--|--|----------------|----|-----|-------------------------|----------|---|--------------------------------------|
| | ทับทิม (R) | | | | | | | bamboo stem | |
| PL161 | (กก)ทับ | <i>Costus speciosus</i> (J.Konig) Sm. COSTACEAE | AV166 | NF | Y5 | 6.4 | rhz | Sand(rice) | Consume; Bathe |
| PL162 | เทพทาโร | [<i>Cinnamomum porrectum</i> (Roxb.) Kosterm. LAURACEAE] | | X | Y11 | 1.8, 13.1, 5.1, 14.2 | bk&w | Boil | Consume |
| PL164 | ตีนตุ้ง (K) เทียนบ้าน (R) | <i>Impatiens balsamina</i> L. BALSAMINACEAE | P21 | H | Y3 | 14.5 | all | Pound & Soak (40 proof alcohol) for half a day | Apply topically, 3 times a day |
| | | | | | | 10.1 | " | Boil 4 baht weight | Consume |
| | | | | | | 12.2 | " | Boil 1 baht weight | " |
| | | | | | | 14.1 | " | Boil | " |
| PL165 | ไทรย้อย | <i>Ficus benjamina</i> L. MORACEAE | | H | Y3 | 5.2 | small rt | Boil 3 กำ | Consume, 1 pot |
| | | | | | | 5.1 | " | Boil | " |
| PL166 | ธรณีพันราก | unknown | AV324 | D | Y13 | 12.1 | rt | Fresh | Ceremony: tie to bed |
| PL167 | เทียนโปีะ, คำรอก (K) นกกะบุด (R) | <i>Ellipanthus tomentosus</i> Kurz. var. <i>tomentosus</i> CONNARACEAE | AV61 | D | Y3 | 4.1, 4.5 | bark | Soak | Consume |
| PL168 | สุนไส, เจมเอ็ด (K) (กก)นกแก้ว, ยางบั้นทะ (R) | <i>Erythroxylum cuneatum</i> (Miq.) Kurz ERYTHROXYLACEAE | AV76, AV216 | NF | Y2 | 8.1 | rt | Sand | Consume |
| | | | | NF | Y5 | 13.1 | rt | Boil | Consume |

PLANTAE (Cont.)

| Code | Local names | Scientific name | Speci. | CO | TH | HC | Part | Preparation | Application |
|-------|---------------------------------------|--|--------------------------|-------|-----|-------------------|-------------|---|---------------------------|
| PL169 | ข้าตอกเต้ (K) นมควาย, นมวัว (R) | <i>Artabotrys burmanicus</i> DC. ANNONACEAE | AV26, AV275, AV342 | NF | Y2 | 1.2 | rt | Sand 7 pieces of medicine | Consume |
| | | | | NF | Y6 | 5.2 | rt | Boil | Consume |
| | | | | NF | B13 | 2.2, 4.3 | rt | Sand | Consume |
| | | | | NF | Y4 | 13.7 | bk | Dry, then burn | Smoke |
| PL170 | นมถั่ว | unknown | AV34 | NF | Y2 | 14.1, 14.2 | bk&w, rt | Boil | Consume |
| PL171 | นมสาว (1) | <i>Uvaria microcarpa</i> Champ. ex Benth. ANNONACEAE | AV43, AV331 | NF | Y2 | 14.1, 14.2 | bk&w, rt | Boil | Consume |
| | | | | NF | Y7 | 13.1, 4.1, 4.5 | bk&w, rt | Sand | Consume |
| PL172 | นมสาว (2) | [<i>Scleropyrum wallichianum</i> (Wight & Arn.) Arn. SANTALACEAE] | P22 | FF | Y3 | 8.1 | bk&w, rt | Sand(water); Soak(water) small pieces, then boil | Consume |
| | | | | | | 12.2, 14.1 | " | Boil | " |
| PL173 | นางแย้ม | <i>Clerodendrum chinense</i> (Osbeck) Mabb. LABIATAE | AV346 | H | Y8 | 13.11 | rt | Boil | Consume, within 7 days |
| PL174 | นางเอ้ว นางเอื่อม | [<i>Globba</i> sp. ZINGIBERACEAE] | | NF | Y5 | 9.2 | rhz | Pound | Topical |
| PL175 | กา-ลโษะ (K) นาค (R) | <i>Blumea balsamifera</i> (L.) DC. COMPOSITAE | AV189 | H | B4 | 6.3 | lf | Boil | bathe |
| PL177 | โกด (K) น้ำเกลือ (R) | [<i>Gluta laccifera</i> (Pierre) Ding Hou ANACARDIACEAE] | | T | Y12 | 6.3 | bk&w | Sand | Consume |
| PL178 | กะตังกะตาว (K) อะวาโรค, รุกโก๊ะ | <i>Ichnocarpus frutescens</i> (L.) W.T.Aiton APOCYNACEAE | AV226, | NF, E | Y5 | 3.3, 13.1 | rt | Boil | Consume |
| | | | | | | 3.1 | " | " | Consume, Steam vagina |

PLANTAE (Cont.)

| Code | Local names | Scientific name | Speci. | CO | TH | HC | Part | Preparation | Application |
|-------|-------------------|--|--------|-----|------|------------|--------|---|--------------------------|
| | (Y) (เครือ)น้ำนม, | | | | | 3.5 | " | " | Steam vagina |
| | เถาหด, ว่านจู้ย, | | | | | 5.10 | " | Boil; | Consume |
| | เครือผสมงา, | | NF | Y11 | 5.4 | | all | Soak(alcohol) | Consume |
| | (เครือ)ประสงค์, | | | | | | | Soak(water), | Consume |
| | ไพรสง (R) | | NF | Y13 | 8.7 | | rt | suck on plant, | Consume |
| | | | NF | Y4 | 13.4 | | rt | then Boil | Consume |
| PL179 | บองเหลือง | unknown | AV345 | NF | B13 | 13.1 | rt | Boil | Consume |
| PL180 | กอสอด้, คอลอ (K) | [<i>Tinospora crispa</i> (L.) Hook.f. | | H | Y4 | 5.1 | bk&w | Boil | Consume, 2 |
| | บอระเพ็ด (R) | & Thomson MENISPERMACEAE] | | H | Y11 | 5.1, 8.7 | bk&w | Steam, then Boil | pots Consume |
| | | | | H | Y12 | 9.6 | bk&w | Boil 7 pieces inside bamboo stalk | Consume, half a quart |
| PL181 | บะซาด, บะสาท, | <i>Strophoblachia fimbriicalyx</i> | AV147, | H | Y2 | 4.1, 8.1 | rt | Sand(water) | Consume; |
| | บะสาย | Boerl. EUPHORBIACEAE | P23 | | | | | in different proportions | Bathe |
| | | | | | | 13.1, 13.7 | " | Boil, Sand | Consume |
| | | | | | | 5.4, 9.6 | " | Sand | Consume, liberally |
| PL182 | (ต้น)บะอุม, บะโอง | <i>Calophyllum pisiferum</i> Planch. | AV164, | NF | Y5 | 4.1, 4.3 | hw | Boil | Consume |
| | | & Triana CLUSIACEAE | AV260 | | | | | | |
| PL184 | บานไม่รู้โรย | [<i>Gomphrena globosa</i> L. | | D | Aj4 | LPT | fl | fresh | symbol |
| | | AMARANTHACEAE] | | | | | | | |
| PL185 | (ต้น)บีคน | [<i>Brucea javanica</i> (L.) Merr. | | NF | Y14 | 13.4 | hw, lf | Boil | Consume |

PLANTAE (Cont.)

| Code | Local names | Scientific name | Speci. | CO | TH | HC | Part | Preparation | Application |
|-------|---|--|--------|----|-----|----------------|-----------|---|-------------------------------------|
| | | SIMAROUBACEAE] | | | | 13.3 | hw | Boil(1 bowl of water) | Consume, 1 swallow, at morn. & eve. |
| PL186 | เด็ยกะบูน, ปะกาย (Y) บุก, บุกป่า (R) | [<i>Amorphophallus paeoniifolius</i> (Dennst.) Nicolson ARACEAE] | P24 | H | Y7 | 4.1 | st | Sand | Consume |
| | | | | H | Y11 | 5.1 | rt: juice | Boil | Consume |
| | | | | H | Y14 | 5.1 | st | Boil | Consume, liberally |
| PL187 | (ต้น)บุงม้ง (K/Y) | unknown | AV335 | NF | Y5 | 2.2, 13.1, 5.7 | bk&w | Boil | Consume; Bathe |
| | | | | | | 4.3 | " | Soak(water) | Consume |
| | | | | NF | Y7 | 4.1 | hw | Sand | Consume |
| PL190 | (ต้น)ประดงเหลือง | cf. <i>Dalbergia oliveri</i> Gamble ex Pain FABACEAE | AV276 | NF | Y5 | 5.2, 14.1 | bk&w | Sand(rice) | Topical |
| | | | | NF | Y6 | 5.4 | bk | Sand(rice) | Topical |
| | | | | NF | Y7 | 5.2 | bk | Boil | consume |
| PL191 | ประคู้ | [<i>Pterocarpus macrocarpus</i> Kurz FABACEAE] | | NF | Y5 | 9.4 | bk | Fresh | suck and chew |
| PL193 | เปรี้ยกราม (Kh) (ผัก)ขมหนาม (R) | [<i>Amaranthus spinosus</i> L. AMARANTHACEAE] | | E | Y2 | 5.1 | rt | Boil | Consume |
| PL194 | วานดุง (K) (เครือ) ปลาไหล (R) | unknown | P25 | FF | Y3 | 10.2, 13.11 | hw | Sand | consume |
| PL195 | ปะเตี้ยลกาฉะลัว (K) (เครือ)ปลา | [<i>Acanthus ebracteatus</i> Vahl ACANTHACEAE] | P26 | NF | Y11 | 1.9 5.4 | all " | Boil Soak(water), suck on plant, then Boil | Consume Consume |

PLANTAE (Cont.)

| Code | Local names | Scientific name | Speci. | CO | TH | HC | Part | Preparation | Application |
|-------|---|---|-----------------|----|-----|---------------------|--------------|--|--|
| | หม้อ (R) | | | | | | | | |
| PL196 | สะ-มาะ-กะ-บอน (K) (ต้น)เปลือก หนา (R) | unknown | AV330, P27 | H | Y11 | 8.6 | hw | Boil | Consume, 5-6 pots |
| PL197 | ปอกะทาน | cf. <i>Memecylon geddesianum</i> Craib. MELASTOMATACEAE | AV302, P28 | NF | Y6 | 6.5 | rt | Sand | Topical: apply from outside towards center of infection |
| PL198 | ปอป่า | <i>Colona auriculata</i> Craib TILIACEAE | AV156, AV190 | H | Y11 | 6.2 | rt | Pound, then Soak(water) | Topical, 1 bottle |
| PL199 | ปุงมั่ง (K) ภูมะลิ (R) | unknown | AV21, AV207 | D | Y5 | 9.5 13.1 | lf bk&w | Fresh boil | Chew Consume, bathe |
| | | | | | Aj3 | 14.2 | rt, all | Eat | Consume |
| PL200 | (กก)ปีเลือด (K) ตะแบกเลือด (R) | [<i>Terminalia mucronata</i> Craib & Hutch. COMBRETACEAE] | P29 | NF | Y5 | 5.10 8.2, 8.3 | bk, rt bk | Boil; Soak Roast, then Soak(water) | Consume " |
| PL201 | คาลังโคงตะตาม (K) (ต้น)ปูกา, ปูนา (R) | unknown | AV240, P30 | D | Y2 | 6.5 | lf | Scrub(rice) | Topical |
| PL203 | ผาง (1) | [<i>Albizia chinensis</i> (Osbeck) Merr. FABACEAE] | | D | Y2 | 13.1, 14.1, 14.2 | hw | Sand | Consume |

PLANTAE (Cont.)

| Code | Local names | Scientific name | Speci. | CO | TH | HC | Part | Preparation | Application |
|-------|--|--|--------------------------|------|-----|--------------------------|------|--|-------------------------------------|
| PL204 | ฝั้แตก, กั้นปอบ, คั้นฝั้ปอบ, คั้นพะเนง | unknown | AV77, AV169, AV300 | NF | Y5 | 12.1 | rt | Tie 3 pieces with cotton thread on Tuesdays | Keep close or tie around neck |
| | | | | | | 8.1 | " | Boil; Fresh | Consume |
| PL206 | ไฝ้ | <i>Bambusa</i> sp. GRAMINEAE | | D/NF | Y7 | 10.2 | lf | Soak(water) | Topical: apply to head |
| PL207 | คั้ลสองไฝ้ (K) ไฝ้ลาย (I) | <i>Bambusa</i> sp. GRAMINEAE | P3 | D/NF | B15 | 2.2 | bk&w | Boil | Consume |
| | | | | | | | | | |
| PL208 | ไฝ้เหล็อง | [<i>Bambusa vulgaris</i> Schrad. Ex J.C. Wendl. var. <i>vulgaris</i> GRAMINEAE] | | D/NF | Y4 | 5.1 | bk&w | Boil | Consume, 2 pots |
| | | | | D/NF | Y5 | 8.7 | rt | Boil | |
| | | | | D/NF | Y10 | 13.6 | bk&w | Boil 7 pieces of medicine | Consume |
| | | | | D/NF | Y13 | 5.3 | bk&w | Boil | Consume |
| PL209 | ฝาง, ผาง (2) (R) | <i>Caesalpinia sappan</i> L. FABACEAE | AV103, AV174, P31 | H | Y2 | 13.1, 4.1, 14.1, 14.2 | hw | Sand | Consume |
| | | | | H | Y3 | 8.1, 13.11 | hw | Pound, then Boil | Consume |
| | | | | H | Y12 | 7.1 | hw | Boil | Consume |
| | | | | H | P6 | 5.7 | hw | " | " |
| | | | | P | B13 | 2.3, 13.1, 6.4, 6.5 | hw | " | " |
| PL211 | พญามือคั้ง | <i>Strychnos</i> sp. STRYCHNACEAE | AV78, P32 | NF | Y5 | 7.2 | hw | Sand(water); Soak(water) | Consume |

PLANTAE (Cont.)

| Code | Local names | Scientific name | Speci. | CO | TH | HC | Part | Preparation | Application |
|--|-------------------|---|------------------------|----------------|------------------|-------------------------------|-------------------------------|--|--|
| | | | | | | 5.1, 5.10 | " | Boil | " |
| PL212 | พญามือเหล็ก | <i>Strychnos ignatii</i> Berg STRYCHNACEAE | AV75, AV221, P33 | NF | Y5 | 5.1, 5.7, 5.10 7.2 | hw " | Boil Sand(water), Soak(water) | Consume Consume |
| PL213 | พระเจ้าห้าพระองค์ | <i>Dracontomelon dao</i> Merr. & Rolfe ANACARDIACEAE | AV113 | FF FF FF | Y4 Y11 Y14 | 4.1, 4.2, 13.7 5.1, 5.2 | rt tip bk&w, fr bk&w | Sand Boil Boil | Consume, 1-2 glasses Consume Consume, liberally |
| PL214 | พริก | [<i>Capsicum frutescens</i> L. var. <i>frutescens</i> SOLANACEAE] | | H | Aj1 | LPT | fr | fresh | symbol |
| PL215 | พริกไทย | [<i>Piper nigrum</i> L. PIPERACEAE] | | H | Y4 | 8.1, 13.11 | fr | Pound, then Boil | Consume |
| PL216 | พลู | <i>Piper betle</i> L. PIPERACEAE | P34 | H | Y3 | 2.5 9.3 | lf " | Pound, then Soak(warm water with slaked lime) Wipe slaked lime on leaf, recite incantation, then blow on leaf | Topical: do not expose injury to sun Wipe leaf across neck and throw leaf away |
| | | | | H | Aj | LPT | leaf | Symbol | symbol |
| All Blowing doctors use this. See Animals table for more details | | | | | | | | | |
| PL217 | พลูกะตอย | <i>Piper wallichii</i> (Miq.) Hard.- Mazz. PIPERACEAE | P34 | H | B11 | 2.1 | lf | Healer Chews Fresh | Healer blows on patient |

PLANTAE (Cont.)

| Code | Local names | Scientific name | Speci. | CO | TH | HC | Part | Preparation | Application |
|-------|---|---|----------------|------|-----|------------|---------|--|--|
| PL218 | (ต้น)พอก | <i>Parinari anamensis</i> Hance CHRYSOBALANACEAE | AV308 | D | Y5 | 4.3 | hw | Soak(water) | bathe |
| PL220 | พะเนียด (K) กระแจะ, ตูมกา (R) | [<i>Naringi crenulata</i> (Roxb.) Nicholson RUTACEAE] | | D | Y2 | 4.1, 8.1 | rt, all | Sand(water) | Consume; bathe |
| PL221 | กาลาพิน (K) พะยอม (R) | <i>Shorea roxburghii</i> G.Don DIPTEROCARPACEAE | P35 | D/NF | B15 | 2.2 | bk | Healer Chews Fresh | Healer blows on patient symbol |
| PL222 | พันชาด, พันชาด | [<i>Erythrophleum succirubrum</i> Gagnep. FABACEAE] | | D | Y2 | 4.1, 8.1 | bk | Sand(water) in different proportions | Consume; Bathe |
| | | | | | | 13.1, 13.7 | " | Pound, then Boil | Consume |
| PL223 | กางขี้ (K) พุงคี่, พังกี่, บุ่งคี่ (R) | <i>Cladogynos orientalis</i> Zipp. ex Span. EUPHORBIACEAE | AV49, AV165 | NF | Y4 | 8.1 | rt | Boil | Consume |
| | | | | NF | Y5 | 8.1 | rt | Boil | Consume |
| | | | | FF | Y6 | 8.1, 14.3 | rt | Boil | Consume liberally at morn. & even. |
| | | | | D | Y11 | 8.1, 14.1 | rt | Boil | Consume |
| | | | | D | Y12 | 8.1 | rt | Boil | Topical |
| | | | | | | 6.3 | " | " | Consume |
| | | | | D | P6 | 5.11, 12.1 | rt | Sand | Consume |
| | | | | | | 8.1 | " | Boil | " |
| PL225 | พุด | [<i>Tabernaemontana divaricata</i> (L.) R.Br. ex Roem APOCYNACEAE] <i>Polyscia</i> | | D | Y3 | 4.1 | rt | Sand; Soak | Consume |

PLANTAE (Cont.)

| Code | Local names | Scientific name | Speci. | CO | TH | HC | Part | Preparation | Application |
|-------|---------------------------------------|---|--------|----|-----|------|------|---|---|
| | | | | D | Aj | LPT | fl | Symbol | symbol (decorative) |
| PL226 | เพชรสังฆาต | [<i>Cissus quadrangularis</i> L. VITACEAE] | | H | Y4 | 8.7 | bk&w | Push it into ripe banana | Consume |
| | | | | H | Y14 | 8.7 | bk&w | Dry, pound, put in capsule | Consume |
| PL228 | โพธิ์ (R), โพธิ์ศรีมหาโพธิ์ (T) | [<i>Ficus religiosa</i> L. MORACEAE] | | D | Y11 | 12.2 | lf | Boil | Consume |
| | | | | | | 9.4 | lf | Pound together, then steam | Soak cotton in medicine, place cotton in patient's mouth. |
| | | | | D | Y13 | 5.9 | rt | Boil | Consume |
| | | | | D | Y14 | 6.5 | bk | Sand | Topical |
| | | | | D | B4 | 6.5 | bk | Sand | Topical |
| PL229 | เรอเป่า (K) ฟักทอง (R) | [<i>Cucurbita moschata</i> Duchesne CUCURBITACEAE] | P36 | H | Y12 | 13.1 | st | Sand | Consume |
| PL230 | ฟ้าทะลายโจร (K/R) | [<i>Andrographis paniculata</i> (Burm.f.) Nees ANCANTHACEAE] | | H | Y3 | 3.4 | all | Pound equal amounts into powder, roll into pellets | Consume; 2 pills at morn. & even. |
| | | | | H | Y14 | 5.1 | all | Boil | Consume, liberally |
| PL231 | เฟื่องฟ้า | [<i>Bougainvillea spectabilis</i> Willd. NYCTAGINACEAE] | | H | Aj3 | LPT | fl | fresh | symbol (decorative) |

PLANTAE (Cont.)

| Code | Local names | Scientific name | Speci. | CO | TH | HC | Part | Preparation | Application | | | |
|-------|--------------------------------------|--|--------|----|-----|------------|-------|--|-----------------------|---------------|------------|-------------------|
| PL232 | สุสา (K) (หญ้า)มก เตา, โคมเบา (R) | <i>Carex baccans</i> Nees CYPERACEAE | AV173 | E | P6 | 13.1, 5.7 | all | Boil | Consume | | | |
| | | | | E | Y2 | 3.7 | all | Boil | Consume | | | |
| PL233 | มอมมอมเล็ก | <i>Ellipeiopsis cherrevensis</i> (Pierre ex Finet & Ganep.) R.E.Fr. ANNONACEAE | AV27 | NF | Y2 | 4.3 | rt | Sand; Soak | Consume; Topical | | | |
| | | | | | | 13.1 | " | Sand | Consume | | | |
| PL234 | มอมมอมใหญ่ | <i>Uvaria rufa</i> Blume ANNONACEAE | AV28 | NF | Y2 | 4.3 | rt | Sand; Soak | Consume; Topical | | | |
| | | | | | | 13.1 | " | Sand | Consume | | | |
| | | | | | | | NF | B13 | 2.2, 4.3 | rt | Sand | Consume |
| PL235 | มะกอกเกลื่อน | <i>Canarium subulatum</i> Guill. BURSERACEAE | | FF | Y2 | 4.2 | bk&w | Cover in salt, Roast, then Soak(water) | Consume; Bathe | | | |
| PL236 | มะกา | [<i>Bridelia ovata</i> Decne. EUPHORBIACEAE] | | FF | Y3 | 8.1, 13.11 | lf | Pound, then Boil | Consume | | | |
| PL237 | มะก้า | [<i>Adenanthera pavonina</i> L. FABACEAE] | P37 | NF | Aj1 | LPT | seeds | fresh | symbol (construct) | | | |
| PL238 | มะขาม | [<i>Tamarindus indica</i> L. FABACEAE] | | H | Y2 | 4.1, 8.1 | hw | Sand(water) in different proportions | Consume; Bathe | | | |
| | | | | | | 13.7 | " | Boil; Sand | Consume | | | |
| | | | | | | | H | Y3 | 6.3 | hw, bk, rt | Boil; Soak | Consume; Bathe |
| | | | | | | | | | 5.2 | small rt | Boil 3 ถัง | Consume, 1 pot |
| | | | | | | | | | 5.1 | small rt | Boil | Consume, 1 pot |
| | | | H | Y4 | 6.5 | lf | Boil | Consume | | | | |

PLANTAE (Cont.)

| Code | Local names | Scientific name | Speci. | CO | TH | HC | Part | Preparation | Application |
|-------|-------------------------------|--|--------|-----|-----|----------|-------------|---|-------------|
| PL240 | มะขามเทศ | [<i>Pithecellobium dulce</i> (Roxb.) Benth. FABACEAE] | | H | Y3 | 13.12 | rt | Boil | Consume |
| PL241 | มะเขือป้า | [<i>Datura metel</i> L. var. <i>metel</i> SOLANACEAE] | | NF | Y4 | 6.1 | lf | Boil | Topical |
| | | | | NF | Y8 | 13.11 | lf | Burn, mix ashes with rice water | Topical |
| PL242 | มะเขือพวง | [<i>Solanum torvum</i> Sw. SOLANACEAE] | | H | Y13 | 7.2 | rt | soak | Consume |
| PL243 | มะแงว | [<i>Nephelium hypoleucum</i> Kurz, SAPINDACEAE] | | NF | Y7 | 4.1, 4.5 | hw | Sand | Consume |
| PL244 | มะคั้น | [<i>Garcinia schomburgkiana</i> Pierre CLUSIACEAE] | | FF | Y3 | 10.1 | bk&w | Boil | Consume |
| PL245 | มะเดื่อปล้อง | [<i>Ficus hispida</i> L.f. MORACEAE] | | D | Y8 | 4.1 | rt | Boil | Consume |
| PL246 | มะตูม | [<i>Aegle marmelos</i> (L.) Correa ex Roxb. RUTACEAE] | | D/H | Y4 | 10.1 | bk&w | Boil | Consume |
| | | | | | | 5.3 | rt | " | " |
| PL247 | ชะกรูด (Y) มะนาว (R) | [<i>Citrus aurantifolia</i> (Christm.) Swingle RUTACEAE] | | H | Y7 | 13.1 | rt | Sand | Consume |
| | | | | H | Y4 | 1.2 | rt, lf | Sand | Consume |
| | | | | | | 6.3 | lf | Place over fire until burnt, pound with pork oil | Topical |
| PL248 | ชะกรูดกาก (Y) มะนาวป้า (R) | [<i>Citrus</i> sp. RUTACEAE] | | NF | Y13 | 13.4 | bk&w, rt | Boil | Consume |

PLANTAE (Cont.)

| Code | Local names | Scientific name | Speci. | CO | TH | HC | Part | Preparation | Application |
|-------|---|---|--------|-----|-----|------------|----------|--|--|
| PL249 | อวานจะลิง (K) (เถ้า)มะปิ้ง, ผักปิ้ง (R) | [<i>Anredera cordifolia</i> (Ten.) Steenis BASELLACEAE] | | P/D | Y11 | 12.2, 12.3 | rt | Sand | Consume: patient will say spirit's name and spirit will leave |
| PL250 | โตง (K): มะพร้าว (R); ชุงอูก (K): มะพร้าวไฟ (R) | [<i>Cocos nucifera</i> L. var. <i>nucifera</i> PALMAE] | | H | Y2 | 6.5 | end | Fresh | Consume |
| | | | | H | Y3 | 4.1 | rt | Sand(water); Soak(water) | Consume |
| | | | | | | 13.11 | end oil | Fresh | Topical |
| | | | | H | Y4 | 6.1 | Fr juice | Boil | Topical |
| | | | | H | Y11 | 9.2 | end oil | Fresh | Topical |
| | | | | | | 8.7 | end | Dry, then Pound, then put into capsules | Consume |
| | | | | H | B12 | 4.1, 4.2 | end | Roast, mix with salt, then soak(water) | Consume |
| | | | | H | Y13 | 5.1 | rt | Boil | Consume |
| PL251 | มะพิกหญ้า | <i>Scoparia dulcis</i> L. SCROPHULARIACEAE | AV327 | D | Y11 | 3.2 | all | Boil | Consume |
| PL252 | เป็ง (K) (ต้น) มะเฟือง (R) | [<i>Averrhoa carambola</i> L. OXALIDACEAE] | | H | Y3 | 10.1 | hw | Boil | Consume |
| PL253 | ปลอง (K) มะไฟ (R) | [<i>Baccaurea ramiflora</i> Lour. EUPHORBIACEAE] | | FF | Y3 | 13.11 | lf | Boil | Consume |
| | | | | FF | Y7 | 4.1, 4.5 | hw, rt | Sand | Consume |

PLANTAE (Cont.)

| Code | Local names | Scientific name | Speci. | CO | TH | HC | Part | Preparation | Application |
|-------|-----------------|---|---------------|------|-----|-----------|---------------------|---|----------------------------------|
| PL255 | มะระจีนก | [<i>Momordica charantia</i> Wall. CURCUBITACEAE] | | D | Y3 | 13.12 | rt, lf | Boil | Consume: must exercise too |
| PL256 | (ต้น)มะราง | <i>Shorea obtusa</i> Wall. ex Blume DIPTEROCARPACEAE | AV222 | NF | Y5 | 8.7 | rt | Boil | Consume |
| PL257 | มะรุม, ผักอีฮีม | <i>Moringa oleifera</i> Lam. MORNINGACEAE | AV328, P38 | H | Y11 | 5.10 | rt | Pound | Consume |
| | | | | H/NF | Y4 | 12.2 | rt | Boil | Consume |
| | | | | D | Y5 | 5.2 | bk | Sand(rice) | Topical |
| | | | | | | 14.1 | bk | Sand(rice) | Consume |
| PL258 | มะละกอ | [<i>Carica papaya</i> L. CARICACEAE] | | H | Y4 | 13.4 | rt | Boil | |
| | | | | H | Y5 | 3.4 | Male: ys, fl, fr | Boil | Steam vagina |
| | | | | | | 3.1, 14.6 | " | Steam; Chop & pound fruit with skin into salad | Consume |
| | | | | | | 5.10 | rt | Boil | " |
| | | | | H | Y14 | 2.1 | sd oil | Fresh | Topical, apply 3-4 d. |
| PL259 | มะลิ | [<i>Jasminum sambac</i> (L.) Aiton OLEACEAE] | | H | Y3 | 4.1, 4.2 | rt | Sand; Soak | Consume; Bathe |
| | | | | H | Y8 | 13.11 | rt | Boil | Consume, within 7 days |
| | | | | H | Aj | LPT | fl | fresh | symbol |
| PL260 | | <i>Lepisanthes rubiginosa</i> | AV273, | D | Y6 | 5.11 | rt | Boil | Consume |

PLANTAE (Cont.)

| Code | Local names | Scientific name | Speci. | CO | TH | HC | Part | Preparation | Application |
|-------|---|--|--------|----|----------------------------|--|----------------------------------|--|--|
| | ตะเลาะเกาะ (Y) มะหวดข่า, มะหวดข่าน้อย (R) | (Roxb.) Leenh. SAPINDACEAE | AV318 | D | Y13 | 8.7 | bk&w, rt | Boil | Consume |
| PL261 | มะหาด | [<i>Artocarpus lacucha</i> Buch.- Ham. Ex D.Don MORACEAE] | | NF | B1 | 2.1 | bk | Healer chews fresh | Healer blows on afflicted area |
| PL262 | มะหิงคะ โมด | <i>Crotalaria bracteata</i> Roxb. ex DC. FABACEAE | AV20 | D | Y5 | 1.6 | fr | Healer chews fresh | Healer blows on afflicted area |
| PL264 | กะเบา, กะมาย (K) มักแสว, หมากแขว (R) | <i>Elaeocarpus grandiflorus</i> Sm. ELAEOCARPACEAE | AV40 | NF | Y2 | 6.5 6.4 | bk, lf " | Boil " | Consume Consume; Soak afflicted area |
| PL265 | มัดกา, ปลาช่อน (R) | [<i>Micromelum minutum</i> Wight & Arn. RUTACEAE] | | NF | Y2 | 4.1, 8.1 13.7, 13.1 | rt " | Sand(water) different proportions Boil, Sand | Consume; Bathe Consume |
| PL266 | มันปลา | [<i>Adinandra laotica</i> Gagnep. THECEAE] | | H | Y8 | 5.3 | hw | Boil | Consume |
| PL269 | ส-แพง, สะดักสะ ต้อล(K) ม้ากระทืบ โรง, ตาไก่ (R) | <i>Neuropeltis racemosa</i> Wall. CONVOLVULACEAE | AV115 | | Y2 Y3 Y4 NF Y5 | 3.7 8.1, 13.11 5.2, 5.9, 5.11 13.1, 5.7 5.7 | all bk&w bk&w bk&w " | Boil Pound, then Boil Boil; Soak(alcohol) Boil; Fresh(honey) Boil | Consume Consume Consume, 2 pots Consume " |

PLANTAE (Cont.)

| Code | Local names | Scientific name | Speci. | CO | TH | HC | Part | Preparation | Application |
|-------|--|---|-----------------------|----|-----|----------------|-----------|----------------------------------|--------------------------------------|
| | | | | | | 5.10 | " | Soak(water) | " |
| | | | | NF | Y8 | 5.3, 5.11, 8.1 | bk&w | Boil | Consume |
| PL271 | (ต้น)เม็ดมะม่วง | <i>Anacardium occidentale</i> L. ANACARDIACEAE | | H | Y5 | 8.3 | rt | Boil | Consume |
| PL272 | (ว่าน)แมงมุม | <i>Cryptostylis arachnites</i> (Blume) Hassk. ORCHIDACEAE | P39 | H | Y6 | 1.5 | head,' lv | Sand(lime) | Topical |
| PL273 | พัวชะ, ขำเลียง (K) (ต้น)แม่ฮ้าง, แม่ หม้าย (R) | <i>Ardisia helferiana</i> Kurz MYRSINACEAE | AV341 | NF | B13 | 4.3 | rt | soak | Consume; Bathe |
| | | | | NF | B15 | 2.2 | rt | Sand(duck blood & alcohol) | Consume |
| PL274 | กาลาจา (K) (ต้น) มูก (R) | <i>Wrightia arborea</i> (Dennst.) Mabb. APOCYNACEAE | AV333 | NF | Y7 | 10.2 | lf | Soak(water) | Topical: apply to back of head |
| PL276 | เมื่อดู | <i>Aporosa ficifolia</i> Baill. EUPHORBIACEAE | AV269 | NF | Y5 | 4.1 | rt | Soak(water) | Consume |
| PL277 | เมื่อดอ | <i>Memecylon scutellatum</i> (Lour.) Hook. & Arn. MELASTOMACEAE | AV91, AV284 P40 | NF | Y6 | 5.11 | hw | Boil | Consume |
| PL278 | มัด (K) ไม้กวาด, หญ้าขัด, หญ้า ขัดมอน (R) | <i>Sida rhombifolia</i> L. MALVACEAE | AV154 | D | Y11 | 13.1 | rt | Boil | Consume, 3 pots |

PLANTAE (Cont.)

| Code | Local names | Scientific name | Speci. | CO | TH | HC | Part | Preparation | Application |
|-------|--|--|---------------------|----|------|---------------------------|-------------|---|---|
| PL279 | กรัถ (K) ไม้ใต้ (R) | [<i>Pinus merkusii</i> Jungh. & de Vriese PINACEAE] | P41 | NF | Y12 | 13.1, 4.1, 4.3, 5.9, 13.7 | hw | Sand | Consume |
| PL281 | กะระช่อง, ดูบหมบ (K) ไมยราพ, ผีหมอบ (R) | [<i>Mimosa pudica</i> L. FABACEAE] | | E | Y3 | 8.7 | rt | Boil | Consume |
| | | | | E | Y5 | 6.3 | all | Boil | Consume; Bathe |
| | | | | E | Y8 | 5.1 | all | Boil | Consume |
| | | | | E | Y11 | 14.2 | rt | Boil | Consume |
| | | | | | | 9.4 | " | Pound, then steam medicine | Use cotton to soak & place in patient's mouth |
| | | | | E | Y14 | 8.1 | bk&w, rt | Boil | Consume |
| | E | B13 | 2.3, 13.1, 6.4, 6.5 | rt | Boil | Consume | | | |
| PL282 | ข้าว (K) ขอบ้าน (R) | [<i>Morinda citrifolia</i> L. RUBIACEAE] | | D | Y3 | 8.1 | fr, rt | Pound into powder & mix with water; Fresh | Consume or suck on fresh rind minimally |
| | | | | | | 8.1 | rt | Sand(water); Soak(water) small pieces, then Boil | Consume |
| | | | | | | 8.1, 13.11 | fr | Pound, then Boil | " |
| | | | | D | Y11 | 6.1 | lf | Dry medicines, pound into powder, & Boil | Topical: break open infection, use white cloth to apply |

PLANTAE (Cont.)

| Code | Local names | Scientific name | Speci. | CO | TH | HC | Part | Preparation | Application | |
|-------|---|--|--------|----|-----|---------------------------------|------|--|-----------------------|-----------------------|
| | | | | | D | Aj | LPT | wood | symbol | symbol (construct) |
| PL283 | ขอป่า | [<i>Morinda elliptica</i> Ridl. RUBIACEAE] | | NF | Y14 | 5.1 | hw | Boil | Consume, liberally | |
| PL286 | ยางปิ่น | unknown | AV176 | NF | Y2 | 4.1, 8.1 | rt | Sand(water) in different proportions | Consume; Bathe | |
| | | | | | | 13.7 | " | Boil, Sand | Consume | |
| | | | | | | 13.1 | " | Sand | " | |
| | | | | | | 3.7 | " | Boil | " | |
| PL287 | ยางโพน | unknown | AV188 | D | B4 | 2.2, 6.4 | lf | Pound | Topical | |
| PL288 | เขี่ยดิน (Y) ยาดิน (R) | <i>Baliospermum solanifolium</i> (Geiseler) Suresh EUPHORBIACEAE | AV197 | D | Y13 | 13.6 | lf | Dry and Burn | Smoke | |
| PL289 | สว้าง, ตะเภาล, เตரியง (Y) ย่านาง (R) | [<i>Tiliacora triandra</i> Diels MENISPERMACEAE] | P41 | H | Y5 | 4.1 | rt | Soak(water) | Consume | |
| | | | | H | Y7 | 4.4 | rt | Sand | Consume | |
| | | | | H | Y11 | 6.4 | rt | Boil | Consume | |
| | | | | H | Y12 | 13.1, 4.1, 4.3, 5.9, 13.7 | rt | Sand | Consume | |

PLANTAE (Cont.)

| Code | Local names | Scientific name | Speci. | CO | TH | HC | Part | Preparation | Application |
|-------|---|--|--------|----|-----|--|----------|---|-------------------------|
| PL290 | มิ่งเซา (K) ย่านาง แดง (R) | [<i>Bauhinia strychnifolia</i> Craib FABACEAE] | | NF | Y3 | 8.1, 13.11 | bk&w | Pound, then Boil | Consume |
| PL291 | ยาสูบ | [<i>Nicotiana tabacum</i> L. SOLANACEAE] | | H | Y8 | 13.11 6.4 | lf " | Burn, mix ashes with rice water Pound | Topical " |
| | | | | H | Aj | LPT | leaf | Symbol | Symbol |
| PL292 | เงาะปลอ (K) ยาหัว (R) | [<i>Smilax glabra</i> Roxb. SMILACACEAE] | P42 | P | Y1 | 8.7 | rhz | Boil | Consume |
| | | | | P | Y3 | 13.11 | rhz | Boil | Consume |
| | | | | P | Y4 | 5.2 | rhz | Boil | Consume |
| | | | | P | Y5 | 5.5, 5.10, 5.11, 12.1, 12.3 3.1 | rhz " | Boil " | Consume Steam vagina |
| | | | | | | 13.11 | " | Pound | Topical |
| | | | | P | Y10 | 13.12 | rhz | Boil | Consume |
| | | | | P | Y12 | 7.1 | rhz | Boil | Consume |
| | | | | P | Y14 | 8.7 | rhz | Dry and pound, put into capsules | Consume |
| | | | | P | P6 | 8.1 | rhz | Boil | Consume |
| PL293 | กิลกอย (K) (ต้น) รัก, น้ำเกลี้ยง (R) | [<i>Gluta laccifera</i> (Pierre) Ding Hou ANACARDIACEAE] | | NF | Y8 | 8.2 | bk | Roast on fire until dry, then Soak(water) | Consume |

PLANTAE (Cont.)

| Code | Local names | Scientific name | Speci. | CO | TH | HC | Part | Preparation | Application |
|-------|--|--|--------|----|-----|-------------------------|--------|---|--------------------------|
| PL294 | รัก | [<i>Calotropis gigantea</i> (L.) R.Br. ASCLEPIADACEAE] | | D | Aj | LPT | fl | fresh | symbol |
| PL296 | (ต้น)รายราย | unknown | AV37 | NF | Y2 | 13.11 | hw | Mix with water | Topical |
| PL298 | ลองกอง (K) | <i>Millingtonia hortensis</i> L.f. BIGNONIACEAE | AV104 | E | Y2 | 5.1 | bk&w | Boil | Consume |
| | คางของ, ต้นคอง | | | H | P6 | 13.1, 3.7, 5.7, 5.11 | rt | Boil | Consume |
| | (R) ต้นปีบ (T) | | | E | Y13 | 5.9 | bk&w | Boil | Consume |
| PL300 | ละลาย | <i>Mitragyna rotundifolia</i> (Roxb.) Kuntze RUBIACEAE | AV95 | D | Y4 | 13.4 | hw | Boil | Consume |
| | | | | D | Y8 | 5.3 | hw, lf | Boil | Consume |
| | | | | | | 13.11 | " | Burn, mix ashes with rice water | Topical |
| PL301 | จำปีจำปา (K) ลั่นทม, ลั่นทมดอกแดง (R) | [<i>Plumeria rubra</i> L. APOCYNACEAE] | | H | Y3 | 9.2 | bk&w | Boil 3 pieces (3"), prepare in 2:2:1 ratios | Consume, before sleeping |
| | | | | X | Y8 | 2.8, 7.2, 13.11 | bk&w | Boil | Consume |
| | | | | H | Aj | LPT | flower | fresh | symbol (decorative) |
| PL303 | ตอไม้กลางทาง, ก้อนแจ็ก (K) ลูก ขิกลูกขอ, ไม้ใน กระดิ่งวัว (R) | N/A | P36 | D | Y12 | 13.1 | hw | Sand | Consume |

PLANTAE (Cont.)

| Code | Local names | Scientific name | Speci. | CO | TH | HC | Part | Preparation | Application |
|-------|---|---|--------------|------|---------|----------------|--------|-----------------------------------|---|
| PL304 | เล็บครุฑ | [<i>Polyscias fruticosa</i> (L.) Harms ARALIACEAE] | P43 | D | Aj | LPT | lf | fresh | symbol (splash water) |
| PL305 | ปู่แมว, บุงเบาะ, บุงเบาะ, บุงตะแวง (Y) เล็บแมว, เล็บแมวขาว/ดำ (R) (black & white) | <i>Ziziphus oenoplia</i> (L.) Mill. var. <i>brunoniana</i> Tardieu RHAMNACEAE | AV177, AV198 | D | Y2 | 3.7 | rt | Boil | Consume |
| | | | | NF | Y7 | 8.6 | rt | Sand | Consume |
| | | | | | | 5.2, 5.8, 10.2 | rt | Boil | Consume |
| | | | | D | Y8 | 13.11 | rt | Boil | Consume, within 7 days |
| | | | | D | Y13 | 6.4 | st, rt | Sand(rice) | Topical |
| | | 3.1, 5.2, 8.7, 13.9 | st, rt | Boil | Consume | | | | |
| PL306 | ไทรหน่ (K) โล่หิน (R) | <i>Derris elliptica</i> (Roxb.) Benth. FABACEAE | P44 | H | Y3 | 1.3 | rt | Sand(lime) | Topical |
| | | | | NF | Y4 | 1.3 | rt | Sand | Topical |
| | | | | H | Y11 | 1.3, 1.4, 1.7 | rt | Pound fresh, soak(water) | Topical |
| PL307 | โศคนง | [<i>Trigonostemon reidioides</i> Craib EUPHORBIACEAE] | | D | Y3 | 2.7 | rt | Sand | Consume |
| PL308 | ปิ่นต้น (K) ลำควน (R) | <i>Melodorum fruticosum</i> Lour. ANNONACEAE | P45 | H | Y2 | 1.2 | rt | Sand 7 pieces | Consume |
| | | | | H | Y4 | 5.3 | rt | Boil | Consume |
| | | | | H | Y11 | 6.1 | bk&w | Dry, pound into powder, then boil | Topical: break open skin, then use white cloth to apply |
| | | | | H | P6 | 5.11 | bk&w | Boil with 7 pieces | Consume |
| PL309 | ลำโพง กาสลัก | [<i>Datura metel</i> L. var. <i>fastuosa</i> (Bernh.) Danert] | | D | Y8 | 6.4 | lf | Pound | Topical |

PLANTAE (Cont.)

| Code | Local names | Scientific name | Speci. | CO | TH | HC | Part | Preparation | Application |
|-------|-------------------------------|--|-----------------|----|-----|-----|------|---|--|
| | ดอกคำ | SOLANACEAE] | | | | | | | |
| PL310 | ว่าน (1) | <i>Murdannia gigantea</i> (Vahl) G.Bruckn. COMMELINACEAE | AV262, AV290 | NF | Y5 | 6.4 | head | Sand(rice) | Topical |
| PL311 | ว่าน (2) | <i>Brachycorythis henryi</i> (Schltr.) Summerh. ORCHIDACEAE | AV288 | NF | Y5 | 6.4 | head | Sand(rice) | Topical |
| PL312 | ว่านชักมดลูก | [<i>Curcuma xanthorrhiza</i> D. Dietr. ZINGIBERACEAE] | | NF | Y3 | 3.4 | head | Pound equal amount into fine powder, roll into pills | Consume, 1 pill at morn. & even. |
| | | | | NF | Y11 | 3.4 | head | Fresh | Chew with hot water |
| PL313 | ว่านไฟ | [<i>Zingiber montanum</i> (J. König ex Retz.) Theilade ZINGIBERACEAE] | | H | Y5 | 8.1 | head | Boil | Consume |
| | | | | H | Y6 | 8.1 | head | Boil | Consume |
| PL314 | ว่านหัวช้าง, มหาฤๅษี | <i>Nervilia aragoana</i> Commons ex Gaudich. ORCHIDACEAE | AV202, P46 | NF | Y5 | 2.9 | bulb | Sand(water) | Consume |
| PL317 | สบแห้ง, อีแห้ง, ว่านดอกลิน | <i>Aeginetia pedunculata</i> (Roxburgh) Wallr. OROBANCHACEAE | AV162 | NF | Y5 | 6.4 | rt | Sand(rice) | Topical |
| PL318 | เสปียง, สะบ้า | [<i>Entada rheedii</i> Spreng. FABACEAE] | | NF | Y4 | 6.1 | end | Boil | Topical |
| | | | | NF | B15 | 2.2 | nut | Boil | Consume |

PLANTAE (Cont.)

| Code | Local names | Scientific name | Speci. | CO | TH | HC | Part | Preparation | Application |
|-------|---|---|---|-----|-----|------------|-------------|---------------------|---|
| PL319 | ส้ม | [<i>Citrus reticulata</i> Blanco RUTACEAE] | | P | Y3 | 5.1 | fr rind | Dry, then boil | Consume 1pot or until sugar level reduces |
| PL320 | ละลอ, ออบแอบ (K) (ต้น)ส้มกบ ใหญ่, ต้นโอโหลก, ส้มกบ (R) | <i>Hymenodictyon orixense</i> (Roxb.) Mabb. RUBIACEAE | AV96, AV170 | NF | Y5 | 4.3 | bk&w, rt | Soak | Consume; Bathe |
| | | | | | | 5.10, 5.11 | bk&w, rt | Boil | Consume |
| | | | | | | 4.1 | hw | Soak(water) | " |
| | | | | NF | Y6 | 4.3 | bk&w, rt | Soak | Consume |
| | | | | D | Y8 | 4.1 | rt | Boil | Consume |
| PL321 | ส้มป่อยแดง: เขาะเซา (K) ส้มป่อย (R) | [<i>Acacia concinna</i> (Willd.) DC. FABACEAE] | | D | Y3 | 8.1, 13.11 | fr | Pound, then Boil | Consume |
| | | | | NF | Y11 | 7.1 | rt, lf | Sand | Consume |
| | | | | | | 5.10 | lf | Boil | " |
| | | | | NF | Aj4 | LPT | lf | fresh | symbol |
| PL322 | ส้มลม | [<i>Aganonerion polymorphum</i> Pierre Spire & A. Spire APOCYNACEAE] | | E | Y2 | 14.1, 14.2 | rt | Sand | Consume |
| | | | | E | Y13 | 8.7 | rt | Boil | Consume, 5-6 pots |
| PL323 | กัลโศทรบ, สะแกกกลา (Y) (ต้น)ส่องฟ้า (2), สมัดใหญ่, ขมิ้น, ต้นเมือก, | <i>Clausena excavata</i> Burm.f. RUTACEAE | AV59, AV65, AV102, AV250, AV344 | NF | Y2 | 3.7 | rt | Boil | Consume |
| | | | | | | 13.1, 8.1 | " | Sand | " |
| | | | | | | 4.5 | " | Boil, Sand | " |
| | | | | D | Y3 | 12.2, 14.1 | rt | Boil | Consume |
| | | | | NF | Y5 | 13.6 | hw | Dry, then burn | Smoke |
| | | | D | Y13 | 4.1 | bk&w | Boil | Consume cool | |

PLANTAE (Cont.)

| Code | Local names | Scientific name | Speci. | CO | TH | HC | Part | Preparation | Application |
|-------|------------------------------|--|---------------|----|-----|------------------------|-----------|-----------------------------|-------------------------|
| | มัดกา (R) | | | | | 3.1 | all parts | Boil | Consume |
| | | | | | | 13.1, 8.1, 14.2 | " | " | Consume hot; one cup |
| | | | | NF | B13 | 2.3, 13.1, 6.4, 6.5 | rt | Boil | Consume |
| PL324 | กัลโตรบ (K) สมัด น้อย (R) | <i>Clausena</i> sp. RUTACEAE | AV184, P47 | NF | Y2 | 3.7 | rt | Boil | Consume |
| | | | | | | 13.1 | " | Sand | " |
| | | | | | | 4.5 | " | Boil, Sand | " |
| PL325 | สมุนแวง | [<i>Cinnamomum bejolghota</i> (Buch.-Ham.) Sweet LAURACEAE] | | FF | Y3 | 8.1, 13.11 | rt | Pound, then Boil | Consume |
| PL326 | เสลดพังพอน | <i>Barleria lupulina</i> Lindl. ACANTHACEAE | AV315 | D | Y11 | 1.4, 1.7 | lf | Pound fresh, soak(water) | Topical |
| | | | | H | Y13 | 1.2, 1.6 | lf | Pound fresh, soak(water) | Topical |
| | | | | X | B6 | 1.2 | lf, ys | Pound fresh, soak(water) | Topical |
| PL327 | แสยก | [<i>Pedilanthus tithymaloides</i> (L.) Poit. EUPHORBIACEAE] | | H | Y8 | 5.1 | rt | Boil | Consume |
| PL329 | แสดงคำ | unknown | P48 | FF | Y2 | 13.1, 8.1, 13.7 | hw | sand or boil | consume |
| | | | | | | 4.1, 8.1 | " | sand with water | bathe |
| | | | | | | 4.3 | " | sand and soak | consume or topical |
| PL330 | แสดงโทน | [<i>Strychnos nux-vomica</i> L. STRYCNACEAE] | P9 | FF | Y1 | 13.1 | hw | Sand(water) | Consume, 1 bowl |
| | | | | FF | Y2 | 13.1, 8.1, 13.7 | bk&w | Boil, Sand | Consume |

PLANTAE (Cont.)

| Code | Local names | Scientific name | Speci. | CO | TH | HC | Part | Preparation | Application |
|-------|---|--|--------|------|-----|------------------------|------|---|----------------------------|
| | | | | | | 4.1, 8.1 | " | Sand(water) | Bathe |
| | | | | | | 4.3 | " | Sand(water); Soak(water) | Consume; Topical |
| | | | | FF | Y4 | 13.11 | hw | Sand(water) | Consume |
| PL331 | ส่องฟ้า (1), มหาส่องฟ้า, ขมิ้น, สมัดส่องฟ้า, ท้องฟ้า | <i>Clausena harmandiana</i> Pierre ex Guillaumin RUTACEAE | AV64 | NF | Y2 | 13.9 | rt | Boil | Consume, 1 pot |
| | | | | | | 13.1, 13.7 | " | Boil, Sand | Consume |
| | | | | | | 4.1, 8.1 | " | Sand(water) | Consume; Bathe |
| | | | | D | Y7 | 1.2 | rt | Healer chews fresh | Healer blows on patient |
| | | | | NF | Y11 | 1.2 | rt | Boil | Consume |
| | | | | | | 1.2 | " | Sand | topical |
| | | | | NF | B13 | 2.3, 13.1, 6.4, 6.5 | rt | Boil | Consume |
| PL332 | พริ้ว (K) ส้านน้อย (R) | [<i>Dillenia ovata</i> Wall. DILLENIACEAE] | | D | Y3 | 8.1 | bk&w | Sand; Boil small pieces | Consume |
| PL333 | (ว่าน)สาวหลง | [<i>Amomum</i> sp. ZINGIBERACEAE] | | H/NF | Y3 | 12.2, 14.1 | rhz | Boil, Sand, Soak | Consume |
| PL334 | สะตัง (Y) สะก้าน (R) | [<i>Piper pendulispicum</i> C.DC. PIPERACEAE] | | H/NF | Y3 | 8.1, 13.11 | lf | Pound, then Boil | Consume |
| PL335 | สะเดา | [<i>Azadirachta indica</i> A. Juss. var. <i>siamensis</i> Valetton MELIACEAE] | | H | Y2 | 6.5 | lf | Dry roast until burnt, soak(rice) | Topical |

PLANTAE (Cont.)

| Code | Local names | Scientific name | Speci. | CO | TH | HC | Part | Preparation | Application |
|-------|---|--|--------|----|-----|------------|---------|---|---|
| | | | | H | Y13 | 13.4 | rt | Boil | Consume |
| PL336 | สะเดาดิน | [<i>Glinus oppositifolius</i> (L.) Aug. DC MOLLUGINACEAE] | | D | Y8 | 5.1 | all | Boil | Consume |
| PL337 | สะบ้าลิงน้อย | <i>Entada glandulosa</i> Pierre ex Gagnepain. FABACEAE | AV263 | NF | Y5 | 5.6 | rt, lf | Boil | Topical; use cloth to apply |
| PL338 | สะเลเต, มหาหงส์ | [<i>Hedychium coronarium</i> J. Konig ZINGIBERACEAE] | | NF | Y5 | 11.3 | fl, rhz | fl: juice; 'head' | Topical: drip into ear |
| PL339 | สัก | [<i>Tectona grandis</i> L.f. LABIATAE] | | H | Y11 | 9.4 | sd | Pound, then steam | Soak cotton in medicine and hold in mouth |
| PL340 | สังข์กรณี | [<i>Barleria strigosa</i> Willd. ACANTHACEAE] | | H | Y14 | 13.3, 13.4 | lf | Pound Fresh | Consume; 1 glass |
| | | | | | | 5.1 | " | Boil | Consume, liberally |
| PL341 | อานัด, ออระนัด (Y) สับปะรด, หมากนัด (R) | [<i>Ananas bracteatus</i> (Lindl.) Schult. & Schult. f. BROMELIACEAE] | P49 | H | Y3 | 5.10 | am | Boil | Consume |
| | | | | H | Y5 | 3.1, 3.5 | am | Boil | Steam vagina |
| | | | | H | Y11 | 5.10 | am | Pound Fresh | Consume |
| | | | | H | Y13 | 5.3 | am | Boil | Consume: urine will become white |
| PL342 | (เครือ) สัมพันธ์ | <i>Bauhinia</i> sp. FABACEAE | AV304 | NF | Y5 | 2.7 | bk&w | Sand | Consume |
| PL344 | सानใหญ่ (K/R) | [<i>Dillenia obovata</i> (Blume) Hoogl. DILLENACEAE] | | FF | Y3 | 8.1 | rt | Sand(water); Soak(water) small pieces, then Boil | Consume |

PLANTAE (Cont.)

| Code | Local names | Scientific name | Speci. | CO | TH | HC | Part | Preparation | Application |
|-------|---------------------------------------|--|----------------|----|-----|---------------------|-----------|---|--|
| PL345 | สาบเสือ, ต้นสามสิบ, ต้นฝรั่งเสด | <i>Chromolaena odorata</i> (L.) R.M. King & H. Rob. COMPOSITAE | AV186 | E | Y1 | 5.1 | bk&w | Tie plants with white, black, red cotton string, Boil until water red | Consume warm, 2-3 bowls a day |
| | | | | E | Y3 | 2.5 | lf | Pound Fresh, Soak (warm water with slaked lime) | Topical: do not expose injury to sunlight |
| | | | | | | 13.11 | " | Pound Fresh | Topical |
| | | | | E | Y11 | 1.8, 13.1, 4.1, 9.5 | all | Boil | Consume |
| PL346 | (กก)สามพันตา, ข่อยदान (R) | <i>Gardenia saxatilis</i> Geddes RUBIACEAE | AV79, AV261 | NF | Y5 | 12.10 | bk&w | Sand | Consume |
| PL347 | สามพันรู | [<i>Hydnophytum formicarum</i> Jack RUBIACEAE] | | NF | Y4 | 5.11 | st (gall) | Boil; Soak(alcohol) | Consume: 2 pots |
| | | | | NF | Y5 | 5.7 | st (gall) | Boil; Fresh(honey) | Consume |
| PL348 | สามสิบกรีบ (R) สะเพีย (Kh) | <i>Stemona phyllantha</i> Gagnep. STEMONACEAE | AV80 | NF | Y5 | 13.11 | rt | Boil | Consume; Steam; Topical |
| | | | | NF | Y14 | 13.4 13.3 | lf rt | Boil Boil(one bowl water) | Consume Consume, 1 swallow morn. & eve. |
| PL349 | (เครือ)สายบาตร | unknown | P50 | NF | Y14 | 5.1 | bk&w | Boil | consume; liberally |
| PL350 | เลี้ยวเครือ, ส้มเลี้ยว | <i>Bauhinia bracteata</i> Graham ex | AV208 | NF | Y5 | 2.7 | bk&w | Sand | Consume |

PLANTAE (Cont.)

| Code | Local names | Scientific name | Speci. | CO | TH | HC | Part | Preparation | Application |
|-------|---|--|--------|----|-----|------------|------------|------------------------------|---|
| | | Wallich FABACEAE | | | | 2.2 | " | Boil | " |
| | | | | | | 4.3 | hw | " | Consume; Soak afflicted part, 2-3 pots. |
| PL351 | เสื่อโคร่ง | unknown | P51 | FF | Y3 | 12.2, 14.1 | bk&w | Boil | consume |
| PL352 | โสมเกาหลี | <i>Panax ginseng</i> C.A. Mey. ARALIACEAE | AV83 | NF | Y5 | 13.1, 5.7 | rt | Boil; Pound fresh (honey) | Consume |
| PL353 | โมกเครือ, วัชรดกแดง (Y) (เครือ)ไต้ต้น (R) | [<i>Aganosma marginata</i> (Roxb.) G. Don APOCYNACEAE] | | D | Y5 | 8.3 | ys, st, rt | Pound Fresh | Consume |
| | | | | | | | lf, rt | Boil | " |
| | | | | | | | | D | Y7 |
| PL354 | หญ้าคา | [<i>Imperata cylindrica</i> (L.) Raeusch. GRAMINEAE] | | NF | Y4 | 5.1 | rt | Boil | Consume |
| | | | | | Y5 | 4.1 | rt | Soak | Consume |
| | | | | | Y6 | 5.11 | rt | Boil | Consume |
| | | | | | Y8 | 13.11 | rt | Boil | Consume, within 7 days |
| | | | | | Y13 | 5.3 | rt | Boil | Consume; urine will become white |
| | | | | | P6 | 5.7 | rt | Boil | Consume |
| | | | | | Aj3 | LPT | lv | Fresh | symbol (construction) |
| PL356 | (หญ้า)หนวดแมว | [<i>Orthosiphon aristatus</i> (Blume) Miq. LABIATAE] | | D | Y14 | 5.11 | lf, st | Dry, then boil | Consume |

PLANTAE (Cont.)

| Code | Local names | Scientific name | Speci. | CO | TH | HC | Part | Preparation | Application |
|-------|--|---|--------|-----|-----|--|---------|---|---------------------------|
| (1) | | | | | | | | | |
| PL357 | ปู่แมว (K) หมวดแมว (2), ต้นแมว, หญ้าหมวดแมว (R) | <i>Barleria cristata</i> L. ACANTHACEAE | AV157 | NF | Y5 | 5.5, 13.5 5.10, 5.11 | rt " | Boil Sand | Consume " |
| PL358 | หมากปู้ย (K) หนามแท่ง (R) | <i>Catunaregam spathulifolia</i> Tirveng. RUBIACEAE | AV171 | NF | Y3 | 8.1 | bk&w | Sand(water); Soak(water) sm. pieces, then Boil | Consume |
| | | | | NF | Y5 | 6.4 | fr | Sand | Topical |
| PL359 | หนามคอง | [<i>Ziziphus cambodiana</i> Pierre RHAMNACEAE] | | D | Y8 | 13.11 | rt | Boil | Consume, within 7 days |
| PL360 | หนุมานประสาน กาย | [<i>Schefflera leucantha</i> R. Vig. ARALIACEAE] | | FF | Y3 | 3.4 | lf | Pound, roll into sm. pellets | Consume, twice a day |
| | | | | FF | Y14 | 13.3, 13.4 | lf | Pound Fresh | Consume; 1 glass |
| | | | | | | 5.1 | " | Boil | Consume, liberally |
| PL361 | (ต้น)หมอน้อย | [<i>Cissampelos pareira</i> L. var. <i>hirsute</i> (Buch. ex DC.) Forman MENISPERMACEAE] | P43 | E | Y12 | 13.1, 4.1, 4.2, 4.3, 4.4, 5.9, 13.7 | rt | Sand | Consume |
| PL362 | (ต้น)หม่อน | [<i>Morus alba</i> L. MORACEAE] | | H | Y6 | 14.3 | bk&w | Boil | Consume, liberally |
| PL363 | โปปรัย, คลา (K) หมาก (R) | <i>Areca catechu</i> L. PALMAE | P52 | H/P | Y2 | 1.2 | end | Sand | Consume |
| | | | | H/P | Y3 | 8.1 | hw, end | Boil; Soak(water) | Consume; Bathe |

PLANTAE (Cont.)

| Code | Local names | Scientific name | Speci. | CO | TH | HC | Part | Preparation | Application |
|--|-------------------------------------|---|----------------|-----|-----|------------|--------|-----------------------|--|
| | | | | | | 8.1 | end | Pound & Boil | Consume |
| | | | | | | 13.11 | " | Pound Fresh | Topical |
| | | | | H/P | Y11 | 8.7 | rt | Boil | Consume |
| All Blowing doctors use this. See Animals table for more details | | | | | | | | | |
| | | | | H/P | Aj | LPT | end | symbol | symbol |
| PL365 | เยาะคัน (K) หมาก ทัน, มัगतัน (R) | unknown | AV246, P53 | D | Y2 | 6.4 | lf | Boil | Soak afflicted body part |
| PL368 | หมากหม้อ, หมักหม้อ | <i>Rothmannia wittii</i> (Craib) Bremek. RUBIACEAE | AV82, AV228 | NF | Y5 | 5.7 | hw | Boil; Fresh(honey) | Consume |
| | | | | NF | Y14 | 8.1 | hw | Boil | Consume, liberally |
| PL370 | หะเมยเบ็ชีย (Y) (ต้น)หมี (R) | <i>Nyssa javanica</i> (Blume) Wangerin CORNACEAE | AV67 | D | Y7 | 6.4 | rt | Sand(rice) | Topical |
| PL371 | (ต้น)ไหมเครือ | <i>Cuscuta chinensis</i> Lam. CONVOLVULACEAE | AV310 | D | Y5 | 4.1 | lf, st | Scrub into water | Topical: apply with towel to wipe body |
| PL373 | (เครือ)เหล็ก | unknown | AV272 | D | Y6 | 14.3 | bk&w | Boil | Consume, liberally |
| PL374 | (ผัก)หวานบ้าน/ป่า, ผักงาบ | [<i>Sauropus androgynus</i> (L.) Merr. EUPHORBIACEAE] | | D | Y3 | 12.2, 14.1 | rt | Boil | Consume |
| | | | | FF | Y4 | 13.11 | rt | Boil | Consume |
| | | | | D | Y8 | 8.5 | rt, lf | Boil | Consume |

PLANTAE (Cont.)

| Code | Local names | Scientific name | Speci. | CO | TH | HC | Part | Preparation | Application |
|-------|--|--|--------|----|------------|--------------------------|--------|---------------------------------|-----------------------------|
| PL376 | หวาย, หวายเดี่ยว | <i>Calamus</i> sp. PALMAE | AV206 | FF | Y4 | 5.9, 5.11 | rt | Boil; Soak(alcohol) | Consume, 2 pots |
| | | | | D | Y5 | 6.5 | rt | Healer Chews Fresh | Healer blows on patient |
| | | | | NF | Y8 | 13.11 | ys | Burn, mix ashes with rice water | Topical |
| PL377 | (หญ้า)หยาขาว | [<i>Calamus viminalis</i> Willd. PALMAE] | | NF | Y14 | 8.1 | rt | Boil | Consume, liberally |
| PL379 | กัลกะแปด (K/Y), กะแปด (Y) (กก)หัวลิง (R) | <i>Streblus asper</i> Lour. MORACEAE | AV235 | P | Y3 | 7.1 | rt | Boil, Sand | Consume |
| | | | | D | Y7 | 4.1 | hw | Sand | Consume |
| | | | | D | Y13 | 6.4 | rt | Sand(rice) | Topical |
| | | | | | | 3.1, 8.7, 14.2 9.8 | all | Boil | Consume |
| | | | | | | | rt, lf | " | Consume; before sleeping |
| | | | | | 4.1 | rt | " | Consume cool | |
| | | | | | 13.1, 14,4 | " | " | Consume hot, 1 cup | |
| PL380 | หัสสุณ | [<i>Micromelum minutum</i> Wight & Arn. RUTACEAE] | | FF | Y3 | 8.1, 13.11 | hw | Pound, then Boil | Consume |
| | | | | NF | Y8 | 5.3, 5.11, 8.1 | hw | Boil | Consume |
| PL384 | กูดจูเมียด (K) (ต้น) ห้างแห้ง (1) (R) | <i>Terminalia</i> sp. COMBRETACEAE | AV11 | D | Y3 | 9.2 | bk&w | Boil | Consume, once a day |
| | | | | X | Y6 | 14.3 | hw | Boil | Consume, liberally |

PLANTAE (Cont.)

| Code | Local names | Scientific name | Speci. | CO | TH | HC | Part | Preparation | Application |
|-------|---|---|--------|----|-----|------------|----------------|--|----------------------------------|
| PL385 | ห้างแห่ง (2) | [<i>Delonix regia</i> (Bojer ex Hook.) Raf. FABACEAE] | | NF | Y8 | 6.4 | hw | Sand(rice) | Topical |
| PL386 | อจอย (K) (ต้น) หาด (R) | <i>Artocarpus lacucha</i> Buch.-Ham. Ex D.Dan MORACEAE | AV309 | H | Y5 | 13.3 | bk | Boil, collect foam from top, dry & roll into pellets | Consume |
| PL388 | บดปองลึก, จะปอติ, ชอมปองลึก (Y) แห้วหมู (I) | [<i>Cyperus rotundus</i> L. CYPERACEAE] | | E | Y3 | 10.1 | head | Boil | consume |
| | | | | E | Y5 | 5.10 | head | Boil | Consume |
| | | | | E | Y11 | 5.5 | head | Boil | Consume |
| | | | | E | Y13 | 5.3 | head | Boil | Consume: urine will become white |
| | | | | E | Y14 | 8.1 | head | Boil | Consume, liberally |
| PL389 | (ต้น)ห้าโปง | <i>Solena amplexicaulis</i> (Lam.) Gandhi CURCUBITACEAE | AV86 | NF | Y5 | 6.4 | rt | Sand(rice) | Topical |
| | | | | | | 5.10, 14.7 | " | Boil; Soak(alcohol) | Consume |
| PL393 | กะตวมเบาะจีน, อ้อยขาวจีน (Y): อ้อย (R); น้ำตาลกะ เซา (Y): น้ำตาล, น้ำตาลแดง (R) | <i>Saccharum officinarum</i> L. GRAMINEAE | AV194 | H | Y2 | 6.5 | stem: sugar | Fresh | Consume |
| | | | | H | Y4 | 5.3 | stem: sugar | Boil | Consume |
| | | | | | | 5.11 | " | Boil; Soak(alcohol) | Consume, 2 pots |
| | | | | H | Y5 | 13.10 | stem: sugar | Fresh | Consume |
| | | | | H | Y7 | 5.8 | stem: sugar | Soak (40 proof alcohol) | Consume |

PLANTAE (Cont.)

| Code | Local names | Scientific name | Speci. | CO | TH | HC | Part | Preparation | Application |
|-------|--|--|--------|--------------------|---|--|----------------|--|-------------------------------|
| | | | | H | Y11 | 3.2, 11.2 | all | Boil | Consume |
| | | | | H | Y13 | 5.1 | st | Boil | Consume |
| | | | | H | Aj | LPT | stem: sugar | Symbol | symbol |
| PL394 | กะตมตะแวน, กะโตมตะแวน (K) อ้อยคำ (R) | [<i>Saccharum chinense</i> Nees ex Hook. & Arn. GRAMINEAE] | | H | Y1 | 8.7, 13.11 | bk&w | Boil | Consume, once a day |
| | | | | H | Y2 | 13.9 | st | Boil | Consume, 1 pot |
| | | | | FF | Y4 | 5.2, 13.4 5.11 | bk&w " | Boil Boil; pound & soak(alcohol) | Consume Consume, 2 pots |
| | | | | H | Y5 | 5.5, 5.10, 8.7, 12.1, 12.3 3.1, 3.5 | bk&w " | Boil " | Consume Steam vagina |
| | | | | H | Y6 | 5.11 | lf, st | Boil | Consume |
| | | | | H | Y8 | 2.8 | st: juice | Fresh | Consume |
| | | | | H | Y10 | 8.7, 13.6 | bk&w | Boil | Consume |
| | | | | H | Y11 | 4.1 | bk&w | Boil | Consume |
| | | | | H | Y12 | 7.1 6.3 | bk&w " | Boil Sand | Consume " |
| | | | | H | Y14 | 13.4, 13.3 | bk&w | Boil in equal portions | Consume |
| | | | PL395 | อ้อยसान, อ้อยสร้าง | [<i>Lannea coromandelica</i> (Houtt.) Merr. | | NF | Y3 | 4.2 |

PLANTAE (Cont.)

| Code | Local names | Scientific name | Speci. | CO | TH | HC | Part | Preparation | Application |
|----------------|--------------------------------|--|-----------------|----|-----|------------|----------|--|-----------------------|
| ANACARDIACEAE] | | | | | | | | | |
| PL396 | อะรง (K) นนทรี (T) | <i>Peltophorum dasyrachis</i> Kurz ex Baker FABACEAE | AV258 | NF | Y13 | 5.2 | bk&w, rt | Boil | Consume |
| PL397 | (ต้น)อินทนิลน้ำ | [<i>Lagerstroemia speciosa</i> (L.) Pers. LYTHRACEAE] | | NF | Y3 | 5.2 | small rt | Boil 3 ถัง | Consume, 1 pot |
| | | | | | | 5.1 | rt | Boil | " |
| PL398 | (ต้น)อีโก้ย, อีก่อย, จี้กุก | [<i>Tetrastigma quadrangulum</i> Gagnep. & Craib VITACEAE] | | NF | Y5 | 5.10 | rt | Boil | Consume |
| PL400 | เกลา (K) อีตูไทยดำ (R) | unknown | P54 | FF | Y3 | 8.1, 13.11 | lf | Pound, then boil | consume |
| PL401 | กะบู้ (K) (ผัก)อีทก (1) (R) | cf. <i>Olox psittacorum</i> (Lam) Vahl OLACACEAE | AV92, AV94 | D | Y5 | 4.2 | bk | Push 7 pieces (1") inside sticky rice, roast, then soak(water) | Consume |
| | | | | D | Y6 | 5.1 | bk&w | Boil | Consume, minimally |
| PL402 | กะบู้ (K) (ผัก)อีทก (2) (R) | <i>Adenia</i> sp. PASSIFLORACEAE | AV329, P55 | D | Y11 | 5.2 | rt | Boil | consume |
| PL403 | อีรำ, อีรัม 1 | <i>Adenantha pavonina</i> L. FABACEAE | AV168, AV301 | NF | Y5 | 5.2 | bark | Sand(rice) | Topical |
| | | | | | | 14.1 | bark | Sand (rice) | consume |

PLANTAE (Cont.)

| Code | Local names | Scientific name | Speci. | CO | TH | HC | Part | Preparation | Application |
|-------|---|--|----------------|---------------------|----------------------|------------------------------------|-------------------------------|--|---|
| PL404 | อีแสมอง | cf. <i>Clerodendrum</i> VERBENACEAE | AV305 | D | Y5 | 6.4 | rt | Sand(rice) | Topical |
| PL405 | (เครือ)เอ็นอ่อน (fem) เอ็นเอ็น (mal) | [<i>Rauvolfia</i> sp. APOCYNACEAE] | P56 | NF | Y6 | 5.2, 5.9 | bk&w | Pound fresh, then Boil | Compress: press on body with cloth; morn. & even. |
| PL407 | กะทก (K) เอื้อง, เอียง, เอื้องหมายนา (R) กะทก (Kh) | <i>Costus speciosus</i> (J.Konig) Sm. COSTACEAE | AV317 | X | Y11 | 6.4, 3.2 9.5 | all rhz | Roast, then Boil " | Consume " |
| PL408 | (กก)เอียนด่อน, คั้นแฉง | <i>Eurycoma longifolia</i> Jack SIMAROUBACEAE | AV32, AV203 | NF NF H NF | Y2 Y4 Y5 Y6 | 4.5 13.11 6.4 6.4 14.3 | rt, lf rt rt rt " | Sand(water) root and/or Scrub leaves Sand(rice) Sand(rice) Sand(rice) Boil | Sand: Consume; Scrub: Bathe Topical Topical Topical Consume |
| PL411 | แสม (K) ขมิ้นเครือ (R) | [<i>Arcangelisia flava</i> Merr. MENISPERMACEAE] | P57 | P | Y14 | 5.1 | hw | Boil | Consume, liberally |
| PL412 | None | [<i>Euphorbia antiquorum</i> L. EUPHORBIACEAE] | P58 | NF | Y5 | 15.1 | bk&w | Boil | Bathe feet |
| PL413 | None | unknown | AV187, P59 | H | Y3 | 5.10 | rt | Boil | Consume |

ANIMALIA (Cont.)

ANIMALIA

| Code | Local names | Scientific name | Speci. | CO | TH | HC | Part | Preparation | Application |
|------|--|---|---------------|------|-----|-------|-----------------------------|-------------------------------|---|
| AN1 | กระท่าง | [<i>Tylototriton verrucocus</i> Anderson] SALAMANDRIDAE | | NF | Y12 | 9.1 | jawbone | Sand(water) | Patient holds in mouth |
| AN2 | กระรอกปางลัว | SCIURIDAE | P60 | NF/P | Y14 | | skull, neck vertebrae | Sand(water) | Consume |
| AN3 | เก้ง | [<i>Muntiacus muntjak</i> Zimmermann] CERVIDAE | | P | Y8 | 13.12 | skin หนึ่ง | | Topical |
| AN4 | ไก่ | [<i>Gallus gallus</i> (Linnaeus)] PHASIANIDAE | | H/P | Y14 | 2.1 | yolk oil | Fresh | Topical |
| | | | | | P6 | 12.10 | entire egg | Fresh, used in ceremony | Ceremony: Roll egg around body, then break open egg symbol |
| | | | | | Aj | RPT | entire egg | symbol | |
| AN5 | เดียนโทรย, ชนัลเรื้อยเกาะ (Y) ไก่ป่า (R) | <i>Gallus gallus gallus</i> (Linnaeus) PHASIANIDEA | | NF | Y7 | 9.1 | foot & leg | Sand | Consume |
| | | | | | Y12 | 9.1 | foot & leg | Sand | Patient holds in mouth |
| AN6 | ปาด (K) เขียดปาด (R) | [<i>Rana erythraea</i> (Schlegel)] RANIDAE | | NF | Y3 | 13.12 | entire body | Chop finely, mix with oils | Topical |
| AN7 | กรั้ง (K) ครั่ง (R) | [<i>Laccifer</i> sp.] LACCIFERIDAE anthroquinone: laccaic acid | AV244, P61 | NF | Y12 | 7.1 | piece | Boil | Consume |

ANIMALIA (Cont.)

| Code | Local names | Scientific name | Speci. | CO | TH | HC | Part | Preparation | Application |
|------|-------------------------------------|--|--------|------|-----|-----------|---|---|-------------------|
| | | B, C, D | | | | | | | |
| AN8 | ค้าง | [<i>Semnopithecus</i> sp.] CERCOPITHECIDAE | | X | Y5 | 8.4 | bones กระดูก | Burn, crush, mix with honey, & roll into pellets | Consume |
| AN9 | คางคก | [<i>Bufo melanostictus</i> (Schneider)] BUFONIDAE | | E | B13 | 1.1 | venom from skin | fresh | Topical |
| AN10 | กะมัยอะปะปรีบ (K) งูเห่าลิ้ม (R) | [<i>Python reticulatus</i> (Schneider)] BOIDAE | P43 | NF/P | Y12 | 2.3, 13.1 | bile ดี | Sand | Consume |
| AN11 | งูเห่า | [<i>Naja siamensis</i> (Laurenti)] Elapidae | P62 | NF | Y13 | 12.3 | dried head | Sand(lime) | Consume |
| AN12 | พลั่วะเจียง (K) ช้าง (R) | [<i>Elephas maximus</i> Linnaeus] ELEPHANTIDAE | P60 | P | Y12 | 4.2 | tooth ฟัน | Sand | Consume |
| | | | | P | Y14 | 5.11 | rib bone | Sand | Consume |
| | | | | P | P6 | 12.10 | tusk | Sand | Consume |
| | | | | P | | 12.3 | skin | " | " |
| AN13 | ด้กเด้าไหม | [<i>Bombyx mori</i> (Linn.)] BOMBYCIDAE | | H | Y3 | 8.1 | cocoon covering pupae ปลอกหุ้ม | Boil; Soak | Consume; Bathe |
| AN14 | เต้า | [<i>Indotestudo elongata</i> (Blyth)] TESTUDINIDAE | | NF/P | Y8 | 13.12 | carapace กระดอง | Burn. then pound into powder | Topical |
| AN15 | นกอทะาะ (Y) นกอเหยี่ยว (R) | ACCIPITRIDAE | | P | Y7 | 9.1 | talon เล็บ | Sand | Consume |

ANIMALIA (Cont.)

| Code | Local names | Scientific name | Speci. | CO | TH | HC | Part | Preparation | Application |
|------|-----------------------------|--|--------|-----|-----|----------|-------------------------|------------------|----------------------|
| AN16 | ปลวก | [<i>Zootermopsis / Reticulitermes</i> sp.] TERMOPSIDAE | | NF | Y12 | 4.4 | top of mound จอมปลวก | Sand | Consume |
| AN17 | ตะป๋า (K) ปลากะเบน (R) | TRIGONIDAE or MYLIOBATIDAE | | P | Y2 | 6.5 | spine | sand | consume |
| AN18 | ปะการัง | RUGOSA | P63 | P | Y2 | 4.1 | exo-skeleton | Sand | Consume; Bathe |
| AN19 | เป็ด | [<i>Anas</i> sp.] ANATIDAE | | H/P | B13 | 2.2 | blood | Fresh(alcohol) | Consume |
| | | | | | B15 | 2.2 | blood | Fresh(alcohol) | Consume |
| AN20 | ผึ้ง | <i>Apis</i> sp. APIDAE | | NF | Aj | LPT | wax | Fresh | Symbol |
| AN21 | มดแดง | [<i>Oecophylla smaragdina</i> (Fabricius)] FORMICIDAE | | E | Y5 | 8.3 | body | Fresh | Consume |
| | | | | | | 8.2 | " | Boil | Consume |
| | | | | | | 6.4 | " | Boil(rice water) | Steam afflicted area |
| AN22 | สะเนาะสมอด (K) มดลิน (R) | [<i>Polyrhachis</i> sp.] FORMICIDAE | | NF | Y11 | 6.4, 8.7 | nest รัง | Boil | Consume |
| AN23 | ม้าขาว | [<i>Equus</i> sp.] EQUIDAE | P64 | P | Y14 | 5.11 | bone กระดูก | Sand | Consume |
| AN24 | เม่น | [<i>Hystrix brachyuran</i> Linnaeus] HYSTRICIDAE | | P | Y5 | 7.2 | quill from tail | Sand | Consume |
| AN25 | แมงมุม | [<i>Pholcus</i> sp.] ARACHNIDA | | NF | Y11 | 1.8 | cobweb | Fresh | Topical |

ANIMALIA (Cont.)

| Code | Local names | Scientific name | Speci. | CO | TH | HC | Part | Preparation | Application |
|------|--------------------------------|---|--------|----|-----|--------------------------------------|------------------------------|--|---------------------|
| AN26 | ลีน | [<i>Manis javanica</i> Desmarest] MANIDAE | | P | Y2 | 8.1 | scale เกี๋ยด | Sand | Consume |
| AN27 | ลีนทะเล | [<i>Sepia pharaonis</i> Ehrenberg.] SEPIIDAE | | P | Y12 | 4.1, 4.3, 4.4, 13.1, 13.7, 5.9 | pen | Sand | Consume |
| AN28 | เลียงผา | [<i>Capricornis sumatraensis</i> (Bechstein) BOVIDAE] | | P | Y11 | 9.2 | oil | Fresh | Topical |
| AN29 | กะลิงเกาะ (K) หมูกระโดน (R) | [<i>Arctonyx collaris</i> F. Cuvier MUSTELIDAE] | | FF | Y3 | 13.12 | oil | Fresh | Topical |
| AN30 | กรอ (K) หอยแครง (R) | [<i>Anadara troscheli</i> (Dunker) ARCIDAE] | | P | Y12 | 3.1, 4.1, 4.2, 4.3, 5.9, 13.7 | shell กาบ | Sand | Consume |
| | | | | P | Y3 | 2.5 | shell: slaked lime ปูน | Soak(warm water) | Topical: |
| | | | | | | 13.11 | " | Fresh(water) | topical |
| | | | | P | Y4 | 8.7 | " | Boil | Consume |
| | | | | P | Y5 | 6.1 | " | Fresh(water) | Topical |
| | | | | P | Aj | LPT | " | fresh | symbol |
| | | | | P | Y2 | 1.2, 5.4 | " | Healer recites incantation, chews with <i>A.</i> <i>catechu</i> & <i>P.</i> <i>betle</i> | blows on patient |
| | | | | P | Y5 | 13.7 | " | " | " |
| | P | B1 | 2.1 | " | " | " | | | |

ANIMALIA (Cont.)

| Code | Local names | Scientific name | Speci. | CO | TH | HC | Part | Preparation | Application |
|-------------|--------------------|------------------------|---------------|-----------|-----------|--|-------------|--------------------|--------------------|
| | | | | P | B2 | 2.1, 2.2, 6.4 | " | " | " |
| | | | | P | B3 | 2.1, 2.2, 4.2, 6.4, 6.5 | " | " | " |
| | | | | P | B4 | 2.1, 2.2, 5.7, 6.4, 8.6, 9.2 | " | " | " |
| | | | | P | B5 | 1.1, 1.4, 1.6, 2.1, 2.2, 5.4, 5.5, 5.9, 8.6, 9.2, 9.3 | " | " | " |
| | | | | P | B6 | 1.2, 2.1, 6.4 | " | " | " |
| | | | | P | B7 | 1.2, 1.6, 2.1, 2.5, 4.1, 4.4, 6.4, 6.5, 8.1, 12.1, 13.7 | " | " | " |
| | | | | P | B8 | 1.2, 6.5, 11.1, 12.9, 13.7 | " | " | " |
| | | | | P | B9 | 3.9, 12.1, 12.3 | " | " | " |

ANIMALIA (Cont.)

| Code | Local names | Scientific name | Speci. | CO | TH | HC | Part | Preparation | Application |
|------|-------------|-------------------------------------|--------|----|-----|--|-----------|--|---------------------|
| | | | | P | B10 | 2.1, 3.8, 4.1, 8.1, 9.3, 11.1, 12.1,12.2, 12.3,12.5, 12.6,12.7, 13.7 | " | " | " |
| | | | | P | B12 | 1.2, 4.1, 4.2, 4.3, 8.1, 10.1, 12.3, 12.9 13.11 | " | " | " |
| | | | | P | B13 | 1.1, 1.6, 2.1, 2.2, 2.3, 2.4, 2.6, 4.3, 6.4, 13.1, 13.7 | " | " | " |
| | | | | P | B14 | 2.1 | " | " | " |
| | | | | P | B15 | 2.2, 12.6 | " | " | " |
| | | | | P | B11 | 2.1 | " | Healer recites incantation, chews with <i>A.</i> <i>catechu</i> & <i>P.</i> <i>wallichii</i> | blows on patient |
| AN31 | หอยทะเล | Mollusca: Bivalvia or Gastropoda | P65 | P | B13 | 2.3, 6.4, 6.5, 13.1 | shell กาย | Boil | Consume |
| AN32 | หอยสังข์ | [<i>Strombus</i> sp.] STROBIDAE | P66 | P | Y12 | 4.1, 4.2, 4.3, 4.4, 5.9, 13.1, 13.7 | shell กาย | Sand | Consume |

ANIMALIA (Cont.)

| Code | Local names | Scientific name | Speci. | CO | TH | HC | Part | Preparation | Application |
|-------------|------------------------------|---------------------------------------|---------------|-----------|-----------|-----------|----------------|--------------------|--------------------|
| AN33 | สามเอียน (K) หัวเอียน (R) | [<i>Anguilla</i> sp.] ANGUILLIDAE | | NF | Y11 | 6.4 | blood เลือด | Fresh | Topical |

FUNGI

| Code | Local names | Scientific name | Speci. | CO | TH | HC | Part | Preparation | Application |
|------|---------------------------------|-----------------------|--------|----|-----|-------------------------|------|------------------------|-------------|
| FU1 | เตี้ยปราน (K) เห็ดไม้แดง (R) | unknown Basidiomycota | P67 | FF | Y4 | 5.3 | all | Boil | Consume |
| | | | | X | Y5 | 2.2, 3.1, 5.7 | all | Soak(alcohol); Boil | Consume |
| | | | | P | Y11 | 5.2, 7.2, 14.1, 14.2 | all | Boil | Consume |
| | | | | P | P6 | 13.12 | all | Boil | Consume |

MINERALS

| Code | Local names | Scientific name | Speci. | CO | TH | HC | Preparation | Application |
|------|--|----------------------------|--------|----|-----|----------|-------------|-------------|
| MI1 | เกลือ | Sodium chloride | | P | Aj1 | LPT | Fresh | Symbol |
| MI2 | การบูร | Potash alum, ammonium alum | P68 | P | Y11 | 6.6, 9.5 | Fresh | Topical |
| | | | | | | 6.1 | Pound fresh | " |
| MI3 | กลองแจมอินทรีน (K) จี้นกอินทรีน (I) | fossil deposits, calcium | P69 | P | Y12 | 13.1 | Sand | Consume |
| MI4 | ประ (K) เงิน (I) | silver | P70 | P | Y12 | 4.4 | Sand | Consume |
| MI5 | ทาน | charcoal | | P | Aj1 | RPT | Fresh | Symbol |
| MI6 | ต้า (K) เหล็ก (I) | iron | | P | Y12 | 7.1 | | Boil |
| MI7 | unknown | battery fluid | | P | Y8 | 6.1 | | Fresh |

APPENDIX H

Materia Medica used in *Lum Pee Taan* Ceremonies

This appendix summarizes and describes the items that are found during each event of the *Lum Pee Taan* ceremonies, in correlation with section 4.1.5. Frequency indicates the number of times the item was used for the indicated purpose during all four recorded *Lum Pee Taan* ceremonies. Items are listed by frequency, and then listed alphabetically.

Scientific names of the raw materials used to make the items are listed in Table 29 and Appendix G and associated photos are found in Appendix A. Definitions of items are listed at the end of this document

1. Altars

1.1 Bowl(s) used to attract spirits to the ceremony

| Items and description | Frequency |
|---|-----------|
| Bananas | 3 |
| ขนมข้าวต้ม (See definition 1) | 3 |
| Uncooked rice that is dry roasted; in a bowl or on sticks | 2 |
| <i>Areca catechu</i> nut | 1 |
| Banana leaves: cut into a steeple pattern or shaped into a cone with a flag | 1 |
| Candle made of wax (ขี้ผึ้ง) | 1 |
| Cotton string: used for wrist tying ceremony | 1 |
| Glutinous rice | 1 |
| Tumeric: used to dye cotton string. | 1 |
| Uncooked rice; in a bowl | 1 |
| บายศรี (See definition 2) | 1 |
| (ดอก)พุด: <i>Tabernaemontana divaricata</i> flowers | 1 |

1.2 Loose items on the altar. All items are used as offerings to spirits, unless otherwise noted.

| Item and description | Frequency |
|---|-----------|
| Uncooked rice (<i>Oryza sativa</i>) in a bowl | 3 |
| ขนมข้าวต้ม (See definition 1) | 3 |
| <i>Areca catechu</i> nut | 2 |
| Rolled up tobacco | 2 |
| Rolled up <i>Piper betle</i> leaf | 2 |
| <i>Sui</i> (ชวย) (See definition 3) | 2 |
| Uncooked rice that has been dry roasted; in a bowl or on sticks | 2 |
| Bananas | 1 |
| Banana suckers with three healthy leaves and tied up with cotton string. Represents all plants and nature. | 1 |
| Dress-material: mirror, powder, and comb | 1 |
| Egg | 1 |
| Silk cloth: to offer to the spirits. | 1 |
| Sticky rice | 1 |
| Sugar cane stalk | 1 |
| Sweet bread | 1 |
| Sword: made out of banana stem | 1 |
| กวาง (Isan) แตร-ล โครย (Kui) (See definition 4) | 1 |
| ธนู (See definition 5) | 1 |
| บีแอกุ (Kui) (See definition 6) | 1 |
| บายศรี (See definition 2) | 1 |
| ไยแมงมุม (See definition 7) | 1 |
| ลั่นทม (<i>Plumeria rubra</i>): flowers stuck into the bananas | 1 |

2. Offerings to *Pee Taan* spirit during ceremonies

2.1 Offerings for the family

| Items and description | Frequency |
|---|-----------|
| <i>Areca catechu</i> nut | 1 |
| Purchased candles | 1 |
| Rolled up tobacco | 1 |
| Rolled up <i>Piper betle</i> leaf | 1 |
| <i>sui</i> (ชวย): ชัน 5 or 8; (See definition 3) | 1 |
| twisted candles : two pairs | 1 |
| tumeric (ขมิ้น) mixed with good smelling leaves | 1 |
| wax: 4 ปีก | 1 |
| กาฬพฤกษ์ (<i>Cassia javanica</i>): leaves and flowers | 1 |
| เกล็ดเกด: bract | 1 |
| เจี๊ม (<i>Ixora cibdela</i>): yellow flowers | 1 |
| กูน (Isan) อาราง (Kui): <i>Cassia fistula</i> bark and leaves | 1 |
| ชวยแป (see definition 8) with ดอกพุด inside | 1 |
| สนม (Kui) กุมลี้ (Thai) (See definition 9) | 1 |

2.2 Offerings for spirits ‘to eat’ (กรูกาย)

| Items and description | frequency |
|--|-----------|
| Cotton and silk cloths: ผ้าถุง and ผ้าขาวม้า (ชิ้นใหม่แพรวา) | 2 |
| Purchased candles | 2 |
| Uncooked rice (<i>Oryza sativa</i>) in a bowl | 2 |
| เหล้าขาว: whisky | 2 |
| <i>Areca catechu</i> nut | 1 |
| Bananas (<i>Musa sapientum</i>) | 1 |
| Bowl of coconut milk dessert place in the center | 1 |
| Dress-material: mirror, comb, jewelry | 1 |
| Model ladders: (See definition 10) | 1 |
| Money | 1 |
| Necklaces (พวงมาลัย): (See definition 11) | 1 |
| Rolled up tobacco | 1 |
| Rolled up <i>Piper betle</i> leaf | 1 |
| <i>sui</i> (ชาย): ชั้น 5 or 8 (See definition 3) | 1 |
| Tumeric dyed string | 1 |
| Twisted candles : two pairs | 1 |
| กาพพฤกษ์ (<i>Cassia javanica</i>): leaves and flowers | 1 |
| เข็ม (<i>Ixora cibdela</i>): yellow flowers | 1 |
| ขนมข้าวต้ม: (See definition 1) | 1 |
| (ดอก)พุด: <i>Tabernaemontana divaricata</i> flowers | 1 |

2.3 Bowls for the spirits (ขันพริกสลิฐ, ของตั้งกายที่จะลงทรง / ขันหมากเบ็ง).

This bowl is brought to the ceremony by the dancers and is used to attract the spirits. When a spirit enters a dancer, it inspects the bowl to determine if the bowl has been made to its liking.

| Items and description | Frequency |
|--|-----------|
| <i>sui</i> (สวย): ขัน 5 or 8; (See definition 3) | 6 |
| บายศรี: (See definition 2) | 6 |
| ลั่นทม : <i>Plumeria rubra</i> flowers | 6 |
| Egg | 5 |
| Dress-material: mirror, towel and comb | 4 |
| Uncooked rice (<i>Oryza sativa</i>) in a bowl | 4 |
| Cotton and silk cloths: ผ้าถุง and ผ้าขาวม้า | 3 |
| Cotton for wrist-tying | 3 |
| Homemade candles (เทียนขดเป็นคำห้าคำสี่) | 3 |
| Purchased candles | 2 |
| Rolled up tobacco | 2 |
| Small bottle of water. | 2 |
| เหล้าขาว: whisky | 2 |
| เครื่องอาต / เทียนงาม (See definition 12) | 2 |
| <i>Areca catechu</i> nut | 1 |
| Cotton rolled onto slivers of bamboo: represents flowers | 1 |
| Incense | 1 |
| Money: 20B bills | 1 |
| Necklaces (พวงมาลัย) (See definition 10) | 1 |
| Rolled up tobacco | 1 |

2.3 Bowls for the spirits (ขันพริกสลิ๓, ของตั้งค๓ยที่จะลงทรง / ขันหมากเบ็ง) (Cont.)

| Items and description | Frequency |
|---|-----------|
| Rolled up <i>Piper betle</i> leaf | 1 |
| Water mixed with tumeric | 1 |
| Wax: 4 ปีก (pieces) | 1 |
| กวง / แตร-ล โดรอย / ไข่ฆอง: (see definition 13) | 1 |
| ของกำลิด (see definition 15) | 1 |
| (แก่น)คูน: small pieces of <i>Cassia fistula</i> bark | 1 |
| (ดอก)ชบา: <i>Hibiscus</i> flowers | 1 |
| เทียนกา (See definition 14): 2 pairs | 1 |
| ไขแมงมุม (See definition 6) | 1 |
| ชวยแป (See definition 8) | 1 |

3. Bowl used to enter and leave possession (เครื่องเข้าแม่๓ค) (Photo AI.1)

| Items: description and function | Frequency |
|---|-----------|
| <i>Bagum</i> (บะกำ) (See definition 16) | 1 |
| Bananas | 1 |
| Candles: lit to attract spirit | 1 |
| Rice grains (uncooked) in a bowl | 1 |
| Water: 1 quart | 1 |
| ขนมข้าวต้ม (See definition 1) | 1 |

4. Items for other events in the ceremony

4.1 Pyramids for attracting evil spirits (Photo AI.2)

Pyramids are built for each medium in the ceremony. They are made out of banana stalks and stand about 5 feet tall. There are shelves on the pyramids with items that are used to attract the bad spirits. After the bad spirits come to the pyramids, then the pyramids are ‘cut down’ by the leaders of the village and men drag the pyramids away and throw them away. The mediums are bathed and all turn their backs on the pyramids and face the ceremonial area.

The items on the shelves are as follows:

1. *Areca catechu* nuts
2. ‘black’ rice (ข้าวดำ): Cooked white rice mixed with charcoal
3. Chilies
4. *Piper Betle* leaves with red and white slaked lime
5. Money: 2 baht
6. ‘red’ rice (ข้าวแดง): Cooked white rice mixed with tumeric
7. Salt
8. Tobacco: rolled into a cigarette
9. พะยอม (*Shorea roxburghii*): Bark

4.2 Items used in the ceremony for building a new house (คืนบ้านใหม่) (Aj1)

1. House of the *bagum* (บ้านของบะกำ): wooden (ไม้ยอ, *Morinda citrifolia*) boxes that are painted yellow with tumeric. A cotton cloth is laid across the box. At the end of ceremony, the mediums step in the middle of each box which belongs to different household. Then the boxes are allowed to return to the household altar.
2. Food for the elephants is placed in the house of the *bagum*. This consists of *Areca catechu* nuts, *Piper betle* leaves with slaked lime, tobacco rolled into cigarettes, แก่นคูน (*Cassia fistula*), bananas and ข้าวต้ม (see definition 1).

3. Elephant and horse made of ไม้ยอ (*Morinda citrifolia*) are set next to the House of the *bagum* and the *Pa nied*.

4. Bottle of water, often with a leaf for the stopper.

5. Candles: lit during the ceremony.

Metal sword

6. *Pa nied* (พะเนียด) is made of ไม้ยอ (*Morinda citrifolia*) and colored yellow with tumeric. It is shaped like a *prasat* or stone castle. This symbolizes where the elephants are kept.

7. Pseudostem of banana is cut into the shape of a sword.

8. Small bottle of whisky.

4.3 Trading for valuable forest products (Photo 4.20)

A. Bees nest (รังผึ้ง) or ‘flowers in banana plants’ (ดอกไม้ใส่กล้วย)

Plumeria rubra flowers are punctured into banana shoots. The plants are placed in a basket and then wrapped and covered with a white cloth. Money and alcohol are also placed in the arrangement. During the ceremony, it is implied that there is honey in the center of the ‘bees nest’.

B. Garland (พวงมาลัย)

A number of items are tied together and then hung from the entryway into the ceremonial room. These items consist of:

1. bananas
2. กากพญากษัย (*Cassia javanica*): flowers and leaves
3. กาลาเกด (*Pandanus tectorius*): bracts
4. ข้าวต้ม (see definition 1)
5. เข็ม (*Ixora cibdela*): flowers
6. (ใบ) ฐุน (*Cassia fistula*): leaves

7. (ดอก) พุด (*Tabernaemontana divaricata*): two necklaces strands of flowers

4.4 Rockets or บั้งไฟ (Aj4) (Photo AI.3)

These are used to celebrate the end of the ceremony, by throwing the ‘rockets’ up into the air. A banana stalk forms the main body of the rocket and ดอกพุด (*Tabernaemontana divaricata*) and ลั่นทม (*Plumeria rubra*) flowers are stuck into the top of the banana stalk.

Definitions of items

1. ขนมข้าวต้ม: dessert made of sticky rice (*Oryza sativa*), coconut milk (*Cocos nucifera*) and sugar (*Saccharum officinarum*) and wrapped in banana (*Musa sapientum*) leaf dessert.
2. บายศรี: Banana leaves shaped and constructed into crown-like shapes. Entices the *Pee taan* spirits to come down to the ceremony.
3. *Sui* (ชวย (Isan) or โครย (Kui)): rolled up banana (*Musa sapientum*) leaves (photo 4.1)
4. กวง, ไข่มอง (Isan) แตร-ล โครย (Kui): Egg shells wrapped in a ring of wax with rice seed husks embedded in the wax. These represent gongs, which were used as signaling devices in the forests. (Used in ceremony event)
5. ธนู: Models of bows and arrows for hunting; made from bamboo. (Used in ceremony event)
6. ปี่แอกู: Wooden models of boats/canoes made out of ไม้ยอ (*Morinda citrifolia*) and used to catch fish. (Used in ceremonial event)
7. ใยแมงมุม: bamboo (*Bambusa* sp.) slivers tied into a diamond shape and decorated with colorful cotton string. It represents the animals in the forest. (Used in ceremony event)

8. ซวยแปล: specialized type of *sui*
9. สนม (Kui) ถมกล้วย (Thai): cylinder-pyramid items made out of ไม้ย้อ (Appendix A: photo AI.4.) They believe that these are attached to the body of a person from their birth.
 - a. พลุ (*Piper betle*): rolled up, stuck around the levels
 - b. ดอกบานไม่รู้โรย (*Gomphrena globosa*): stuck into each rolled up *Piper* leaf
 - c. ลั่นทม (*Plumeria rubra*): flower in the middle on the top of the cylinder-pyramid
10. Model ladders: 1 foot tall and 4” across. Avenue for spirits to climb down to the altar and possess dancers. Construction materials: 1. banana stem (*Musa sapientum*): can be substituted with wood, but banana stems are easier to use. 2. ไม้ไผ่ (Bambusa sp.): tiny slivers are used to piece banana stems together.
11. Necklaces (พวงมาลัย): flowers of ลั่นทม (*Plumeria rubra*) and รั้ว (*Calotropis gigantea*) and *Jaminum sambac* are strung together, but species are not mixed.
12. เครื่องอาต / เทียนงาม: A bundle of items. They are offerings for the spirits ‘up above.’ One is tied to each of the four corners of the ศาลพิธี and ศาลเจ้าปู่ (altars). It is made up of knotted homemade candles, เทียนเงินเทียนคำ which are red and white thread rolled onto tubes, and ทะเลา which are bamboo slivers tied into star-like shapes.
13. เทียนกา : This is made up of two homemade candles that are twisted together so that they resemble the ‘foot of a crow.’
14. ของกำเล็ด: A square item woven out of bamboo. After the ceremony, it will also be placed on the altar in the household. It holds the ของรักษา, consisting of bananas, ข้าวต้ม, หมาก, ซวย, and ไบเงิน, which belongs to a newly initiated medium.
15. Bagum (บะกำ): braided string. During the ceremony, this is kept in the bowl when medium is out of possession, during possession it is placed on the mediums forehead.

APPENDIX I
Research Publications and Presented Papers

- Virapongse A, Picheansoonthon C, and Konsil J (2006) Ethnomedicine of the Kui. Contributed poster, 47th annual meeting of the Society for Economic Botany, Chiang Mai, Thailand. (June 5-9). (Awarded Morton Award for Best poster)(Written in Thai and English)
- Virapongse A, Picheansoonthon C, Leucha P, Konsil J (2005, December 1-2) Medicinal plant use by Kui traditional healers (Northeast Thailand). Contributed poster, Conference of the 25th year of the Faculty of Pharmaceutical Sciences: Service quality in pharmacy, Khon Kaen University, Khon Kaen, Thailand. (Presented in Thai)
- Virapongse A, Picheansoonthon C, Leucha P, Konsil J (2005, August 30). A study of the traditional medicine of the Kui ethnic group. Contributed paper, The 2nd conference of Thai traditional medicine and alternative medicine, Bangkok, Thailand. (Presented in Thai)
- Virapongse A and Picheansoonthon C (2005, June 7) The sanding medicines: a unique method of herbal preparation among Kui traditional healers (Northeast Thailand). Contributed paper, Society for Economic Botany annual meeting, Fort Worth, Texas, USA.
- Virapongse A and Picheansoonthon C. [2005] Researching traditional medicine: A review and evaluation of methodology and objectives. *Journal of Health Science* (Thailand).
- Virapongse A, Luecha P, Picheansoonthon C (2000) Recent Advances in Quantitative Ethnobotanical Research. *The Journal of the Royal Institute* (Thailand) 2004; 29(4): 1032-1045.
- Virapongse A and Picheansoonthon C (2004, October 7) A Traditional Medicine System of the Kui Community in Northeast Thailand. Contributed paper, International Congress on Traditional Medicine and Materia Medica, Tehran, Iran.

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