# Low Kok On Universiti Malaysia Sabah

JACQUELINE PUGH-KITINGAN
Universiti Malaysia Sabah



# Field Note

The Impact of Christianity on Traditional Agricultural Practices and Beliefs among the Kimaragang of Sabah A Preliminary Study

The Kimaragang, an indigenous Dusunic ethnic group from the Districts of Kota Marudu and Pitas in Sabah, Malaysia (formerly North Borneo), traditionally practice the shifting cultivation of hill rice with maize. This study focuses on Kimaragang hill rice cultivation and discusses some of their traditional agriculturally-focused beliefs and communal healing and cleansing rituals. Over time, with the conversion to Christianity and the movement towards the towns of Tandek and Kota Marudu, many of these practices have declined. Christianity became the main religion among the Kimaragang during the 1950s and more so after the expulsion of missionaries from Sabah in the early 1970s. The factors that led to this large-scale conversion to Christianity and the gradual demise of some of the old agricultural rituals and some of the associated beliefs are herein examined. Other factors for this decline are also discussed.

KEYWORDS: Kimaragang—hill rice—traditional beliefs—communal healing and cleansing rituals—Christian conversion

THE KIMARAGANG are one of thirteen main Dusunic isoglots who are indigenous to Sabah, the east Malaysian state on northern Borneo.<sup>1</sup> Most live in the administrative districts of Kota Marudu and Pitas (BANKER and BANKER 1997, 315–18; KROEGER 1985; 1993). Traditionally, the Kimaragang were sedentary communities who practiced the shifting cultivation of dry hill rice. Many Kimaragang still cultivate hill rice, together with maize and vegetables on the sloping terrain of their land.

Over the years there have been many studies conducted among other Dusunic peoples on their traditional agricultural practices and beliefs concerning rice planting and the ritual importance of rice (see, for example, KITINGAN and DRYNAN 1982; SABAH MUSEUM 1993; METUSSIN and ANTARAN 2002; HUSSEIN 2006; PUGH-KITINGAN 2012; PUGH-KITINGAN and JOHN BAPTIST 2009; PUGH-KITINGAN et al. 2011).

This field note explores some of the traditional Kimaragang beliefs and ritual practices concerning rice planting and looks at the impact of Christian conversion on these practices. As the majority of Kimaragang are now Christian, factors that have led to their large-scale conversion to Christianity since the 1940s need to be understood. Recent research on Christian conversion among indigenous Borneo communities has thrown light on the reasons why some people seek to become Christians. Among the Rungus of Matunggung in northern Sabah, for example, APPELL (1986) noted that Christian conversion in the 1950s was initially linked to economic development. Among the Tahol Murut of Ulu Tomani in southern Sabah, however, ABD. HAKIM MOHAD (2011) found that the people deliberately sought Christianity due to years of dissatisfaction with the evil spirits and their constant demands as well as the fear of omens. A similar conversion by choice due to a desire to be free of the spirits and the fear of bad omens occurred earlier among the Kelabit of Sarawak and Kalimantan. Kelabit anthropologist Poline Bala claims that aspects of Christian practice fit with the Kelabit world view and social concepts of good morality and personhood (BALA 2009). Therefore, we may ask the following questions: How have traditional Kimaragang beliefs and practices, especially with regard to agriculture, been retained in the Christian context? Have Kimaragang Christians completely changed their world view? Which traditional beliefs and practices, if any, have they retained to this day, and why? And what other factors, apart from Christian conversion, have led to changes in traditional Kimaragang beliefs and practices concerning hill rice cultivation?

#### THE KIMARANGANG

The administrative districts of Kota Marudu and Pitas are situated in the northern part of Sabah, the east Malaysian state on north Borneo (see the map below). The people here consist of those speaking various indigenous Dusunic languages and include the Kimaragang, Rungus, Tobilung, and Sonsogon, and also (in Pitas District) the Tombonuo, whose language is from the indigenous Paitanic Family. There are also regional maritime ethnic groups, such as the west coast Bajau, the east coast Bajau, and the Suluk.

Of the Dusunic peoples, the Kimaragang form the majority in Kota Marudu District. Paul Kroeger, who studied the Kimaragang language in Tandek, Kota Marudu in the 1980s, estimated that approximately 10,000 Kimaragang lived there (BOUTIN and PEKKANEN 1993, viii). The Department of Statistics Malaysia (Sabah Branch), in its Sabah 2010 population census, reported there were 43,900 Kadazandusun<sup>2</sup> residing in Kota Marudu District and another 4,400 in Pitas District. For this census, the department considered all the Dusunic peoples speaking different languages as one major ethnic group, the Kadazandusun. Hence, the actual number of Kimaragang in the region cannot be determined from this data. During interviews, Jonan bin Gaul, the Native Chief of Kota Marudu, estimated that approximately 60 percent of the so-called "Kadazandusun" populations living in



Map of Sabah's districts, with Pitas, Kota Marudu and Kudat Districts (modified from www.google.com/search?q=Sabah+Districts+Map&client).

Kota Marudu District were actually Kimaragang. This was corroborated by one of the officers from the Kota Marudu branch of the Department of Statistics Malaysia, who thought that approximately 60 percent of the "Kadazandusun" in Pitas were also Kimaragang, although many Rungus have also moved to the Bengkoka Peninsula in Pitas District over the past century (APPELL 1976; 1986). Based on rough estimations, Jonan bin Gaul assumed that a total of about 30,000 Kimaragang altogether were residing in Kota Marudu District and Pitas District in 2011 at the time of this research.

Apart from Kroeger's extensive research on the Kimaragang language, other cultural studies include the study of Kimaragang gong ensemble music and dance that was part of the Southeast Asian Regional Studies Exchange Program (SEAS-REP) Project "Kulintang Music and Malay Dance Traditions of North Borneo and the Philippines" (1998–2000) that was undertaken by researchers from the University of Malaya and the University of the Philippines, headed by Prof. Dr. Mohd Anis Md Nor and Dr. Felicidad Prudente, together with consultant Dr. Jacqueline Pugh-Kitingan (then) of the Sabah Cultural Board. Follow-up interviews for the subsequent project "Kulintangan Music and Dance Traditions of Sabah" were conducted among the Kimaragang in 2003. This field note is based largely on 2011 field interviews conducted in Kota Marudu and Pitas districts between May and June 2011 by Low Kok On.

As with many other Dusunic peoples, the Kimaragang believe that their ancestors migrated from Nunuk Ragang, a village in Ranau District. In Dusunic languages, *nunuk* is a banyan or rambling fig tree and *ragang* or *aragang* means "red." Linggang bin Itur (informant 15), during an in-depth interview, said that before his ancestors acquired their name, there was a long drought during which all the crops dried up. The people had nothing to eat, so they climbed up trees to collect the foliage for food. Passersby saw from a distance that some of the trees were reddish in color. This triggered their curiosity, and they went closer to find out why. To their surprise, they saw that the skin of the people in the trees gave a reddish tinge to the color of the trees. Since *aragang* means "red," passersby called them *aragang* people. As time passed by, the term became the Kimaragang meaning "there are red people there," in which the prefix ki- is derived from the Dusunic terms *kiwaro* or *kiharo* meaning "there is" or "there are." Nowadays, it is said that there are more Kimaragang residing in the Kota Marudu District (which borders on the Ranau District) than in the Pitas District.

Like other Dusunic peoples, the Kimaragang are an egalitarian or acephalous society (without heredity, hierarchy, or hereditary leadership positions) with a bilateral kinship system (whereby kin relations and descent through both parents are equally important), in which the conjugal family is the basic social unit. There are no tribes or clans. The Kimaragang practice gender balance, and in former times, certain spiritually gifted women were (and a few still are) the *bobolian* or priestesses in the traditional religion. Marriage is traditionally legalized by the payment of *tinipuk* or bride wealth (not dowry) from the groom's parents to those of the bride and is exogamous as far as third cousins. Post-nuptial residence is



FIGURE I. A Kimaragang awalai or single house (image taken 2011; all photographs by Low Kok On).

traditionally uxorilocal in the bride's village but nowadays tends to be bilocal in either the home village of either husband or wife (Hj. Mozium bin Pangusang interviewed by Jacqueline Pugh-Kitingan, 28 November 2003).

Up until the early twentieth century, people lived in established sedentary villages composed of two or three long houses or binatang where individual families occupied separate apartments. Although a family would shift its rice swiddens from three to five years to allow the soil to fallow, its occupation of an apartment in the sedentary longhouse was fairly stable. Rarely would a longhouse be abandoned, except in cases of epidemics or other major catastrophes. As among many Dusunic communities, a north Borneo-wide smallpox epidemic in the early twentieth century and World War II may have contributed to the demise of the longhouse (PUGH-KITINGAN 2012, 49), and today Kimaragang villages consist of separate houses or awalai (FIGURE I). As in former times, each family has a permanent lagkau or rice storage barn near its house. When working in the swiddens, however, they use a small temporary hut or *sulap* for keeping implements, threshing after harvesting, and resting for periods at noonday.

In addition to the traditional swidden cultivation of hill rice and maize as staples, the Kimaragang nowadays cultivate cash crops such as rubber and oil palm as small holders. The state government has also introduced wet rice cultivation using modern rice varieties, especially on flat land, as around Kota Marudu town. Apart from farming, some Kimaragang have attained tertiary education and are also employed in the business and academic sectors.

#### THE KIMARANGANG WORLD VIEW AND THE COMING OF CHRISTIANITY

While a detailed description of Kimaragang cosmology is beyond the scope of this field note, preliminary research suggests that they share some similarities in world view with other Dusunic peoples. Put simply, the universe is said to consist of an upper world of seven spiritual layers above the earth and a lower world below the earth. The upper world is inhabited by benevolent celestial beings (osundu), while the underworld and certain places on the earth are the abode of demons (rogon) or nature spirits that are generally malevolent towards humans. Above the upper world is the Minamangun (lit. "the Creator") who has the personal name of Kinoroingan ("God most high"). He created the world and all that is in it, including humans (each of whom has seven hatod or spirits) and the rice plants which also have a spiritual essence or hatod sometimes described as hatod parai or "spirit of the rice" (Hj. Mozium bin Pangusang interviewed by Jacqueline Pugh-Kitingan, 28 November 2003). Rice is important because it feeds one's family, and the rice crop must be properly maintained. Since it has a spiritual essence, rice is sacred and is sometimes included in ritual offerings.

As among the Rungus, each Kimaragang family was believed to have a set of odu-odu or guardian rogon to watch over their crops and livestock (APPELL and APPELL 1993; PORODONG 2000; 2001). These odu-odu are said to guard their paddy fields and the harvested rice stored in the family's lagkau. Two of the most important roles of the odu-odu are safeguarding the paddy plants and ensuring a bountiful harvest. These guardian rice spirits, however, are not the same as the spirit of the rice which is the life force in the rice plants and grains.

Three village heads and a retired *bobolian* told the following story concerning the belief in *odu-odu* among the Kimaragang. All the other informants claimed that their parents and grandparents told this story to them at each paddy planting season:

Once in a remote place there lived an orphan boy. He was so poor that he had only seven paddy plants surrounding a dead tree trunk in front of his little hut. His neighbors, however, had large pieces of land with many paddy plants. It was near harvesting time and seven unfamiliar maidens came wandering by. They stopped by the first owner of the big paddy field and asked him to spare them some ripe grains. Their request was turned down by the owner who said: "How can I give you my paddy? There are too many of you!" They continued their journey and reached the second paddy field, where again the owner refused to give them any paddy. Finally they arrived at the tiny paddy planting spot belonging to the orphan boy and asked whether he could spare them some rice grains. "I have only seven paddy plants, but if all of you are hungry, you may take some of the grains," he said. "You are poor and yet so kind hearted and generous compared to the rest of the farmers here," exclaimed the seven maidens, full of praise. So they started to harvest his crops. He had only seven paddy plants but was shocked to see how much rice the seven maidens managed to harvest."How could this be?" he asked them, puzzled. "To be frank with you, we are odu-odu,

the ones who have power over the paddy yield," they said. "From now on, your paddy yield will be bountiful from one year to another, even though your plants are small in number." Then the seven maidens bid farewell to the orphan boy. Soon the paddy yields of those farmers who refused to help the seven maidens began to dwindle so that they had to ask for help from the orphan boy. From that day on, Kimaragang farmers realized the importance of the odu-odu and would invite them to their field at each stage of the paddy cycle to ensure a bountiful harvest.

The myths of Kimaragang cosmology and the prescriptions of the adat or customary laws are contained in the *rinait*, a large body of ritual poetry that is memorized and chanted in specific ritual situations by the bobolian. Each of these highly respected women has a familiar spirit that enables her to mediate with the spiritual world on behalf of humans. Men may also be bobolian among the Kimaragang, but their spiritual powers and knowledge of the *rinait* is far less than that of the women, and they normally do not use familiar spirits. The role of the bobolian is essentially to maintain the balance or neutrality between the human and spiritual worlds and to intervene through ritual should this relationship become imbalanced.

According to Rumpilin binti Santiru (informant 16), a retired male Kimaragang bobolian, there were few of his gender practising in the past. Women bobolian performed complex ritual ceremonies related to paddy planting, healing, and the banishment of evil spirits, while male bobolian would assist in other smaller unspecified ceremonies. Mugudar bin Arabit (informant 3), a village head, stated that before the 1960s, every village in the districts of Kota Marudu and Pitas had at least four bobolian. Similarly, Mojudin (informant I), a retired hill rice planter, recounted how each year they would invite a bobolian to perform ritual ceremonies at significant stages of the rice cultivation, such as during clearing the hillside before planting, when rats, birds, and wild animals were destroying their crops, and during harvest.

Kimaragang adat requires humans to live morally upright lives in a properly balanced or "cool" (osogit) relationship with each other, the natural environment, and the spiritual realm. If humans sin, this balance will be upset, and the relationship will become "hot" (alasu). The guilty parties, their families, and the community will be attacked by rogon, resulting in illness, death of crops and livestock, and other misfortune. Such a situation requires an animal sacrifice or *sogit* as "cooling compensation" and appropriate rituals by the bobolian.

Nowadays, most Kimaragang are Christians of various denominations, while a few are Muslims. Although Christianity in northern Borneo goes back to the fourteenth century, it appears that it only came to the Kimaragang in the early 1940s when the Seventh Day Adventist Mission started work in the Marudu Bay area before World War II. But it was not until the early 1950s that the Seventh Day Adventist Church itself became fully established. St. Theresa's Roman Catholic Church was established in Tandek, Kota Marudu, in the early 1960s. Today, the Protestant Church in Sabah, started by the Basel Mission among the neighboring Rungus in 1952, is also present among the Kimaragang, as is the Sidang Injil Borneo (Borneo Evangelical Church, originally founded by Borneo Evangelical Mission) and others. Since the early 1970s when missionaries were expelled from Sabah under the USNO government, these churches have been staffed and run by the local indigenous people. Today, it is estimated that 60 percent of the Kimaragang are Christian (Catholics and Protestants), 20 percent are Muslim, and the remaining 20 percent practice their traditional religion (information from interviews with Jonan Bin Gaul, the Head of the Native Court, at Kota Marudu District Office, 2012). According to Mojudin bin Gambus (informant 1) and Lucy binti Jamari (informant 22) there are now twenty Catholic churches and about eighty Protestant churches to be found in the districts of Kota Marudu and Pitas.

#### THE STUDY

This study is based largely on in-depth and focus group interviews with knowledgeable Kimaragang informants during 2011. Questions concerned three general hill rice cultivation stages: the selection and preparation of sites for swiddens, the planting period and harvesting, as well as traditional beliefs and ritual practices (and changes in these beliefs) in connection with each stage. Discussions focused on specific themes like omens, agricultural rituals, and changes brought about by Christian conversion.

The informants selected for this study were Kimaragang people with experience of hill rice planting, local community leaders such as some *Ketua Anak Negeri*, village heads, and local church leaders. Other participants, who no longer engage in agriculture, had formerly helped their parents and grandparents with hill rice cultivation. All these people provided valuable information about traditional rice cultivation practices, and the *Ketua Anak Negeri* and village heads were well-versed in the culture and customs of their people. Local church leaders, many of whom are farmers, were also interviewed regarding changes in Kimaragang life after their conversion to Christianity.

Most of the informants over fifty-five years old in this study originally subscribed to the traditional religion characterized by rituals presided over by *bobolian*. Over the years, some of the informants, such as Mojudin, Jonan, Ja, and Banal (see page 421), have converted to Christianity, while others, like Mugudar, have kept to their traditional religion.

#### TRADITIONAL AGRICULTURAL PRACTICES AND BELIEFS

All the senior informants for this research stated that before the 1960s, most Kimaragang resided in the hilly areas of the Districts of Kota Marudu and Pitas. They were small-scale farmers who the practiced shifting cultivation of rice on hillsides and also planted various other crops including maize, tapioca, fruits, and various types of vegetables for their own consumption. They used slash-and-burn techniques to prepare the hillsides for cultivation. Hill rice (*parai tidong*) provided their staple food. They did not cultivate one place for long—when the soil

became infertile they would erect a temporary sulap (hut) and cut their swiddens in a new location. According to the senior informants, their forefathers would maintain a planting site for a maximum period of three to five years.

## Selecting the New Planting Site

When the fertility of the soil was exhausted, farmers would seek a new site by examining the plants growing on nearby hillsides. When a new site was identified (based on whether the trees and plants appeared healthy), the farmer concerned would erect a wooden pole known as a tonduk at the perimeter of the site to inform others that he had "booked" the site. This form of "manual booking" was possible at the time as the surrounding hillsides were rarely under the ownership of outside parties. All the villagers understood and respected the symbolism of the tonduk; not doing so was considered against their customs and might lead to bad fortune. As well as signifying that the site was booked, the tonduk was believed to have magical powers that would bring misfortune to anyone trespassing in the Kimaragang community. According to Mojudin (informant 1), in the past, many Kimaragang farmers were thought to practise black magic and to be capable of putting spells on the tonduk or planting objects with magical powers underneath it. Thus, it was natural for people to respect other people's tonduk.

A tonduk was also erected in front of a fruit tree near the house of its owner to indicate ownership. Passersby, who stopped to eat some of the fruit from the tree, would not pay a penalty; however, those who took the fruit away to consume it elsewhere or sell it, were likely to get stomachache or to suffer some other misfortune. Some non-Christian Kimaragang residing in Kota Marudu District still use the tonduk as a magical stick to protect their fruit trees.

The Kimaragang were always sensitive to *kadaat* (bad omens) when choosing a new planting site. If a family member had a bad dream on the day of the site selection, the land would immediately be abandoned and a new site sought. For Kimaragang farmers, bad dreams served as warning signs that something unpleasant was about to happen.

The process of hill rice cultivation continues among the Kimaragang in hilly areas. After site selection, the work of clearing the hillsides starts in either July or August (depending on land size). Kimaragang farmers use a traditional labor exchange system that involves relatives and villagers joining the farmer and his family in clearing the trees and bushes as volunteers. The farmer's family feed them at the end of each day. In return, the farmer's family assists the volunteers when they need to clear their land, with the same number of workers, for the same number of days, and are fed the same amount of food. Once the branches and leaves from the chopped trees have dried up, they burn them and begin preparing the soil. In the past if the farmers happened to see a snake or a field rat enter a hole while clearing bushes, it was considered an omen that someone would fall sick. The farmer concerned would either stop working or return home to rest for a day, or continue to work but later invite a bobolian to conduct a ritual to ward off any

misfortune. She usually sacrificed a chicken or a pig, depending on the seriousness of the omen.

## Magatob Ritual

After completing the preparation of the site (usually in October), the farmer would invite a *bobolian* to conduct a ritual called a *magatob* (a land cleansing ceremony to appease the local spirits). According to Mojudin bin Gambus (informant I), Mugudar bin Arabit (informant 3), and Banal bin Upas (informant 5), the *bobolian* with one helper would bring a chicken to the planting site, chant a special *rinait*, then slaughter the chicken there. At the end of the ritual, the *bobolian*'s helper would blow two darts from his blowpipe—one to the east and another to the west. This ceremony was to rid the site of evil spirits that might bring bad luck and sickness to the farmer's family. Following the *magatob*, the field was left idle for three days, after which the planting of the hill rice plants and other crops could begin. Maize was planted first, followed by paddy. Other crops like sweet potato, vegetables, and beans were often planted around the perimeter of the swidden.

The *magatob* ritual suggests that fear of malevolent spirits (*rogon*) was very strong among the Kimaragang. Farmers were also worried that if any of their family members fell sick or suffered injuries while working in the fields, their planting schedules would be disrupted and the eventual harvests might be insufficient to feed their families during the following year. The chicken sacrificed by a *bobolian* on the planting site was an offering to appease the *rogon* that reside in the wild so that they would not harm the farmers. Animal sacrifice is found in many cultures to appease the spiritual world (Low 2006, 42). Chanting the *rinait* was used by the *bobolian* as a means of communicating with the spirits, so that the farmer could safely use the site for planting.

## Timing for Planting and Harvesting

Next, farmers would observe the position of two significant star constellations in the night sky: *Muru-pudu* (Orion) and *Walatik* (Aries). Mojudin (informant I) said his father used to bring him to the field at night to observe the position of the constellations. According to him, the best time for planting is when *Muru-pudu* is sighted in the middle of the sky, while the shining edge of *Walatik* indicates the direction in which the hill rice should be planted. The significant dates are 20 August, when *Muru-pudu* can be seen overhead, and both 15 September and 10 October when *Walatik* is clearly observable. In April, when the stars that comprise *Walatik* are low in the western sky, it is time for harvesting. Nowadays, the use of calendars has largely superseded the observation of the night sky for timing the agricultural cycle.

## Process of Planting and Observation of Omens

From the position of the constellations, the arrival of October signaled the time for hill rice planting. On the first day of planting, the farmer was required to perform a special rite: a *bobolian* would be invited to the planting site and the farmer would build a *sulap* near a dead tree trunk. The *bobolian* would then plant seven selected

paddy plants around the trunk and sacrifice a chicken while chanting her special rinait to Rinodu (one of the odu-odu) to ensure that the young paddy shoots would be protected and mature into healthy plants. The blood from the sacrificed chicken was sprinkled around the offering site to ensure fertility and promote crop vield. Several village heads from Pitas district confirmed that all the farmers in their villages used to invite bobolian to conduct such rituals.

Normally, when sowing the rice seeds, the men walk ahead and poke holes in the soil using a long sharp dibble stick, while the women and children follow behind placing a few seeds into each hole. Once the paddy plants start growing, the routine of caring for the plants involves the daily clearing of weeds from the hillside until the plants start to bear seed. No watering and fertilizing is needed during the cultivation period for traditional hill rice.

Prior to the coming of Christianity to the Kimaragang in the 1950s, however, farmers were required to act on certain omens: they listened for the sound of the moguntik, a small jungle bird about the size of a sparrow with distinctive reddish yellow feathers. A single "tik!" sound from the moguntik was considered a bad omen. However, if the *moguntik* produced more than one "tik" sound, the prospects were good. The mere sight of a snake or a rat was of little significance, but if such creatures disappeared into holes in the earth it was considered a bad omen. Seeing an anteater in the field was also viewed as unlucky. Bad omens required the farmer to return home for the day and necessitated a bobolian to conduct a ritual in the field to ensure the continuation of planting.

When asked why the single call of the moguntik bird and the appearance of other animals were omens, some informants said that the moguntik was once believed to be the child of a spirit-being married to a man. Others said those birds and animals represented certain spirits, whose duty is to inform people whether they are allowed to do certain things or not. None of the informants could explain why one "tik" sound from the moguntik was considered a bad omen, whereas repeated calls were not. They said that the bad omen of snakes and rodents disappearing into holes had been handed down by their parents. It was believed that the penalty for ignoring such an omen was illness befalling a family member or some other misfortune. Similar beliefs in bird and animal omens are common in many agricultural societies of Borneo (BALA 2009, 176; TUIE 1995; HARRISSON 1967, 121; ROUSSEAU 1998, 73).

Plant-related omens were also observed. According to Mojudin (informant 1), whenever a group of farmers were clearing bushes, the sight of a rattan plant with one of its ends coiled like a snare was considered to be "the snare of the spirits." The remedy for such a portent was to invite a bobolian to sacrifice to the spirits as appearement.

Alternative remedies for dealing with bird, animal, and plant omens meant that approaching a bobolian was not always the first resort. For example, upon hearing a single "tik" from a moguntik, the farmer on his way to the planting site would stop on the spot and swing his machete against a stone to produce the "tik"-like sound, with the aim of getting a response from the moguntik. If the moguntik responded and produced a second "tik" sound, the kadaaat would no longer be in force.

However, if the *moguntik* failed to respond, then the farmer had the choice of either taking the day off or going ahead with work and paying the *sogit* later. Furthermore, if he saw a snake or a field rat running into a hole, he could use a small stick to make them come out without killing them. Once the creature had left the hole, the omen no longer applied. Nevertheless, if they happened to see a "spirit snare" on the rattan plant while clearing bushes, the only option was to pay the *sogit*. It was thus generally understood that if an omen was observed, something could often be done to change the outcome.

## Tangkal Ritual

If farmers encountered problems during the grain-ripening period, such as large numbers of rats, small grain-eating birds, or wild boar eating the paddy plants or destroying them, they would invite a *bobolian* to conduct the ritual known as *tangkal*. She would begin chanting and then sacrifice a white chicken in the field in a ceremony designed to shut the mouths of the rats and birds. During such rituals, farmers would not enter their fields to work for three days.

When asked about the effectiveness of *tangkal*, one senior informant exclaimed: "Yes, it works magically. I experienced it myself!" He and several others recounted that on returning to their fields after the ceremony, rats and birds no longer posed a threat to the crops. Seeking spiritual help was a natural recourse for farmers in an era before insecticides and pesticides. They would consult *bobolian* over any serious problem, including attacks on their crops by birds and rodents, because they had confidence in their powers.

## Monongolid Ritual

Once the paddy grains had ripened, the *bobolian* would conduct another ritual ceremony known as the *monongolid*, a ritual to ensure the fertility of crops and domestic animals. Mojudin's father would build a *sulap*, called *sulap odu-odu*, at the centre of his hill rice field and invite a *bobolian* to conduct the ritual ceremony. This *sulap* measured about three by five feet. The *bobolian* would sacrifice a chicken near the wooden hut while chanting her *rinait*. Thereafter, some of its feathers were poked into the soil surrounding the wooden hut along with some of its blood. The aim of this ceremony was to entreat the *odu-odu* to guard the paddy to ensure a bountiful harvest. The *sulap odu-odu* was linked to the family's permanent rice barn or *lagkau* via a small path.

## Inviting the Odu-Odu

A special ceremony was required to invite the spirits to the *sulap odu-odu*. On the first day of harvesting, the farmer and his family members would go to the field to see whether the paddy was ripe enough to be harvested, then select the seven best paddy stalks and hang them in the middle of the *lagkau*. After that, another two sets of seven selected paddy stalks would be hung on both sides of the *sulap odu-odu*. Next, a *bobolian* would perform a ritual to invite the *odu-odu* into the *sulap* to ensure that the farmer had a bountiful harvest. A chicken was then sacrificed as the

bobolian chanted. Family members were prohibited from joining the farmer at the harvesting site. On the second day, harvesting proper would begin with the help of the other villagers. The paddy plants surrounding the *sulap odu-odu* were always the last to be harvested. At the end of the harvest, both sets of the selected seven stalks of paddy hanging in the *sulap odu-odu* were brought back to the *lagkau*.

Certain taboos had to be observed by the farmers: they were not permitted to make any noise, play around, or hit the lagkau walls. One informant, who once as a child ignorantly hit the *lagkau* walls, recounted his experience. He hit the walls while singing and fainted immediately for no apparent reason. On awakening, he found himself surrounded by a group of people accompanied by a bobolian. When questioned by the bobolian, he told what had happened, whereupon she informed him that he had triggered the anger of odu-odu and advised him not to repeat the action. The bobolian had apparently saved him that day by performing a simple rite.

## Harvesting Rite by Family Members

Another harvesting ritual described by some informants was conducted by the farmer's family and did not involve the bobolian. This harvesting rite is often used as a means of checking whether the paddy is ripe enough for harvesting. On the first day of harvesting, some family members would go to the paddy field and one (usually the mother) would cut the best stalks of paddy using the small harvesting knife called a linggaman (FIGURE 2) and put them into a pataan, a type of traditional basket (FIGURE 3). They would repeat this act seven times and thereafter return home. One informant said that Kimaragang farmers preferred to use



FIGURE 2. The linggaman or traditional harvesting knife viewed from above the handle (2011).



FIGURE 3. A Kimaragang farmer demonstrating how to cut the first paddy stalks with a linggaman and deposit them into a pataan basket (2011).

the traditional *linggaman* to harvest the paddy, rather than a modern sickle knife, because the *linggaman* is small and would not scare away the *odu-odu* when cutting the paddy stalks. On reaching home, the farmers would separate the paddy grains from their stalks by hand, remove the husks, then cook the rice in a pan. Then the cooked rice, together with cooked fish, cucumber, and all the agricultural tools, including the *linggaman* and the pataan, would be offered to the oduodu. The purpose of this ritual was to thank the paddy spirits for providing them with a bountiful harvest.

The above illustrate the importance of these guardian spirits in the planting activities of the Kimaragang farmers. The monongolid (before harvesting), the building of a small shelter (during harvesting), and the invitation to the small hut for a thanksgiving ceremony (after the harvest) all clearly show the respect given to the odu-odu by Kimaragang farmers. The use of the traditional harvesting knife or linggaman, instead of the modern sickle, could also be understood as showing respect for the rice plants. The way in which the blade of the *linggaman* is concealed and turned inwards when cutting the first paddy stalks, rather than outwards as is usual in harvesting, could also be interpreted as trying not to scare the paddy spirits away.

After a harvest, a family relaxes and celebrates with a feast. Since all the families in a longhouse or village usually harvested at the same time, this annual feast usually occurred simultaneously throughout the village.

Nowadays, the village head meets with the villagers to fix a day for their annual celebration. All the villagers gather in the community hall, bringing along food and supplies of traditional rice beer or tapai. Here they celebrate their bountiful harvest while chatting, joking, eating, and drinking. Any village member and all

bobolian in the village are invited as respected guests, regardless of the religious affiliations of the celebrants.

#### CHRISTIAN CONVERSION AND CHANGE AMONG THE KIMARAGANG

When asked about the reasons for their conversion to Christianity, Kimaragang informants typically answer, "They [the preachers] assured us that God will protect us. We are exposed to many stories in the Bible which show us that God saves his followers." In other words, safety and security are the main reasons why many Kimaragang turn to God in times of trouble. The Kimaragang traditionally believe that malevolent spirits or rogon are everywhere and may harm them at anytime. They formerly lived in fear of these spirits. Thus, it is not surprising that the assurance of God's protection is the reason why many Kimaragang became Christians. As one informant said, "Whenever I am sick and worry about the bad spirits, I will pray to God with confidence for help."

The conversion process, however, was not always smooth. Some informants stated that during the initial stages of conversion, some Kimaragang would go back to the bobolian if praying in church failed to cure their sicknesses. Such cases clearly show, however, that the idea of God as more powerful than the evil spirits has been fundamental in leading the Kimaragang to follow Christ. Ultimately, the Kimaragang converts have accepted Christ as their sole protector against evil spirits.

Others noted, "Once we started learning to pray and read from the Bible and practicing the new ways of conducting rituals in the Church, we found our old rituals to be too complicated and troublesome. Now that we are Christians, we no longer need to slaughter chickens and pigs and hire a bobolian, then stop working for a few days because of bad omens." Based on comments such as these, it is evident that the cumbersome aspects of the old practices caused many Kimaragang to abandon their old practices. It was the sense of becoming "freer" and of being freed from the fear of malevolent spirits and bad omens, that encouraged many Kimaragang to convert.

In addition, many informants said that, "Christianity teaches us many good things. After becoming Christians, our great-grandparents rejected the headhunting culture, which was bad. After becoming Christians, we abandoned our bad habits and behaviors like drinking tapai, gambling, and so on. We learned about sin and became better people thereafter." In this respect, the Kimaragang converts have used Christianity as a means to generate positive qualities, such as self discipline, needed to be a better person. Positive changes have inevitably attracted more Kimaragang to join the new faith.

Some of the informants stated that they were convinced by other Christians that if they believed in God and followed God's way in their life, they would be granted a place in Heaven when they died. Furthermore, the church educated them to forgo some of their old practices, such as using bobolian to appease the spirits. Thus, some informants said, "If we follow the old ways, we are not true Christians." These realizations and the work of the early missionaries and other



FIGURE 4. A signboard directing the way to three Catholic churches in villages near Tandek, Kota Marudu (2011).

Christians over the years in Kota Marudu and Pitas District have inevitably resulted in many Kimaragang farmers converting to Christianity. Concerning the older generations, one Kimaragang church leader commented that it was more difficult to persuade them to become Christians, especially the bobolian, as they had held their beliefs and practices for such a long period of time. Clearly, younger people were more amenable to the idea of change than the elders.

Early missionaries established clinics and schools and proved to be very successful in their mission to uplift the quality of life among the local population, as 60 percent of the Kimaragang are now Christians. Many converts claimed they had also gained significant spiritual benefits as a result of conversion. The paragraph below, from a letter written by a resident of West Coast, North Borneo, dated 5 June 1936, illustrates this:

I have also received a long letter, dated 23rd May from Majinal, a Dusun, stating the spiritual benefits he has obtained as a convert of the Seventh Day Adventist Mission and pleading for permission for the Mission to remain on his land.

(North Borneo Central Archives 2010, file no. 315, 4)

Nowadays, local Kimaragang churches play a very important role by providing spiritual sustenance to the villagers (FIGURE 4). Besides weekly services and other church activities, the priest or pastor and their assistants are invited to say prayers and conduct ceremonies at various functions such as weddings, birthday parties, funerals, and house dedications.

Freedom from fear of bad omens and the consequences of ignoring them is another reason why many Kimaragang became Christians. JK (informant 20), for example, recounted that after his late father became a Christian (a Seventh Day Adventist) in 1950, he no longer bothered about bad omens and their potential consequences. JK's father also told him that believing in such omens was too burdensome. When he had a bad dream before he became a Christian, for example, he would have to write off three days work in the field. Furthermore, he had to seek a bobolian's advice regarding any bad omens that featured in his dreams. Whenever he wanted to chop down a tree, he became afraid of offending the rogon dwelling in it and was thus prevented from doing so. If he heard the call of the montis (kingfisher) or the sound of a snake moving through the undergrowth in front of him, he was forced to return home and rest for three days.

After becoming a Christian, he no longer feared the bad omens and evil spirits. He felt free to chop down any tree on his land and did not fear retribution from the spirits as his belief in God's power was greater. Christianity has thus given JK's family confidence that God will protect them from the evil spirits. Hence, they are able to ignore bad omens.

Nevertheless, some Christian Kimaragang informants admitted that ignoring bad omens had unpleasant consequences, as is indicated by the following case. One man recalled that once he heard the call of the *moguntik* and he continued to work in his field. While working, he accidentally cut his hand. Although it could have been a coincidence, to the person concerned, it reinforced the traditional belief that hearing the call of the *moguntik* is a bad omen. Thus, like some converts from other Borneo communities, some people still feel obliged to follow certain omens (CHUA 2009, 341). One Kimaragang Roman Catholic church leader, however, said, "As a Christian, I am taught not to view bad dreams, a single call by the moguntik and so on, as bad omens. If I encounter one, I will make a cross sign and continue my journey to the planting field." Thus, while many Christians have confidence that God will protect them against the effects of being insensitive to bad omens, some people still avoid ignoring these omens to avoid any unpleasant consequences.

When asked about continuing belief in the spirits, all informants (both Christian and non-Christian) said that their parents and grandparents who followed the traditional religion believed in various spirits, which when offended would harm humans. They also strongly believed in odu-odu that guard the paddy fields and play an important role in ensuring a bountiful harvest each year. It was said that if the odu-odu are offended they will leave the fields and harvest yields will be diminished. Some revealed that every harvest time, they would empty a modest amount of harvested rice into a rice storage bin. But to their surprise, when they transferred the rice from the rice storage bin into gunny sacks, they would obtain a much bigger yield, about one hundred sacks or more. Hence they believed that it must have been the rice guardian spirits who helped them to increase their yield.

Although the practice of erecting a *sulap odu-odu* and linking it to a family's lagkau has since been discontinued, the Christian informants stated that they still believe in the existence of odu-odu. This shows that conversion to Christianity has not eradicated the traditional Kimaragang world view. Instead, such spirits are deemed to remain real and efficacious, as long as their existence is generated and sustained by the traditional-based actions via ceremonies and offerings.

In general, however, the Christian informants avoid conducting ceremonies associated with these spirits. Instead of hiring a *bobolian* to invite *odu-odu* to their paddy fields, they pray to God for a bountiful harvest. In other words, adopting Christianity has not led to the Kimaragang Christians to totally abandon their former beliefs. The absence of ceremonies cannot simply be equated with an end to belief in the paddy spirits. The fact that most Christian Kimaragang still believe in the existence of *odu-odu* but avoid conducting ceremonies associated with them indicates how conversion does not necessarily involve a radical shift in world view. In her research among the Labuk Dusun, KOEPPING (2006, 69) noted that there are Christians who retain a deep awareness of, and respect for, the traditional belief system but feel following it is wrong in church terms. This is also true among the Kimaragang Christians: as one informant said, "Personally speaking, I still respect the old rituals but now that I am a Christian, I try not to talk about the old ways anymore."

Some informants continue to plant hill rice. Many from Pitas District said that there are no longer any *bobolian* in their villages. So if they want to conduct any ritual in their fields, they have to invite *bobolian* from other villages. This is costly and troublesome.

Some *bobolian* have converted to Christianity and have consequently stopped practicing ritual ceremonies. Thus, the decreasing number of *bobolian* is another reason for the decline in conducting agriculture-related rituals nowadays.

Another factor is the introduction of wet rice by the Agriculture Department in recent years. According to some informants, the majority of the hill rice planters residing in the interior of Pitas and Kota Marudu Districts are still animists who continue to practice rice cultivation rituals. Wet rice planters, on the other hand, reside on the plain near Kota Marudu town. Regardless of whether these farmers are Christian or not, the introduction of modern agricultural technology, including insecticides and pesticides, makes them less dependent on the *bobolian* for help when their paddy plants are attacked by insects and pests.

While none of the Christian Kimaragang farmers conduct traditional rituals, a few of them still observe certain traditional practices related to harvesting, which they do not consider to be contrary to the teachings of Christianity. For example, on the first day of harvesting, family members still go to the paddy field, cut the best stalks with a *linggaman*, and put them in a *pataan*. They repeat this seven times thereafter and return home to conduct a symbolic thanksgiving ceremony dedicated to the rice spirits. To these Christian Kimaragang, such ceremonies do not contradict Christian teachings as they do not involve a *bobolian*. The conviction that certain traditional paddy harvesting ritual practices can be observed as long as no *bobolian* is involved tells us about how some Kimaragang Christians are making conscious decisions about where to draw the boundaries with the past.

Instead of following old rituals, most Roman Catholic Kimaragang farmers bring newly-harvested grain to the church each year to be blessed by the priest. Some invite the priest to their house to bless the paddy seeds. It is also normal practice for a Catholic Kimaragang farmer to invite a catechist to bless newly prepared land. On these occasions, the *bobolian*'s chants are replaced by Christian

prayers and the blood of a sacrificed animal is replaced by the holy water. In addition, the farmer will erect a cross instead of a tonduk in front of his new field. This symbolizes that the new field has been handed over to the God.

Conversely, one assistant pastor said that Protestant farmers may or may not bless the grain. Although they invite their pastor to pray over the new planting site, they do not erect a cross or spray holy water on the ground.

The basic reasons for both traditional and Christian ceremonies are the same—to request divine help and spiritual support to protect the crops and ensure a bountiful harvest. For many Christians, the old Kimaragang rituals amount to worshiping the devil because they deal with spirits and should be abandoned. Others, however, disagree, saving the old ceremonies are important as they were practiced by their forefathers long before the arrival of Christianity. The question of whether to respect or discard these old rituals is clearly a dilemma for some older Kimaragang converts.

But all the young Christian informants who worked in the wet rice fields with their parents after 1990 said that their elders no longer invited bobolian to conduct planting rituals. When their plants are attacked by pests, for example, they now use insecticides and pesticides. They do not use a *linggaman* to harvest their paddy anymore as they say it is more time-consuming than using a sickle. Moreover, newly-introduced rice varieties are shorter than the traditional varieties and require harvesters to bend down to cut the stems. Owners of large paddy fields use harvesting machines for convenience. They plant paddy twice a year for commercial purposes, as compared to their previous practice of planting it only once a year for family usage. Although these young informants expressed knowledge about odu-odu and knew that the bobolian were able to cure certain sicknesses, they knew little else about the paddy rituals of their people.

#### OTHER FACTORS AFFECTING TRADITIONAL PRACTICES

It is undeniable that besides Christianity, there are many other factors that have led to the discontinuation of the old agricultural practices of the Kimaragang. The first is the process of urbanization. Over the years since the formation of Malaysia in 1963, increasing numbers of Kimaragang have migrated from hilly areas to the lowlands of Kota Marudu District, where wet rice and cash crops like coconut, rubber, and oil palm were introduced to them. The District Chief of the Kota Marudu District estimated that 80 percent of the Kimaragang now reside in and around the towns of Tandek and Kota Marudu.

Both the trend towards urbanization and the shift to planting new cash crops and wet rice have inevitably changed the old practices. One Kimaragang farmer who plants wet rice and uses pesticides, fertilizer, and a harvesting machine claims that they have good harvests each year without needing a bobolian to appease the spirits. Also, planting new crops like coconut, rubber, and oil palm has no connection with the paddy spirits. Such factors have caused many younger Kimaragang to break from tradition and cast off their grandparents' agricultural beliefs and practices. Other factors, beyond the scope of this study, like conversion to Islam (affecting a minority of Kimaragang), education, and government policies are also responsible for the erosion of old Kimarangang beliefs and practices.

#### Conclusions

From the above, it can be seen that the traditional shifting cultivation of hill rice among the Kimaragang was imbued with ritual. This was to avert the effects of bad omens and attacks by evil spirits during field preparation and planting and to invite the favor of the *odu-odu* guardians of the paddy field to provide sufficient harvest to feed one's family. In this, the *bobolian* or priestesses were paramount as mediators on behalf of the human world with the spiritual realm.

Over time, the practice of these traditional rituals has declined due to factors such as large-scale conversion to Christianity and the demise of many older *bobolian*. Moreover, recent migration from remote hilly regions in the Districts of Kota Marudu and Pitas to the towns of Kota Marudu and Tandek, together with the introduction of the cultivation of wet rice and cash crops subsidized by the government, and the use of pesticides and fertilizers has rendered traditional rice rituals obsolete.

Concerning factors causing conversion to Christianity, it is clear that the main reason was because most Kimaragang desired protection from the power and attacks of the *rogon* and freedom from the restrictions of *kadaat*. While some felt obliged to continue with some semblance of ritual observances, even justifying them by not employing *bobolian*, most Christians were glad to be free from the cumbersome and costly organization of complex ritual ceremonies. In these aspects, the protection from evil spirits and from the consequences of not following omens, as reasons for conversion to Christianity among the Kimaragang, are similar to those of the Kelabit (BALA 2009, 179) and Tahol Murut (ABD. HAKIM MOHAD 2011).

Becoming Christian for the Kimaragang has not necessarily meant a complete break with their traditional world view and rich culture but rather an abandonment of certain negative old practices such as headhunting. Modern Kimaragang Christians still hold to their cultural values and the belief in the existence of the spiritual realms but now profess faith in the God of the Bible. Traditional cosmological concepts including *kinoroingan* or "God most high" as the *minamangun* or Creator have functioned as redemptive analogies (RICHARDSON 1981) in enabling the Kimaragang to understand the Gospel. There is also cultural continuity in that many Christian Kimaragang practices, such as Protestant pastors praying over paddy fields before planting and Catholic priests blessing swiddens by sprinkling holy water and planting crosses, are evocative of traditional agricultural rites. Respect for rice, the staple crop given by the Creator to the Kimaragang, is shown during church harvest celebrations when families offer the best of their harvests to God. In all this, the cultural past continues into the present as the Kimaragang move forward on into the twenty-first century.

## **INFORMANTS**

Notes: The Malay word *bin* in the middle of the name denotes "son of," while *binti* means "daughter of." All the informants listed below are Kimaragang. Informants 20 and 21 do not wish to be identified by name.

NO.	NAME	AGE	INTERVIEW DATE	VENUE	REMARKS
I	Mojudin bin Gambus	60	11 May 2011	Togudon Village, Tandek, Kota Marudu	Retired paddy planter/ Head of Togudon Village, Sidang Injil Borneo (Sabah Evangelist Church)
2	Jonan bin Gaul	51	13 May 2011	Kota Marudu	Retired paddy planter/ District Chief of Kota Marudu District
3	Mugudar bin Arabit	57	17 June 2011	Gailun Darat Village, Pitas	Village Head cum farmer
4	Majalan bin Sogoi	55	11 May 2011	Togudon Village, Tandek, Kota Marudu	Farmer
5	Banal bin Upas	61	17 June 2011	Mantus Darat Village, Pitas	Farmer/ Ex-pastor
6	Angkarit bin Sulaim	72	16 June 2011	Mandurian Village, Pitas	Village Head cum farmer
7	Marasun bin Mungeak	73	16 June 2011	Bilangau Darat Village, Pitas	Village Head cum farmer
8	Kunoh bin Gansip	59	16 June 2011	Mempakat Darat Village, Pitas	Village Head cum farmer
9	Ja bin Alun	73	17 June 2011	Bilangau Besar Village, Pitas	Hill paddy planter
IO	Rominah binti Samat	72	17 June 2011	Bilangau Besar Village, Pitas	Hill paddy planter
II	Jupinah binti Ja	31	17 June 2011	Bilangau Besar Village, Pitas	Hill paddy planter
12	Faridah Shilla binti Matigap	53	17 June 2011	Bilangau Besar Village, Pitas	Hill paddy planter
13	Rungiah binti Binah	51	17 June 2011	Bilangau Besar Village, Pitas	Hill paddy planter
14	Maisin bin Ja	35	17 June 2011	Bilangau Besar Village, Pitas	Hill paddy planter
15	Linggang bin Itur	71	17 June 2011	Tingkalanon Village, Tandek	Farmer
16	Rumpilin binti Santiru	66	17 June 2011	Tingkalanon Village, Tandek	Retired <i>bobolian</i> (ritual specialist)
17	Suezyiah binti	30	20 June 2011	Morion Village, Tandek	Teacher
18	Jonim Adlin binti Adanghu	31	20 June 2011	Sumbiliyon Village, Kota Marudu	Teacher
19	Doris binti Osoi	44	20 June 2011	Damai Village, Kota Marudu	Teacher
20	JK	53	25 July 2011	Kota Kinabalu	Government servant
	DJ		28 July 2011	Kota Kinabalu	Government servant
22	Lucy binti Jamari	60	26 July 2012	Tandek, Kota Marudu	Catholic Church Catechist

#### Notes

- I. The authors hereby acknowledge the assistance of the Ministry of Education in the form of a grant in 2012 (LRGS/TD/2012/USM-UKM/KT/03). A portion of the grant was used for field trips to the Kota Marudu District of Sabah to gather information on the traditional beliefs among the Kimaragang ethnic group.
- 2. The term "Kadazandusun," officially coined in 1992, is a combination of the words Kadazan and Dusun, devised with the aim of uniting various dialect groups who speak the Kadazan Dusun language, the largest member of the Dusunic family of languages. Although the Kimaragang and other Dusunic peoples are not Kadazandusun, many political parties and cultural associations lump them together with the Kadazandusun (for example, the constitution of the Kadazan Dusun Cultural Association of Sabah lists the Kimaragang as Kadazandusun).

#### REFERENCES

#### ABD. HAKIM MOHAD

Transformasi Budaya: Dampaknya kepada Identiti Masyarakat Murut Tahol [Cultural transformation: Impact on the identity of the Murut Tahol]. PhD dissertation, Universiti Malaysia Sabah.

#### Appell, G. N.

- 1976 The Rungus and Other Dusunic Groups. New Haven, CT: Human Relations Area Files, Inc.
- Social anthopological research among the Rungus Dusun: A talk for the 1986 Sabah Society. Sabah Society Journal 8: 194-209.

## APPELL, George N., and Laura W. R. APPELL

To converse with the gods: The Rungus Bobolizan—spirit medium and 1993 priestess. In The Seen and The Unseen: Shamanism, Mediumship and Possession in Borneo, ed. Robert L. Winzeler, 1-53. Borneo Research Council Monograph Series, volume 2. Virginia: Borneo Research Council, College of William and Mary.

# APPELL, Laura W. R.

Sex role symmetry among the Rungus of Sabah. In Female and Male in Borneo: Contributions and Challenges to Gender Studies, ed. Vinson H. Sutlive, Jr., 1-56. Borneo Research Council Monographs Series, volume 1. Virginia: Borneo Research Council, College of William and Mary.

#### BALA, Poline

2009 An engagement with "Modernity"? Becoming Christian in the Kelabit Highlands of Central Borneo. Borneo Research Bulletin 40: 173-85.

#### BANKER, John, and Elizabeth BANKER

1997 The Kadazan/Dusun Language. In Languages of Sabah: A Survey Report. Pacific Linguistics, Series C, No. 78, Julie K. King and John Wayne King, eds., 287-324. Canberra: Australian National University. (Originally published 1984)

## BOUTIN, Michael E., and Inka PEKANNEN, eds.

Phonological Descriptions of Sabah Languages. Sabah Museum Monograph vol. 4. Kota Kinabalu: Department of Sabah Museum.

#### CHUA, Liana

2009 To know or not to know? Practices of knowledge and ignorance among Bidayuhs in an "impurely" Christian world. Journal of the Royal Anthropological Institute (N.S.) 15: 332-48.

### HARRISSON, Tom

Ethnological notes on the Muruts of Sapulut river, Sabah. Journal of the 1967 Malayan Branch, Royal Asiatic Society 40: 111-29.

#### Hussein, Hanafi

2006 Ritual Padi dan Identiti: Kajian Kes Komuniti Dataran Penampang, Sabah [Rice rituals and identity: A case study of the community of the the Penampang coastal plains, Sabah]. PhD dissertation, University of Malaya.

## KITINGAN, Laurentius L. L., and K. G. DRYNAN

Factors affecting the adoption of new rice varieties by low-income farmers in Tambunan, Sabah, Malaysia: A preliminary investigation. Bulletin of the Society of Agricultural Scientists Sabah 5: 39-46.

### KOEPPING, Elizabeth

2006 Hunting with the head: Borneo villagers negotiating exclusivist religion. Studies in World Christianity 12: 59-78.

## KROEGER, Paul R.

Linguistic relations among Dusunic groups in the Kota Marudu district. 1985 Borneo Research Bulletin 17: 31–46.

Kimaragang phonemics. In BOUTIN and PEKANNEN, eds., 31-45. 1993

#### Low, Kok On

2006 Reading symbols and mythical landscape in the "Tambunan Dusun origin myth" of North Borneo. International Journal of Asia-Pacific Studies 2: 29-50.

## METUSSIN, Omarand, and Bantong ANTARAN

2002 Socio-economic changes and cultural adaptation of rural communities in Brunei Darussalam: A case study of Dusun and Iban communities. In Cultural Adaptation in Borneo, Sabah Museum Monograph volume 7, 91–109. Kota Kinabalu: Department of Sabah Museum.

## North Borneo Central Archives

Population Estimates by Administrative District and Ethnic Group, Sabah, 2010, file no. 315, 4, table 3.18. Department of Statistics Malaysia (Sabah Branch).

### PORODONG, Paul

- 2000 Dynamics of Gender Relations in Forest-based Communities in Sabah: Interaction with Changes in Belief Systems, Property, Forest Use and Livelihood. Paper presented at Workshop on Gender Relations in Forest Communities, 16–17 February, Asian Institute of Technology, Bangkok.
- Bobolizan, forests and gender relations in Sabah, Malaysia. Special issue: 200I Gender relations in forest societies. Gender, Technology and Development Journal 5: 63-90.

#### PUGH-KITINGAN, Jacqueline

Kadazan Dusun. Kuala Lumpur: Institut Terjemahan and Buku Malaysia.

PUGH-KITINGAN, Jacqueline, and Judeth JOHN BAPTIST

2009 Music for cleansing the universe: Drumming and gong ensemble music in the Mamahui Pogun ceremonies of the Lotud Dusun of Tuaran, Sabah, Malaysia. *Borneo Research Bulletin* 40: 249–76.

PUGH-KITINGAN, Jacqueline, Hanafi Hussein, and Judeth John Baptist

2011 Music in the *Monogit* of the Kadazan of Penampang, Sabah, Malaysia. *Muzika Jurnal* 7: 122–54.

RICHARDSON, Don

1981 Eternity in Their Hearts. Ventura, California: Regal Books.

Rousseau, Jerome

1998 Kayan Religion: Ritual Life and Religious Reform in Central Borneo. Leiden: KITLV Press.

SABAH MUSEUM

1993 Rice Power and Its Magic: A Brief Introduction to the Culture of Rice in Sabah. Kota Kinabalu: Department of Sabah Museum.

TUIE, Meechang

1995 Masyarakat Lun Bawang, Sarawak: Satu Pengenalan [The Lun Bawang society of Sarawak: An introduction]. Kuching: Dewan Bahasa dan Pustaka.