SCHIZOSTACHYUM LUMAMPAO (BYUYU): ITS DIVERSE ETHNO-BOTANICAL USES BY LUBUAGAN SUB TRIBE OF KALINGA IN NORTH LUZON PHILIPPINES

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Abstract

Bamboos are widely used by indigenous people in the tropical regions for different purposes. *Schizostachyum lumampao* is one of the bamboo species utilized by different ethnic groups in the Philippines. This study determined how the Lubuagan sub-tribe of Kalinga of the Cordillera Region Northern Philippines used *Schizostachyum lumampao* in their daily life. Selected key informants from the different communities of Lubuagan municipality were interviewed about the ethno-botanical uses of this species. These uses were verified through field observations and photo-documentations. *Schizostachyum lumampao* was found to be an integral part of the Lubuagan sub-tribe life. This bamboo species is a versatile source of materials for surgical tools, agricultural implements, shelter constructions, socio-cultural activities and indigenous musical instruments. These integral ethnobotanical uses of *S. lumampao* show the importance of bamboo plants to indigenous people's life that need to be conserved.

Keywords: Ethno-botanical uses, indigenous people, Lubuagan sub-tribe

Introduction

Liese (1987) claimed that bamboo is one of the economically important non-wood forest and agricultural products in the world. It is estimated that there are about 1200 species scattered in about 18 million hectares in different ecosystems in the continents of Asia, Africa and America (Ohrnberger, 1999). In most parts of tropical countries, rural poor depend completely on bamboo; almost one billion rural people live in bamboo houses. This is so because bamboo can be easily be grown and harvested (http://www2.bioversityinternational.org/publications).

Bamboo grows almost everywhere in tropical countries like the Philippines, particularly in places close to water such as on riverbanks and by streams. Because it is so easily found and so easily replaced, it is treated with an almost casual disregard and valued only lightly (Locsin; 2000). It is indeed a relatively cheap raw material. It is unfairly known as 'poor man's timber'. Of the 9 bamboo species of the genus *Schizostachyum* that thrive in Southeast Asia, *S. lumampao* is native in the Philippines (Rao et al.; 1989).

The favorable Cordillera climate is suitable for bamboo growth. Bamboos can be found at the low lying warm areas up to the coldest highest peak of Mount Pulag (Merill and Merrit, 1910). In fact, Tangan and Costales (1991) identified *Schizostachyum lumampao* as one of the common species in the region.

Bamboo has 1,500 documented traditional uses that include materials for complicated construction to most basic need that is food (http://blog.agriculture.ph/bamboo). As one of indigenous tribes living in the Cordillera Region of North Luzon Philippines, the Lubuagan sub tribe of Kalinga has their own unique indigenous socio-cultural practices, livelihood,

music and arts. Besides, the people of Lubuagan are known for their creativity in making of various indigenous implements.

This paper explores the ethno-botanical uses of *Schizostachyum lummpao* (byuyu) by Lubuagan sub-tribe. These ethno-botanical uses reported in this paper would serve as the bases for conserving this bamboo species for the next generation.

Materials and methods

The study was conducted in the municipality of Lubuagan, Kalinga Province. Lubuagan is composed of nine barangays with a total land area of 234.20 km² (90.4 sq mi). These barangays composing the Lubuagan sub-tribe include Dangoy, Mabilong, Mabongtot, Poblacion, Tanglag, Lower Uma, Upper Uma, Antonio Canao and Uma del Norte.

A Global Positioning System (76CSX Garmin) receiver was used to determine the elevation and coordinates of the sites. The sites are located within the altitudinal range of 370 to 1246 meters above sea level (masl) with coordinates 17^{0} 22 02.0 N, 121^{0} 12 32.4 E / 17^{0} 21 03.6 N, 121^{0} 09 40.5 E (see Figure 1).

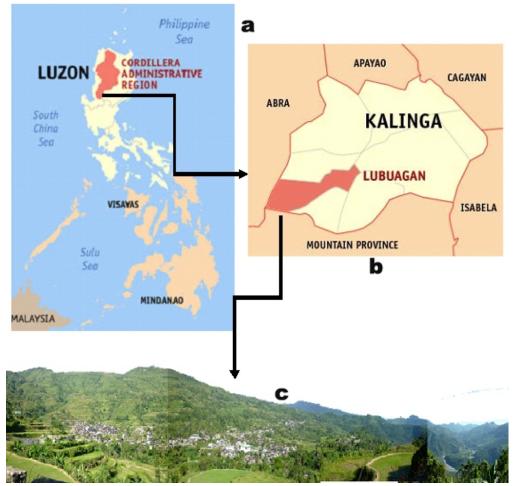


Figure 1. Locale of the study.

Map of the Philippines showing the Cordillera Administrative Region (a), map of Kalinga Province showing the municipality of Lubuagan (b), a photographic view of the Lubuagan town proper (c)

The descriptive method and photo-documentation were used in this study. Key informants were interviewed on the ethno -botanical uses of byuyu. These were community elders, bamboo growers, indigenous basket weavers, farmers, "imong" owners and indigenous healers. A digital camera (Panasonic; LUMIX 12 megapixels) was used to photo-document the uses of bamboo.

The ethno-botanical uses were classified into farming materials, musical instruments cooking/house implements, housing materials, cultural, weaving, and surgical implements.

Results and discussions

Table 1 presents the ethno-botanical uses of *Schizostachyum lumampao* (byuyu) by the Lubuagan sub-tribe of Kalinga. It shows that there are 10 farming implements made from byuyu, 7 musical instruments, 5 cooking materials, 4 housing materials, 2 cultural practices, and 1 each for weaving and surgical implements.

Table 1. The ethno botanical uses of byuyu (*Schizostachyum lumampao*) by the Lubuagan sub-tribe as; (a) farming materials, (b) musical instruments, (c) cooking/house implements, (d) housing materials, (e) trapping and fishing implements, (f) cultural, (g) weaving, and (h) surgical tools

Names		Description	Uses
(a) Farming	Materials		
	ggakit	Bamboo poles/stand installed along the rice paddies	For hanging of newly harvested rice during rainy season for easy drying.
	obod	Thin and flexible bamboo strips	Used to bundle vegetables and other farm products
3. Byukyut chi maluk		A woven cage	To contain chicken during transport.
	nata	bamboo pole	This is used by men to balance and carry rice on their shoulder
	gaben	Strips suspended under or outside walls of a traditional house.	For chickens' resting place
	gungkung	A suspended woven funnel-shaped bamboo.	Nest for chickens under or outside a traditional house
7. Sok	cche	A long bamboo pole	To pick big fruits like papaya, jackfruit, pomelo, etc.
8. Suk	cit	A long bamboo pole with split tip	For picking small fruits or to reach out for something
9. Tuc	choy	A bamboo tube installed to a spring water source	It provides good water convergence and better access
10. Tut	uytuy	A small bamboo tube	Storage for wild berries
(b) Musical	instruments		
1.Kambyu-ut		A bamboo cane with two pliable splits at one end.	This is played as an accompanying music for salip or courtship dance during festive occasions.
2. Patang-og		A mouth flute made from a bamboo cane	It is played as accompanying music for villagers while on their way to a festivity or another village.
3. Saggaypu		A wind bamboo musical instrument in a set of 4-6 pieces.	It is played alternately with gongs during community occasions.
4. Siggisig		A flute made of bamboo cane	Traditionally played as ornamentation to back up bamboo ensemble for clear rhythm.
5. Tongali		A nose flute made of long and small bamboo tube.	This "love bamboo is traditionally played at night by village flutists to reminisce their romantic pasts.
6. Tong-nga-tong		A set of 4 to 6 of bamboo tubes in ascending lengths with opened upper end. This produces syncopated pentatonic tone when the closed base is stamped on the ground	It is played to announce and invite the community to join in the celebration of gabbok or the birth of the firstborn.

7. Ulimong	A flute made from one bamboo cane	Traditionally played at night to recall the pleasant experiences of the past. The tribe believes that this can be used to communicate with good spirits.
(c) House implements		
1.Acha-ed	A well dried bamboo tube split into two. A slot is made at the center of the other half then covered well with a soft kindler.	For starting fire by rubbing vigorously the slot against the side-edge of the other half until it burns by friction.
2. Lawok	A bamboo cup	For serving wine during festive occasions.
3. Peyaloy	A long bamboo table at waistline level.	Dining table during community celebrations.
4. Pilalit	Long tube made from fresh byuyu	To cook rice directly over a flame during a birth celebration
5. Tilibyayu	Fresh bamboo tube	For cooking meat by in the absence of a cooking pot.
(d)		
1.Bulilaw	A woven bamboo made of woven split bamboo	Wall of a commoner's house.
2. Byawi	A shed that can cover a wide space	To provide shade during community occasions.
3. Sigey	Bamboo farm hut	It is a second house of farmers in the farm for family use to work and rest
4. Teyob	Made of split poles fitted oppositely	For roofing
(e)		
Ilug/Sallut	Fresh bamboo pliable strips	For trapping wild chicken or birds
Pakatan	An attachment pole	Attachments pole for catching fish small bats and cicadas
(f)		
1. Sagang chi chekot	A bamboo stand mounted with glutinous rice cake.	Traditional symbol of thanksgiving after rice planting.
2. Pesuk	A bamboo bow and arrow	Symbolize the belief that a child has a very fragile and sensitive personality that can easily be disturbed or hurt by bad spirits
(g)		
1.Gegellayan	A bamboo pole	Used to set and hold a weaving set
(h)		
1.Ilap	A sharpen bamboo that has a razor like blade.	For cutting umbilical cord of a new born baby, castration of livestock and circumcision

Table 1a presents the uses of *Schizostachyum lumampao* as farming materials. It shows that byuyu canes are utilized as poles (gimata) in carrying rice seedlings during planting season and harvests (see Fig.2a & i). Byuyu is probably preferred for gimata due to its lightness, smoothness and convenient culm size for easy transport.

It is further shown that a drying stand or anggakit is made from byuyu poles (Fig. 2c) Anggakit stand is installed along the rice paddies during the rainy harvest season for easy drying of newly harvested palay. Native bamboo poles are used as sturdy posts while byuyu species are used as lateral hangers. The lengthy and straight poles of byuyu is a good trellis (Fig. 2d) for climbing plants and for picking fruits of tall plants (sokche/sukit) as shown in Figures 3f & g. Besides, pliable byuyu strips are also used to bind (takod) vegetable products (Fig. 2h) and woven into containing baskets (Fig. 2j). Likewise, these strips are woven into cages or kagungkong/kagaban for containing and transporting domestic animals (see Figure 3).



Figure 2. Farming uses of byuyu; gimata (a & i), bamboo poles for shooing aquatic animals in rice fields (b), anggakit (c), byaseg (e), sukit (f & g), takod (h), mini-basket (j)



Figure 3. Byuyu cages. kagungkong (a & c), kagaben (b), byuknot (d,e&f)

The Lubuagan sub-tribe is also known for their byuyu instruments as shown in Table 1b. Maceda (1998) reported that the Philippine ethnic groups make instruments from bamboo. These included aero phones or wind instruments; the chordophones or stringed instruments and the idiophones or percussion instruments. In the Cordillera region of North Luzon, Philippines, the Kalinga tribe had the most number of bamboo instruments. These are tongatong (Fig.4a) that produces a booming hollow sound bamboo when pounded on a log or a wooden floor, bamboo buzzers such as balingbing (Fig. 4b), bungkaka or batiwtiw and flutes (Fig.4d-i). Philippine Consortium on Agriculture and Resources Research and Development (1984) reported that bamboo musical instruments were also observed in Pangasinan in 1960.

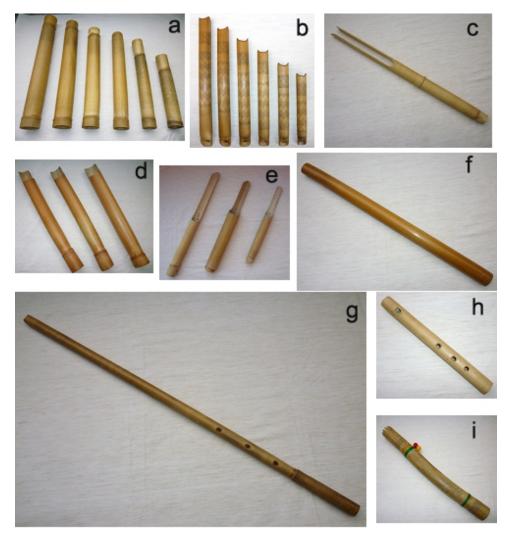


Figure 4. Musical instruments made from byuyu; tungatong (a) saggaypo (b), balingbing (c),kambu-ot (d) patang-ug (e, tubungan(f), tungali (g & h) sigisig (i)

Byuyu is used for cooking (Table 1c). Acha-ed (see Fig.5a) from dry byuyu is used for starting fire while fresh byuyu tubes (Figures 5b&c) are used for cooking rice and meats. Byuyu is the best container to cook probably due to its right culm wall thickness. Interestingly, byuyu strips are used to construct long tables (Fig.5d) for dining while smaller tubes are used as serving cups (Fig. 5e&f) of native wine during community affairs like peace pact celebrations. The lightness and tube diameter of about 3.0-5.5cm make a good cup for easy serving.



Figure 5. The uses of byuyu as cooking and serving implements; acha-ed (a), pilalit and tilibyayu (b & c), peyaloy (d), lawok (e & f)

Aside from cooking materials, dried byuyu poles are used as fuel for cooking, animal dressing and lye preparations (see Figure 7). These fuels easily burnt producing yellowish blue flame.



Figure 6. Use of byuyu as fuel, for burning and cleaning of butchered pig (a & b), cooking rice (c), preparation ash lye from native shells 9 d, e & f)

Schizostachyum lumampao is one of the indigenous materials for house construction by the Lubuagan sub-tribe (Table 1d). It shows that byuyu can provide the necessary materials to construct a farm hut sigey (Figure 7a). The poles can be split and arranged oppositely to form a roof or teyob (Figure 7b), as temporary support for tarps that provide a temporary shade (byawi) during community affair as seen in Figure 7c. A woven byuyu at can be used as wall, windows or doors (see Fig. 7d).



Figure 7. Byuyu as house construction materials; sigey (a), teyob (b), byawi (c) and bulilaw (d)

Locsin (2000) stated that aside from byuyu, other bamboo species such as *Bambusa* blumeana var. and *Dendrocalamus merrillianus* were also used as construction materials and farming instruments while *Bambusa cornuta* for households' uses.



Figure 8. The uses of byuyu for fishing and trapping, fish trap (a & b), handle of fish net (c), trapping of small mammals and birds (d & e), handle for bird mesh net (f)

The Lubuagan sub-tribe used byuyu for their hunting and fishing wildlife. The pliability of byuyu strips make it ideal for making traps for wild games and fishes (Table1e). The poles are also used as attachments for fish and bird nets as shown in Figure 8.

In terms of ceremonial ritual, byuyu split cane is used to contain sticky rice being offered as thanksgiving after rice planting (Table 1f). This split cane is placed directly in newly transplanted rice terrace as shown in Figure 9. Byuyu is used for its culm lightness and convenient size to fit-hold the rice cake.

It is also used as pesuk a bamboo bow and arrow which is used to symbolize the popular belief that a child has a very fragile and sensitive personality that can easily be disturbed or hurt by bad spirits. This is demonstrated in the shooting with pesuk (arrow) piercing the banana blossom hanged in the pakalaweg during the celebration. A bamboo due to its versatility can be used in many ways associated with the rural lifestyles in Malaysia as materials for house constructions, musical instruments, traps and numerous home utility items (Wong;1989)

Rao et al. (1989) reported that in Peninsular Malaysia, species of *Schizostachyum* are used for construction materials, wares, musical instruments, fishing rods, thatching, water containers, mats and baskets, handicrafts, props for banana plants, screens, container for cooking glutinous rice as well as edible shoots.



Figure 9. Sagang chi chekot

Lubuagan sub-tribe is known for their weaving skills in the region. Byuy pole is used to hold a weaving set (see Fig. 10). The smoothness and lightness of the pole probably make this a weaver's choice among bamboo species.



Figure 10. Gegellayan, (weaving set)

Ilap (Fig.11) is razor knife made out of byuyu. This is used in cutting the umbilical cord of new born babies, circumcision, castrating animals, and the preparation of the animal entrails for cooking native delicacies. This species is preferred because when the culm is cut, it has sharp ends that make precise cutting.



Figure 11. Use of byuyu as cutting implements (ilap), for cutting of umbilical cord (a &b), for pig castration (c), for cleaning animal entails (d & e)

Conclusions

Results of this study show that *Schizostachyum lumampao* (byuyu) is an integral part of the socio-econimic and cultural life of Lubuagan sub-tribe of Kalinga. This reveals the versatility of this species that needs conservation efforts for sustainable development of the area.

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