Field notes on the dietary habits of the Mlabri hunter-gatherers in Thailand

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Abstract

The Mlabri who live in the mountainous region of northern Thailand have lived as nomadic hunter-gatherers until 20 years ago. While they have begun to live sedentary life and to engage in cash crop cultivation by state-led development project in the late-1990s, they still engage in hunting and gathering in the forest especially during the farmer’s off-season and their traditional dietary habits are still maintained.

We conducted a survey over three years to describe these dietary habits. They are extremely simple. Food resources are skillfully obtained through hunting or gathering using the spear (khōït), spade (khabok), hoe (soq), bladed instruments (tòq/cok), and flint and steel (kl.hlek), according to much knowledge on natural resources that they acquired in their traditional life in the forest. Foods are boiled or steam in bamboo cylinder, or roasted on a fire directly.

While the staple of the Mlabri diet is wild yam (eq), they also consume many other foods such as bamboo shoots, palm stalks, mushrooms, etc. Animal protein are got from wild animals such as wild boar, barking deer, monkey, and bird which they can find in the forest.

Our research presents as complete and accurate a record as possible of the previously unknown dietary habits of the Mlabri.

1. Introduction

The paper aims to provide general information on the Mlabri and their diets, especially focusing on tools of hunting and gathering, ways of hunting and gathering, and main diets. Since a monumental conference on hunting and gathering societies, “Man the Hunter”[1], was conducted in 1966, diet and foraging behavior have been a primary focus of hunter-gatherer studies. In this context, the interest in the relationship of them leads us some basic questions; how do they find the diets? how do they get them? how do they cook them? and so on, because these questions eventually is on a more fundamental issue; how does the human being live in various environment?

Although it would be necessary to conduct cross-cultural study to answer this issue, previous studies focused on the Mlabri and their diet, unfortunately, are still not enough to carry out it. For instance, Sungquan and Yuadyong discussed nutrient composition of some diets of the Mlabri and concluded “if these jungle people do not have meat in their diet, their state of nutrition is probably not nearly good enough”[2][3]. The study, however, just focused on their main diet, wild yam and some vegetables and the conclusion is too simplistic because if it is so it did not answer the question; why were they able to live in the forest so far? In that sense, the paper has possibility to provide more information not only on main diets but also on the folk knowledge of tools and hunting activities with the local terms.

The Mlabri, once called “Phi Tong Lueang” or “Spirits
of Yellow Leaves” by Thais, live deep in the mountainous regions of northern Thailand. Until very recently the Mlabri survived by hunting and gathering. They are one of the smallest ethnic groups in the world, with a population of just over 400 people. Until the end of the 20th century, the Mlabri lived nomadic life in the mountainous regions of western Laos and northern Thailand. For this reason, opportunities for researchers to meet the Mlabri were very rare. A researcher thus noted that “the Mlabri are the most interesting and least understood people in Southeast Asia”[4]. The first official record of the Mlabri was made by a Thai person in 1886, where the Mlabri were referred to in the Thai language as phi paa (forest ghost in Thai)[5]. This name persists today, with Thais often calling the Mlabri “the spirits of the yellow leaves (Phi Tong Lueang)”. This name reflects the mysterious and “ghostlike” impression the Mlabri left on the outside world. According to Seidenfaden[6], there were almost no eyewitness accounts of the Mlabri before the end of the 1910’s.

In the mid-1930s, Bernatzik, H.A.[7], an anthropologist and ethnologist exploring SE Asia, encountered the Mlabri people. He photographed and published pictures of the Mlabri and glimpses of their lifestyle. This was the beginning of research on the Mlabri. Since that time, the Mlabri have been seldom seen, and evidence of their existence amounts to occasional traces they have left behind in the forest. They truly are mysterious “spirits of the yellow leaves”. Thus, until very recently, it was assumed that researching the Mlabri would require an expeditionary journey.

20 years ago in early January, while one of the authors (Ohsawa) was visiting a small village of Hmong people in the mountains of Nan Province near the Thai border with Laos, he unexpectedly met a group of 10 Mlabri men and women. It was such an unexpected event that he missed the opportunity to begin a survey of the Mlabri. Since the end of the 20th century, while the author waited for another research opportunity, the Thai government has encouraged the Mlabri to settle. Now researchers can regularly meet with the Mlabri at their permanent settlements (Figure 1). There is no longer need for researchers to search fruitlessly in the forests for the Mlabri people. We first met the Mlabri at the Ban Huai Yuak in the mountains of Nan province.

One of the authors, Nimonjiya, has been stayed at Ban Huai Yuak for two years and continued intensive field survey. About 200 people resided at this settlement, 50 percent of the total Mlabri population. As the Mlabri are no longer nomadic, observing the hunter gatherer lifestyle first hand is no longer possible. However, they have only recently settled, and many aspects of their life in the forest remains; the Mlabri still maintain their behavior, eating habits, customs, family structure, beliefs, and all of this can be recorded. The goal of this paper is to report on the dietary habits of the Mlabri people before they disappear.

2. About the Mlabri people
The Mlabri (“people of the forest” in their own language belonging to the Khmuic branch within the Mon-Khmer language group of the Austro-Asiatic linguistic family. their own language belonging to the Khmuic branch within the Mon-Khmer language group of the Austro-Asiatic linguistic family) are a small group of hunter-gatherers who live in Northern Thailand and Western Laos. Up until 20 years ago, the Mlabri would move through the forest in groups composed of relatives, never staying for more than a few days in any one location. As soon as food became scarce, they would move to their next location. Their area of movement was extremely large, spanning the deep forests from Sanyaburi province in western Laos to the Nan province of Thailand. A Mlabri band was a temporary unit composed voluntarily by several unclear families. One band contained 10-15 people (4~5 families)[8]. The band that the author encountered 20 years ago was of a similar size. They expertly avoided contact with outsiders, quietly trading goods with other ethnic groups, or doing temporary manual labor to earn counter value with which to purchase rice, salt, and steel hunting spears or knives(through brief contact with Hmong or Mien) [9] with which to continue their hunter-gatherer lifestyle. These knives and spears became important tools in obtaining food.

In recent years, the Mlabri have began settling under
development project by the Thai government, and earn income through wage labor, cash crop cultivation or ethnic tourism[10]. In the farming off-season, hunting and gathering activities still continue, though it is only a matter of time before these practices die out. These field notes will report on one of the few presently confirmed hunter-gatherer people.

2.1. Living environment
This research was conducted in a small settlement of approximately 30 huts located in the Ban Huai Yuak in Ban Luang district of Nan province in northern Thailand (Photo 1). These steep mountains were previously covered in slash-and-burn fields and a vast forest, rich in animal life. Mlabri lived in forests at 1,000 meters elevation or more. The forest types include: wet evergreen forests (*briq caboq sung*), dry evergreen forests (*briq mëk / briq krum*), mixed evergreen-deciduous forests (*briq citce*), and sparse forests (*briq paw*).

2.2. Climate
The year is divided into three seasons: summer (*nuam thu.ul*), rainy season (*nyam mèq hot*) and winter (*nyam takat*). The food resources change depending on the combination of different forest types and seasons. The Mlabri have extensive knowledge about the flora and fauna, and have survived by utilizing these rich resources.²

2.3. Informants of Mlabri
We will describe the forest hunting and gathering activities of the Mlabri. This information comes from interviews with the following Mlabri residents of the village:
1. Mrs. Baa Hirankhirii
2. Mrs. Nit Hirankhirii
3. Mrs. Riam Suchonkhirii
4. Mr. Can Suchonkhirii
5. Mr. Nooi Doisak
6. Mr. Thawatchai Doisak
7. Mrs. Mong Maluangphrai
8. Ms. Wanidaa Doisak

3. Main tools used in Mlabri hunting and gathering
The tools used by the Mlabri are an extremely important factor to maintaining their hunting and gathering activities. These tools include spears, spades, blades, flint and steel. The tools are all made of iron. Iron was obtained from trading with other tribes, probably beginning in the middle of the 20th century (our estimate). In the 1950’s, the Mlabri began using bellows made of bamboo to cast bladed instruments in iron[12] (Photo 2). Before the introduction of iron, the Mlabri apparently used sharpened bamboo to hunt and gather. According to records, a knife made of bamboo had great cultural meaning. Coon[13] describes how the Mlabri living in Laos used fire to both fell bamboo and craft knives from it. Because the outer skin of the bamboo contains...
quartz, the edge was hard enough to cut animal skin and meat. In other words, using only the fire and bamboo, the Mlabri were able to survive without stone implements[14]. However, this account cannot be confirmed today.

In the case of digging deep into the ground or felling large animals, bamboo is not a sufficiently strong material. By replacing bamboo with iron, the ability to obtain foods improved dramatically. Presently, the Mlabri carry their spears and hatchets with woven rattan sheathes covering their sharp edges. The following is a description of the five main tools and its related information by the Mlabri informants.

3.1. Spear (khòt) (Photo 3)
-Spears are a hunting tool wielded by men only.
-Mainly used to hunt wild boar and comparably sized animals, but can also be used as a weapon against larger predators.
-The Mlabri believe that a spear has a spirit, and they avoid loaning it to others or placing it on the ground.
-If a person steps over someone else’s spear that has been places on the ground, it is believed to cause a stomach ache.
-During the hunt, whoever injures an animal with their spear is considered the owner, but meat must be shared among all those who participated in the hunt. If the owner does not share, he is also not allowed to eat the meat.
-A person should not be prideful about having killed an animal.
-Skilled hunters are revered by women.
-A spear is a very valuable tool for a man, but obtaining iron is difficult and few men own a spear, even as the Mlabri have become more settled.

3.2. Spade (khabok)
-As with spears, a spade is only used by men.
-Presently it is said there are no Mlabri who own a spade[15].
-In the past a spade was used in hunting large animals, but is presently used for small animals.
-The spade is used to hunt by stabbing at the nest or burrow of subterranean animals.
-It can also be used to stab fish and Chinese soft-shelled turtles.

3.3. Spade (soq) (Photo 4)
-Much of the flora and fauna that the Mlabri use for food is found underground (e.g. yams, moles, bamboo rats, giant lizards, etc.), and so the spade is the most frequently used and important hunting tool.
-Almost all Mlabri own and use this tool frequently even now.
-Children learn how to use the spade by imitating adults (digging holes, etc.) and they receive their own spade when they become an adult.
Unlike the spear, there is no particular tradition regarding the spade, and it may be lent and borrowed freely between members of the band.

- Spades are usually obtained through trade with other tribes instead of making them themselves. When a spade is not available through trade, the Mlabri will sometimes give iron to another tribe and ask for a spade to be made. There are apparently cases where the Mlabri provided a blacksmith with food each day until the work was completed, so that he could concentrate on crafting the tool.

- Like the spade, bladed tools such as knives and hatchets are a necessity for daily life in the forest.

- The Mlabri use blades in many aspects of everyday life. - Blades may be used as cooking implements and weapons, and also to cut building materials, vines and grass from walking paths, and to craft other tools.

- The Mlabri use two kinds of blades. The *tòq* is used by men, has a very sharp edge and point and is shaped like a large kitchen knife! The *cok* is used by women and looks like a hatchet.

- Fire is very important to the Mlabri in food preparation and hunting, and thus the tools to make fire (flint and steel: *kl.hlek*) play an important role.

- The Mlabri are very skillful at using these tools to start a fire. Fire is used to smoke out hornets and bees from their nests (photo 7).

- Fire can also smoke out giant lizards and hedgehogs from the tops of trees or holes in the ground.

- Fire is used to smoke out hornets and bees from their nests (photo 7).

- Yams can be gathered throughout the year, but the summer provides the most bountiful harvest.

- Because summer yams are considered the most delicious, the Mlabri also call summer *nyam eq* (season of the yam).

- Yams are cooked either by roasting them directly or are steamed in a bamboo cylinder after cutting them into small pieces (photo 8).

- During the rainy season (July-October), yams sprout new leaves and contain more water, degrading the flavor. The Mlabri call these *eq hnyol. hnyel* or *eq wëy* and are not eaten. However, yams grown on high mountains contain less water, even if they have sprouted new leaves, and are edible. These are called...
During the rainy season, until yams become edible again, the Mlabri switch to other vegetables as a staple diet. The most common is the bamboo shoot (blung).

(2) Bamboo shoots, etc
- There are many types of bamboo shoots that the Mlabri eat: blung dalaw, blung micin, blung thok, blung drthang, blung hlin jang, blung brran, blung sukwäk, blung trrup
- Overeating bamboo shoots is to believed to cause diarrhea and make one unsteady on one’s legs.
- Mlabri believe that if a pregnant woman consumes too many bamboo shoots, it can compromise the health of both mother and child.
- Mlabri also eat the stalk of taq oq (a type of palm), banana flowers and stalk4, mushrooms, the tips of rattan cane, wild cabbage, etc. These are all cooked by steaming in a bamboo cylinder.
- The soft stem of taq oq can be eaten raw. Unlike yams, these vegetables are used as a way to keep from being hungry, but not to fill their stomachs. Mlabri consider these to be more of a side dish, and believe eating too much is bad for one’s health.
- The soft stem of the Tao tree can also be eaten, but overeating is believed to cause stomach aches.
- Pregnant women who eat larva of hornets and the tips of rattan cane are said to cause caput succedaneum in their newborns.
- Mushrooms can sometimes be poisonous, so are not given to children.

(3) Other fruits and fruits and vegetables
- Wild mango and lychee
- mafai, mako, makjuk (types of palm)
- paap (catimbirn malaccensis, ginger family)
- rung (pometia pinnata J.R. & G. soapberry family)
- lambo (ginger family), etc.
(4) Buds, young leaves, and flowers used as side dishes
- cha om (acacia pennata)
- phak-kak (opiliaceae family)
- phak-yoon, phak-kaan
- wokwam (piper sarmentosum Roxb, pepper family)
- i-laam (bishofia javanica BL., spurge family)
- gumro (lasia spinosa Thw., araceae family)
- gung-gong, phak kud, etc.[16]
- New leaves of the la ok tree (rubrus hastifolius Lev., rose family)
These are generally boiled, and spiced with cha-kaan or salted. Eating the new branches of mla-saak is said to quench thirst. kiat and tayern are also eaten when thirsty.

4.2. Animal-based diet
Animals are mainly hunted using the five tools: koot (spear), habok (spade), soq (spade), tòq (blade), and kl.hlek (flint and steel). A dog can also be an important partner in the hunt (photo 9). Because the Mlabri did not use bow and arrows or other projectile weapons, the animals they hunted were limited. In the past 30 years hunting rifles have come into use and greatly expanded possible prey, although according to some interviewees, animals have retreated from humans since the adoption of the rifle.
4.3. Main animals hunted
-Monkey (thawaq)
-Cow (klèh)
-Langur (khang)
-Bird (ac)
-Wild chicken (sr.kèng briq)
-Squirrel (cak.qdar), etc.

The Mlabri say that hunting fast moving animals, animals that reside in high places, and animals wary of humans, are difficult to catch.

4.4. Wild animals the Mlabri like to hunt
-Muntiacus muntjak (polh, barking deer)
-Deer (ciak)
-Wild boar (cabut briq/ngay)
-Bear (bèk), etc.

4.5. Small animals
-Giant lizard/monitor (pye)
-Hedgehog (qdoq)
-Hog badger (swèh)
-Plantain squirrel (kathel)
-Bamboo rat (koc)
-Mole (mat lèk)
-Bat (tierek)
-Chameleon (qwèk)
-Rat (hnèl)
-Snake (tom.oq), etc.
-Eggs of birds (photo 10) and giant lizards (varanus bengalensis).
-Beehives (mung qyek) and honey (wèk qyek)
-Spider (bum.bway)
-Bamboo bugs (dit.dren)
-Fish (kaq)
-Frog (tuguk)
-Turtle (kasèng)
-River shrimp (tarèng plèn)
-Crab (kr.tam) (photo 11)
-Chinese softshell turtle (hng.gïp), etc.

As with vegetables, the Mlabri boil or roast meat before eating. White rice and salt were previously obtained by exchanging honey, softshell turtles, giant lizards, etc., but since the 1980’s such goods (rice, pork, etc.) are bought using wages earned through manual labor.

From the above observations we can divided into four categories on the food the Mlabri hunt and gather in the forest.

(1) Yams (8 types)
kway, thrut, wèyh, hmaq, glèw, gathat (diw) jèlèk, thriq bring

(2) Vegetables
phak-kard (wild cabbage), waai shoots, bamboo shoots (blung dalaw, blung micin, blung thok, blung drthang, blung hlïn jang, blung brran, blung sukwik, blung trrup), soft stems of the tao tree, cha-om (acacia pennata), phak-waan (opillaceae), yoen (vegetables), kan bom bam (vegetables), iq dum, gumro, gung-gong, phak-guk (species of fern), etc.

Photo 9. A dog can also be an important partner in the hunt

(3) Animals
Land animals: monkey (thawaq), cow (klèh), langur (khang), bird (ac), wild chicken (sr.kèng briq), squirrel (cak.qdar), muntiacus muntjak (polh, barking deer), deer (ciak), wild boar (cabut briq/ngay), bear (bèk), giant lizard/monitor (pye), hedgehog (qdoq), hog badger (swèh), plantain squirrel (kathel), bamboo rat (koc), mole (mat lèk), bat (tierek), chameleon (qwèk), rat (hnèl), snake (tom.oq), various bird eggs, giant lizard eggs, beehives (mung qyek), honey (wèk qyek), spider (bum.bway), bamboo bugs (dit.dren), etc.

Water animals: fish (kaq), frog (tuguk), turtle (kasèng), river shrimp (tarèng plèn), crab (kr.tam), chinese softshell turtle (hng.gïp), etc.
(4) Fruit

5. Note on Mlabri hunting and gathering activities:
   a. Before settling, the gathering of food was an activity shared by all members of the band society.
   b. Mlabri describe the separation of work as men hunting and women gathering. In practice though, women hunt small animals (such as bamboo rats) while gathering, and men help with gathering, so the division of labor between sexes is not necessarily distinct.
   c. Children, elderly, and the infirm, do not participating in hunting and gathering.
   d. Hunting and gathering activities end when enough food for that day has been obtained. Food is not stored.
   e. According to some interviewees, food could be gathered as needed because there was so much food available (such as yams). There was no need to set aside food for future consumption. Food was consumed on the day it was obtained, and the next day’s food was hunted and gathered the next day. As long as no one was hungry, the Mlabri used their time on other activities such as resting at camp or making tools needed in daily life, such as bags or baskets, etc.
   f. Several interviewees said that when they used to live in the forest, a full meal of yams would keep them satisfied for for two days.
   g. Normally hunting and gathering began in the early morning. The Mlabri woke up before dawn and headed out from camp as soon as it was light enough.
   h. Women would invite others and form a small group to gather food, or if there were children, they would go as a family. This was because if working alone, one would not be able to call for help if something happened.
   i. When hunting and gathering, individuals spread out to cover a given area. When enough food had been obtained, or when someone got hungry, the Mlabri would call out to each other and assemble. When everyone was present, food was divided equally between members and they returned to camp to cook it.
   j. If there was not enough food after the hunt was finished, the Mlabri would set out again as needed.
   k. Men could go hunting and gathering alone, in a group, or as a family.
   l. However, when hunting only men could go, and if hunting larger animals, they would form a group to cooperate in the hunt.
   m. Meat was carried back to camp and divided equally between all members of the band. Division of food is extremely important to the Mlabri; even if food is very scarce, it must be shared if asked. One
informant said that since the Mlabri live together, everyone should share if they have food, and that if food wasn’t shared, the person without food would be very sad.

n. When hunting or gathering in unfamiliar woods or far from camp, the Mlabri would make marks on the trees with their blades, or bend branches in the direction of travel, to help those following to not get lost.

o. If not enough food could be gathered within a day’s travel from camp, the members of a band would decide to move camp after discussing the matter with each other.

p. In order to efficiently hunt and gather, a huge amount of ecological knowledge is needed. For example, the Mlabri know to not eat yams with new leaves in the rainy season, or withered yams, or yams that have been eaten by underground bugs. They also know which kinds of yam are poisonous, and can determine this just this by its color (turning reddish).

q. Another example of this knowledge is knowing that a large mole hill indicates that the mole has burrowed deeper than a hunter can dig.

r. Mlabri do not eat things just because they are edible; when harvesting yams, they do not dig straight down, but at an angle, in order to take only the bottom portion of the yam. By doing this, the yam can be harvested again when it grows back.

s. It is strictly forbidden for unmarried men and women, brothers and sisters, wives and fathers-in-law, to gather food as a pair. If this rule is not followed, it is considered an affront to custom and both members will be expelled from village. It is believed that to let the offending members stay would risk both a repeat offense or allow a negative influence to affect the entire group.

This paper is based on a survey of the Mlabri settled at Huaiyuak village. This village was established by the Thai government in 1999. Since that time, the Mlabri have changed from a hunting and gathering lifestyle into working as paid laborers to help neighboring tribes with their farming, or planting their own small-scale crops (corn). As this lifestyle has changed, so has their food resources, and dependence on foods obtained from the forest has dropped dramatically.

Now Mlabri have begun to eat fried chicken or fish, pork, raw fish, vegetables, and sweets brought by the Hmong people arriving by truck.

The Mlabri society are changing of the hunter-gatherer society into an agricultural society, one can access the internet.

We are just beginning our research on these people that ancient years of human experience has passed by. How will this small group known as the Mlabri people adapt to these dramatic changes?

Note
1 In the 1980’s, the sphere of activity of a single band of Mlabri was approximately 30 square kilometers[17].
2 In this paper, Mlabri is transcribed using the roman alphabet, conforming with the system described by by Ito Yuma who studies Mlabri language at Kyoto University.
3 Yams smaller than the gathat are called dïw.
4 The Mlabri do not eat the noi (tanii in Thai) variety of banana. They believe a monster lives in this banana and can bite your heart if the banana is eaten.
References


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Abstract (Japanese)

タイ北部の山岳地帯に暮らすムラブリ（Mlabri）は、20年前まで森で遊動生活を送る狩猟採集民であった。1990年代後半に政府主導の定住政策により定住生活と換金作物栽培を開始したが、現在でもなお、農閑期には森での狩猟採集に従事し、伝統的な食習慣を維持している。我々はムラブリの食習慣と食事の内容について3年間の調査を行い、彼らの伝統的な食事の習慣と食事内容について記録した。彼らの食生活はいたって簡素である。食料資源は、森での伝統的な生活で獲得された自然環境に関する豊かな知恵に基づき、狩猟と採集によって獲得される。道具は槍（khôi）、鎌（khabok）、鋤（soq）、刃物（tôq/cok）、火打ち石と火打ち金（kl.hlek）のみであり、食材は竹筒を用いて煮るか蒸し、また直接火にかけて焼くかして調理する。主食はヤム芋であるが、竹の子やヤシの茎、キノコのほかに多様な食材を用いている。動物性のタンパクもイノシシやシカ、サル、トリなど森で手に入るものから得ている。この研究は今までその全貌が未知であったムラブリの食生活について出来るだけ忠実に記述したものである。

Key words: 狩猟採集民、ムラブリ、食生活、調理、タイランド

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Field notes on the dietary habits of the Mlabri hunter-gatherers in Thailand