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RESEARCH NOTE

Exploratory Market Survey of *Tuba* in Tacloban City

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This research note explores the market condition of *tuba* in Tacloban City in the Philippines. It examined the market viability of *tuba* as a source of income for small retailers as well as coconut farmers. To determine whether there is any commercial value to *tuba*, and to what extent, a survey was made on the type of *tuba* sold, the price it is sold for, the quantity sold, the age of *tuba*, and the source of *tuba*. This report provides basic information as to the commercial value of *tuba* to small store retailers in the city.

Keywords: Market research, market survey, beverages, liquor

Tuba, a popular drink in the Leyte and Samar provinces of the Philippines, is a wine fermented from the sap of the floral branch of a coconut tree. As a commodity, there exists limited information on the present market opportunity of *tuba*, it being a part of the shadow economy in the Philippines. This study explores the market condition of *tuba*, focusing on Tacloban, a city in Leyte Island in the Philippines, and to examine the market viability of *tuba* as a source of income for small retailers as well as coconut farmers. One question is raised: Is there any commercial value to *tuba* and to what extent? A survey of the type of *tuba* sold, the price, quantity sold, age of *tuba*, and source of *tuba* was conducted to find answers to this question.

HISTORICAL PERSPECTIVE

Studies and published materials have made reference to *tuba* as a traditional alcoholic drink among Filipinos. Scott (1994), in his study of early Philippine history, described *tuba* as being made from coconut palm which "was considered better and therefore a profitable item of trade" (pp. 50-51). In 1914, Manuel Artigas y Cuerva made reference to *tuba* drinking in a historical account of Leyte. Artigas described that the Visayans or the people of Leyte were fond of parties and getting drunk because they consumed too much *tuba* (Borrinaga & Kobak, 2006). In another account of history, Ignacio F. Alcina wrote in 1668 of his awe for the farmers who climbed the coconut trees to gather the coconut sap for *tuba*:

> They (the farmers) go up and down at times with bamboos full of *tuba* and others with a cluster of fruit with such ease that it causes admiration by those who see it. Our heads spin at this sight, but they keep their heads and, without any danger, go up and down in this manner. (Kobak & Gutierrez, 2002, pp. 339-340).

A recent study by Dignos (2008) dwelt on the process of *tuba* making and testing the sensory

taste of *tuba* by selected panels. This study significantly found that the various factors used in *tuba* making did not affect the acceptability of the different types of *tuba* tasted. The varying taste preferences of the panel members (or drinkers of *tuba*) may have greater influence in the acceptability of the wine.

ECONOMIC VALUE OF *TUBA*

Drinking *tuba* is a more economical option to imbibing the more expensive beer and hard liquor like gin, rum, or whisky. The familiar *sari-sari* stores (variety retail store) in many towns in Leyte sell *tuba* by the one-liter bottle or one-gallon jug (all measures in metric). Normally, a buyer brings his or her own empty container or leaves a deposit for the use of a bottle or gallon jug to be returned at a later time. The store owner then fills an empty bottle by pouring *tuba* from a glass jug or clay vat known as *tadjao*.

Does *tuba* have economic value? Ostensibly, coconut farmers depend on *tuba* for supplemental income to their main activity of selling copra or sun-dried coconuts. The gathering of coconut sap for *tuba* maximizes the time of the coconut farmer by allowing him to make use of downtime while coconuts are in the process of being sun-dried into copra. While the sap gatherer is doing his rounds, the farmer is able to clean coconut trees and cut down dead fronds and other debris in the trees. Such tree maintenance and preventive care provides a productive routine for coconut farmers to tend to their trees.

By drawing the coconut sap from the floral branch, or the tender, of the coconut tree, the sap gatherer does not entirely deprive the tree of fruits. Some coconuts remain on the tree and the tree will continuously bear more fruit. To a certain extent, some farmers who could afford it, segregate some coconut trees devoted exclusively for coconut sap gathering. This alternative provides quality control for *tuba* and for producing better coconuts.

There are other popular wines in the Philippines such as *tapoy* or rice wine produced in the Mountain Provinces, *lambanong* which is a *tuba*-based wine made by distillation and produced in Southern Luzon Provinces such as Quezon and Laguna; and *basi* which is made from fermenting sugar cane juice and is popular in the Ilocos Provinces. *Tuba* is a herbal drink fermented naturally and without chemicals added. The only element added is a bark known as *barok* which has potential bacteria-controlling properties and colorizes the *tuba* into a red wine. The *barok* gives the distinct bitter taste of *tuba*. There are two sources of *barok.* One is from Indonesia which is of a high grade quality and the other is from a mangrove bark found in Bohol Island. As a health drink, there have been no recorded fatalities (i.e., from food poisoning) from drinking *tuba*. However, it may be added that irresponsible drinking of *tuba* has been the cause of domestic violence, injuries, and serious crimes committed in Leyte.

METHODOLOGY

This survey was conducted from late October to early November 2008 for two weeks and consisted of using a brief open-ended questionnaire to identify the price of *tuba* in Tacloban City. The open-ended questionnaire was designed to elicit detailed information directly from store owners without restricting them from selecting predetermined entries. The questionnaire was administered randomly to owners of *sari-sari* stores selling *tuba*. While the focus was on small-scale retailers, one *tuba* wholesale dealer provided information for the survey. The city of Tacloban was divided into four sectors – San Jose, Utap, Anibong to Nulatula, and within V & G subdivision. One hundred and one questionnaires were administered by interviewers to retailer store owners and sellers, all of whom cooperated in the survey.

FINDINGS

Source of Tuba

The predominant source of *tuba* in Tacloban City is Barugo, which is a coastal town in northern Leyte, facing the Carigara Bay, and is about 50 kilometers northwest of Tacloban City. Barugo by itself represented 40% of the suppliers to the *tuba* retailers in the city. The other major sources are Palo, Carigara, and Dulag, all in Leyte Island; and Basey in Western Samar. Combining Barugo and Carigara, which are contiguous northern coastal towns, showed that they supply 48% of *tuba* in Tacloban. Noticeably, most of these suppliers are located close to Tacloban, mainly because of the cost savings in transportation. Table 1 summarizes the suppliers of *tuba* stores in Tacloban.

Aging of Bahal *and* Bahalina

The quality of *tuba* depends on the length of fermentation. The longer the *tuba* is aged in a jug or bottle, the better its quality (taste, smoothness, clarity, acidity, and, of course, alcohol strength). There are two common types of *tuba* in the market: *bahal* and *bahalina*. *Bahal*, the young and less mature *tuba*, is fermented between one to two months. The most surprising revelation of this study is that, often, in the suppliers' rush to sell to the market, *bahal* that has been fermented only for three weeks or less is already delivered to the stores. Meanwhile, store owners who reported to have *bahalina* in stock indicate that the *bahalina* is aged for one year. *Bahalina* is far superior in quality because of its clarity and refined taste, and, definitely, higher alcohol content.

Table 1
Source of Tuba *in Tacloban, by Municipality*

Location	No. of Respondents	Percentage (%)
Barugo	41	39.80
Palo	17	16.50
Carigara	8	7.80
Basey, Western Samar	6	5.80
Sta. Fe	5	4.90
Dulag	5	4.90
San Miguel	4	3.90
Jaro	4	3.90
Javier	3	2.90
Tanuauan	3	2.90
Tunga	2	1.90
Sta. Rita, Western Samar	2	1.90
Pastrana	1	1.00
Tacloban (Pawing & Sagkahan)	1	1.00
Leyte	1	1.00
No Response	2	1.90
TOTAL *	**103**	**100.00**

*Exceeds 101 stores due to multiple listings of sources of *tuba*. The multiple listings include Dulag/Barugo/Pastrana, Dulag/Jaro/Tanuaun, Barugo/Sta. Fe, and Carigara/Palo.

The 101 store owners in Tacloban where asked "What is the approximate age of the *tuba* you sell?" (in terms of the number of months of fermenting). To get comparable figures, the information reported by store owners in months or years was converted into weeks. Ninety-five store owners reported the age of the *bahal* they are selling. The median of the age of the *bahal* sold is four weeks, while the range is from one week to 28 weeks. The data reveals that many stores (31%) sell *tuba* that has been aged for one month, while 15% of the stores sell *tuba* that has been aged from one month to two months. Figure 1 below shows the age of *bahal* in three-week intervals. It shows that the fermentation process clusters around one to 12 weeks.

There were 28 store owners who claimed to sell *bahalina*; however, three of these stores could not give the age of their *bahalina* and six stores reported no sale of *bahalina*. Most of the stores that sell *bahalina* claim that their *tuba* has been aged for one year or more. For the 25 store owners reporting the age of the *bahalina* they sell, the median age of the *bahalina* is 40 weeks and the range is four weeks to 72 weeks. Figure 2 shows that when the data is collapsed into four-week intervals, the predominant age of *bahalina* is between 45 to 48 weeks.

Price of Bahal *and* Bahalina

The price of *bahal* ranged from a low of Php 15 per liter to a high of Php 50 per liter. However, majority of the stores (52%) sell *bahal* at Php 20 per liter, while 20% sell at Php 18. The mode was found to be Php 20 per liter. When sold by the gallon, the price of *bahal* ranges from Php 60 to Php 200 per gallon with 48% of the stores selling *bahal* at Php 80 per gallon and about 20% of the stores selling *bahal* at Php 70 per gallon. The

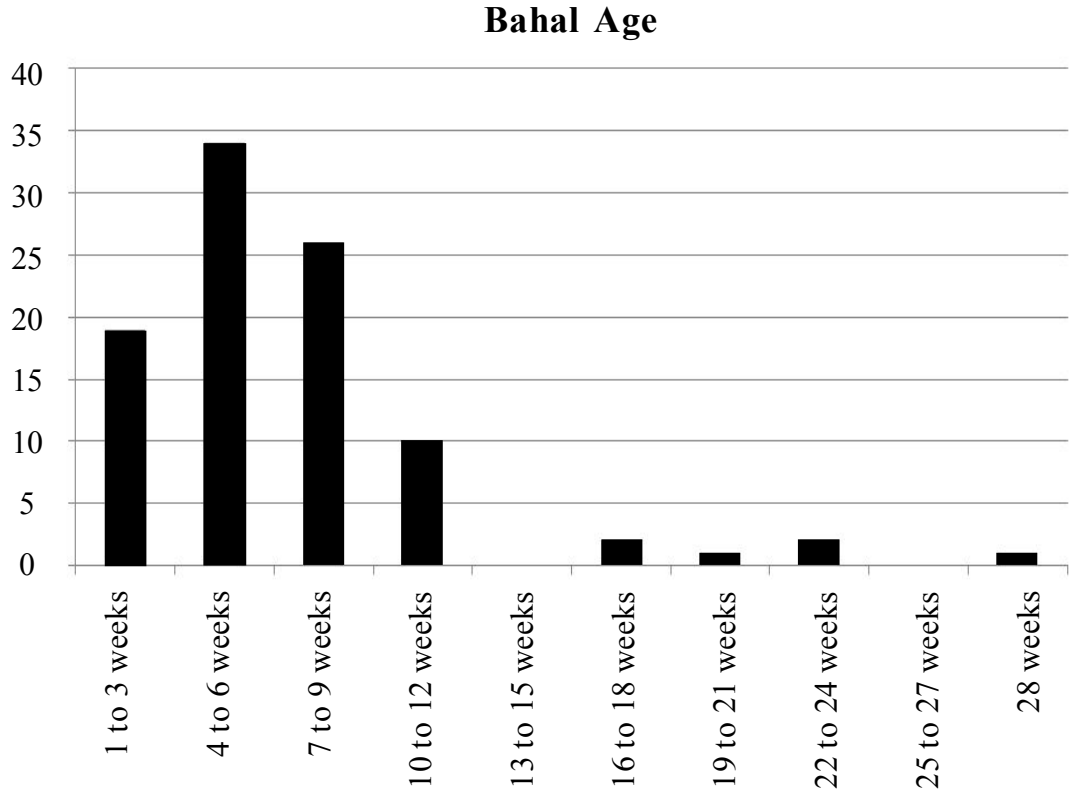

Figure 1. Bahal *age (in three-week intervals)*.

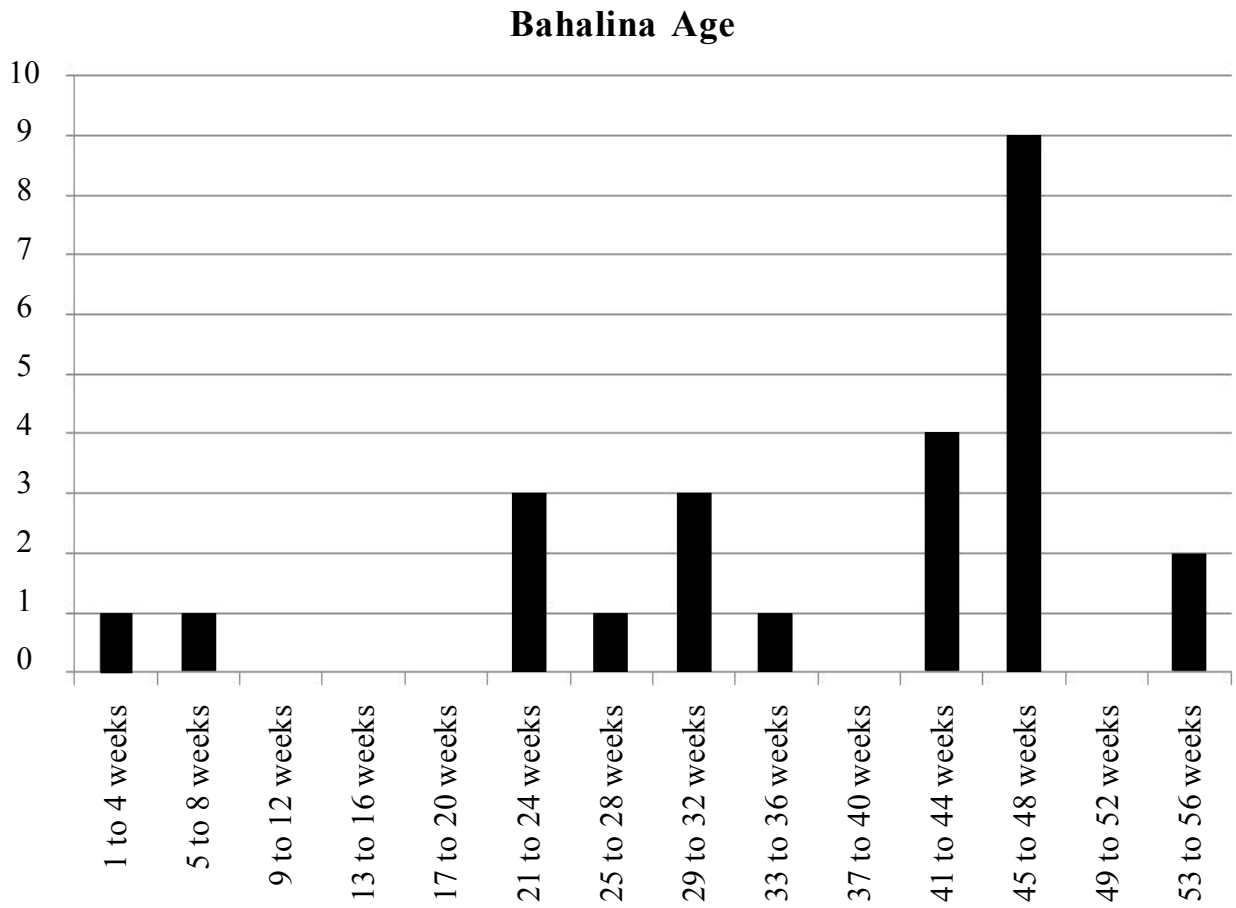

Figure 1. Bahalina *age (in four-week intervals)*.

Table 2
Reported Price of Bahal*, Per Liter and Per Gallon (In Php)*

Price per liter	No. of Stores	Price per gallon	No. of Stores
0 to 10	0	0 to 50	0
11 to 20	67	51 to 100	92
21 to 30	22	101 to 150	7
31 to 40	1	151 to 200	1
41 to 50	2	-	-
No Response	9	No Response	1
Total	**101**	**Total**	**101**

Note: Php 47.60/USD.

mode was found to be Php 80 per gallon. Table 2 summarizes these results.

In contrast, *bahalina*, which is of a higher quality, sells at between Php 30 and Php 40 per liter in most stores. The price range of *bahalina* is from a low of Php 25 to a high of Php 75 per liter. *Bahalina's* highest price per liter is Php 75 as opposed to *bahal's* highest price, which is Php 50. In gallons, *bahalina* is sold at between Php 90 to Php 400, with about 32% of the stores selling

Table 3
Reported Price of Bahalina*, Per Liter and Per Gallon (In Php)*

Price per liter	No. of Stores	Price per gallon	No. of Stores
0 to 20	0	0 to 50	0
21 to 40	22	51 to 100	6
41 to 60	3	101 to 150	15
61 to 80	1	151 to 200	6
-	-	Above 200	1
No Response	2	No Response	-
Total	**28**	**Total**	**28**

Note: Php 47.60/USD.

bahalina at Php 120 per gallon. The mode price for *bahalina* per liter is Php 32.50. The mode price per gallon is Php 120 per gallon. Table 3 summarizes these results.

The 101 stores that sell *bahal* sell an average of 1,911 liters a week with an equivalent value of Php 39,100 (per store average: 18.92 liters, Php 387.13). The same stores sell an average of 878 gallons of *bahal* with an equivalent value of Php 72,718 (per store average: 8.69 gallons, Php 719.98). Meanwhile, the 28 stores that sell *bahalina* sell an average of 630 liters a week with an equivalent value of Php 22,154 (per store average: 22.50 liters, Php 791.21). The same stores sell an average of 283 gallons of *bahalina* in a week with an equivalent a value of Php 63,410 (per store average: 10.11 gallons, Php 2,264.64). The sale of *bahal* exceeded that of *bahalina* by 23%. In other words, consumers prefer *bahal*, which is the more affordable and coarser type of *tuba*.

Extrapolating from the data in Tables 2 and 3, the amount earned by the 101 stores selling *bahal* showed weekly revenues of Php 111, 818. For the stores that sold *bahalina*, the amount earned was Php 85,564. Combining the two types of *tuba*, the stores in the study earned Php 197,382 in one week or close to Php 789,528 in one month. At face value, the earnings appear high; however, distributing these earnings among the 101 stores, each store derives only Php 7,817.11 a month. These are gross estimates which can be verified only through an examination of sales receipts (non-existent, though) or possible re-interview of the respondents. A future study can include sales logs (quantity of *tuba* sold and amount earned) on a daily basis for one week for purposes of research only.

Based on the reported price and quantity sold by the retail stores in Tacloban, one is able to get a picture of a potentially lucrative activity that is not highly labor-intensive and currently requires minimal resources and production costs. No mechanization is involved at all. No chemical additives are used including sulfites to sterilize bottles and containers. No refrigeration is required in storing *tuba* while in the retail store. Time is the main ingredient in making *tuba*, as in any wine making process.

Therefore, the sale of *tuba* (both *bahal* and *bahalina*) is not an economic activity to be taken lightly. There is commercial value to it, and definitely, money to be made. The store that maintains a good reputation for selling higher quality *tuba* can expect the loyalty of its patrons, thereby sustaining a steady income stream.

OBSERVATIONS

Store owners had some information about the source of their *tuba* and most claimed to have only

one type of *tuba*, which is *bahal*. The store owners were asked to identify the place or locality where their *tuba* came from, or where their suppliers acquired their *tuba*. Knowing where the suppliers are from, whether it is Palo, Burauen, or Tunga, for example, would help identify the places known to produce quality *tuba* that is most in demand in Tacloban. It would also provide an appreciation of the practices used in making *tuba* and perhaps learn about the soil quality, water supply, weather, and the species of coconut that is used to extract the coconut sap. Good *tuba* can, of course, be attributed to the skills of the coconut sap gatherers and the knowledge and passion of those who actually ferment the *tuba*.

The respondents were unable to identify precisely the type and age of the *tuba* being sold in Tacloban. The store owners reported that they receive the *tuba* from suppliers without knowing its exact age, and often attributed the source of the *tuba* to the town of the supplier.

There is no disclosure as to what type of *tuba* is being sold to consumers. Absent labeling and any formal classification of the *tuba* in the market, "buyers beware" is the dictum. However, buyers not willing to take the word of the store owner have a choice of tasting the *tuba* before ordering a gallon. In most instances, the trust given by the buyers to the store owners is sufficient guarantee that the *tuba* they are purchasing is of good quality (to what degree is unknown). There is no consistency and predictability in the quality since it cannot be guaranteed that the next *tuba* bought from the same store would taste the same.

Tuba drinkers traditionally mix *tuba* with softdrinks, either Coke or Pepsi. Apparently, Coke is used to mask the poor quality of *tuba*, which has a tart or bitter taste to it. The extra cost of at least two 1.5-liter bottles of Coke is now added to the purchase of *tuba*. Consumers are short-changing themselves by buying inferior or poor quality *tuba*; thus, one pays cheap for cheap *tuba*. *Tuba* is also drunk with a variety of appetizers (*pulutan* in Tagalog or *sumsuman* in Waray-Waray, the dialect used in the Eastern Visayan provinces). Consumers try to avoid the three tastes of bad *tuba*: tart, bitter, and sour (in Waray-Waray vernacular, *maaplod*, *mapait*, and *maaslom*). The credo for bad *bahal* is "*bahala na*" (whatever will be, will be). With Coke and appetizers, good conversations and "drinking" songs, one can forget about the bad taste. The alcohol in *tuba* works in mysterious ways.

There is also no transparency in the quality of *tuba* being sold as buyers don't know exactly the following: (1) how long was the fermentation process of the *tuba*; (2) how sanitary or hygienic was the fermentation process; and (3) was any adulteration made on the *tuba*. One relies on the honesty and trustworthiness of store owners that the *tuba* being bought is suitable for drinking. Coke alone cannot cover up the bad taste of *tuba* in the mouth and all the other problems associated with it.

FURTHER STUDIES

This survey is exploratory in nature. Its goal is to gather information on marketability of *tuba*. A follow-up study to collect samples of *tuba* to determine quality, taste, and other characteristics (e.g., ph level, acidity, clarity, alcohol level) can be conducted. A more scientific type of research can be conducted by the Tuba Research Center recently authorized by the Eastern Visayas State University in Tacloban City. The center is designed to undertake basic research on *tuba*, provide assistance and training to those who are engaged in *tuba*-making, and serve as a repository of information on everything about *tuba*.

It is essential that support be given to the operation of the Tuba Research Center. This can be done by seeking grants and assistance from Philippine coconut agencies and trust funds, including from private foundations. A recent development came in a report that the Philippine Coconut Authority approved a Php 5.5 million foreign grant to study *tuba*-making. The grant was provided by Japan as development assistance to the country. It was reported that this grant will involve the use of special yeast created by the

Champagne Institute in France. Unfortunately, this grant will be based in Quezon City rather than where the source of materials for *tuba*-making is. The *tuba* will be made into a new wine called *nilak*.

This study was not intended to examine *tuba* as a revenue source in terms of taxes or fees for the city government. The potential source for taxes is apparent but the mechanism for considering that requires a more rigorous research. Obviously, the small stores in Tacloban now pay annual fees to operate as a retail store. Such fees are normal revenue sources for the city government.

CONCLUSION

Keeping *tuba* in the shadow economy will never raise the standards for *tuba*-making in Leyte. Fortunately, there are trends to making things better as evidenced by *tuba* consumers looking for the high quality *bahalina* during the Oktubafest or Tuba Festival held in October 2008 in Leyte. The higher-priced but quality *bahalina* was immediately sold out. *Tuba* in fancy bottles with a *banig* mat (hand-woven mat from dried leaves) and colorful label is now being sold for domestic consumption as well as gift items for visitors and *balikbayans* (returning Filipino residents). One *tuba* bottle (750 ml) with the label Barcelo Wines of Barugo is sold for Php 275 at Hotel Alejandro; although the same bottle is sold for Php 170 at Angelo Hotel in Tacloban.

Before even considering *tuba* as a revenue stream for the city, upgrading the process of producing and marketing *tuba* should be a priority of the Tuba Research Center and other *tuba* aficionados in Leyte and Samar. For now it is recommended that as an option to its tax issue, the *tuba* should be recognized and classified by law as a herbal, tonic, and an indigenous beverage, as opposed to a manufactured alcoholic drink. After all, *tuba* is predominantly a cottage industry in need of standards and guidance in quality processing, and not inflexible control and regulation.

REFERENCES

Borrinaga, R., & Kobak, C. (Eds.). (2006). *The colonial odyssey of Leyte (1521-1914)*. Quezon City: New Day Publishers.

Dignos, R. (2008). *Coconut wine: A tropical wine process and formulation*. Retrieved March 8, 2009, from http://www.lulu.com

Kobak, C. J., & Gutierrez, L. (Eds.). (2002). *History of the Bisayan people in the Philippine Islands*. Manila: UST Publishing House.

Scott, W. H. (1994). *Barangay: Sixteenth century Philippine culture and society*. Quezon City: Ateneo de Manila University Press.