A Culture Review of Unique Traditional Uses of Plants in Quezon Province, Philippines

Cherry C. Favor
Southern Luzon State University-Judge Guillermo Eleazar
Tagkawayan, Quezon, Philippines
gingfavor@gmail.com

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Abstract *– The study aimed to document the unique traditional uses of plants in Tagkawayan. A descriptive method was utilized that employs an enhanced and adapted survey questionnaire as the interview guide in data gathering to 65 knowledgeable elders that are farmers, healers, forest dwellers and mothers. The study reveals 17 plants species that are uniquely prepared with medicinal and culinary purposes. Among the plant part used leaves are commonly prepared as medicine and plant fruits are used for food. Rituals and inclusion of special ingredients for plants preparation as food and alternative cure for common ailment was observed. This time honored practices of plants utilization are confined among the older generation due the transfer of knowledge by verbal means. So, a formal documentation will preserve and protect not only our plants diversity but also our cultural heritage. Which in the long run will benefit the young Filipinos who are engrossed mostly with the modern trends brought by technology and forgot the living legends of the old folk's way of life. Further, the awareness of plants medicinal values can provide new venues for drug development which are plant based, and biochemical analysis can also provide information on the efficacy of the plants. More so, adding special ingredients from old practices of food preparation to increase its nutritive values can be a basis for food innovations.*

Keywords *– ritual, special ingredients, leaflet, ethnobotan*

INTRODUCTION

The review of literature shows that mostly of the current ethnobotanical studies conducted in the Philippines focuses on the indigenous people practices of plants utilizations, more specifically on the traditional healing knowledge for treatment of diseases. That can be seen in study of Ong and Kim [1] that reveals the Medicinal Plants used by the study of Aldovino et al. [2] that showed the Healing Practices of Aeta in Quezon Province. There is a study [3] which deals with the comparative study on the use of Plants between Binukid and Manobo tribes in Bukidnon, while the study of Raterta et al. [4] was on the assessment, inventory of medicinal plants of Batan and Sabtang in Ivatan Province. More so, studied the medical importance of plant roots in Cebu Island, reveals that their respondents' knowledge were more on medicinal values of plants present in the study area rather the role of plant in pollution mitigation process. Cabauatan [7]talked about Ybanag minority of Northern Isabela, Cagayan Valley on the Ethnobiology and Alternative Medicine [5] [6]. Other study [8] discussed the Ethnomedicine of Plants Sold in Quiapo, Manila. Only the one study of Prigge [9] considered farmers and suggested that these rural folks should also be consider an important source of information about plant uses, their daily contact with nature makes them more knowledgeable and familiar with plants usage. Mothers tends to be the primary health provider and that give the first aid for their sick children can also contribute to this study as a respondent [10]. Proper documentation of these traditional uses of plants will benefit people that live in rural places that are remote areas and far away from the modern healthcare [11]. Study [12], stressed that since this traditional knowledge of plant important uses is in edge to vanish due to the busiest life of the younger generation this must be properly documented before it will be buried with the memories of the elderly.

Ethnobotanical Knowledge

Plants beneficial uses are observed in myriad ways, which can be seen in the way human uses plants, from being an ingredient in a simple dish to a complex use as cure for common diseases. With this importance in people's lives, it is not surprising that there are many stories about plants [13]. These are important narratives often tells the listener something about the plant's biology or ecology, distribution, history, uses and methods of exploitation, or cultural significance. The field of science that elucidates the relationship between

plants and human is Ethnobotany that plays an important role in understanding the dynamic relationships between biological diversity and social and cultural systems MS [14]. In traditional societies around the world people rely on stories, reinforced with practical demonstration, as a means of passing on essential knowledge and skills from generation to generation, thus, Tagkawayan with multi-cultural town in the south most part of Quezon is rich with a time honored practices that can be a good source of information for preservation of a local culture. There's a study [15] that concluded that the youth should be encouraged to learn the traditional medicinal knowledge to preserve it from being lost with the older generation. Furthermore there is a study that reveals that identifying many high value medicinal plant species, can be a high potential for economic development through sustainable collection of these medicinal plants [16]. More so with the study [17] that shows the urgent need to further document indigenous uses of plants for future domestication, since it depicts a strong human-plant interaction which significantly contributes in preserving the ethnobotanical knowledge associated with the study area. Indigenous knowledge is extremely important to humanity for it provides a new way of thinking, a new model and an alternative model, which we can in fact learn from it [18]. *T*his knowledge is of profound importance because many traditional societies have a unique understanding of their immediate environment [19].

OBJECTIVES

The economic progress of the Philippines involve modernization with the use of technologies, which the younger Filipino generations who are so engrossed with. The threat of disappearance of the traditional culture and natural resources is now on the verge of depletion with their lack of interest. Thus, the current study would want to contribute in conservation of these ethnobotanical knowledge from the rural folks of Tagkawayan. Specifically this study was conducted to (1) to document plants species and its unique perceive uses in the study area (2) identify plants parts used and its mode of preparation. (3) developed a printed material for information dissemination.

MATERIALS AND METHOD

The study Area

Tagkawayan is located at Coordinates: 13°58′N 122°32′E and a municipality in the province of Quezon that has a population of 51,832 people, according to the 2015 census. It comprises a total land area of 534.35 km^2 (206.31 sq mi). With a total of 45 politically subdivided barangays.

Data Collection

Reconnaissance survey and field visits were conducted during December 2016 – January 2017. Preliminary to the conduct of the study a verbal consent was obtained from each respondents. Upon their approval ethnobotanical knowledge on the uses of plants are collect through a personal interview with the use of semi-structured interview guide to locals and the elderly people who were familiar with traditional uses of plants particularly for medicinal and other uses that uniquely prepared in the study area. The queries were repeatedly done to validate and increase the reliability of the data. Which then written as a transcript to be corrected by the informants for the authenticity of the contents.

1. The interview was done to a 65 knowledgeable elders that are farmers, healers, forest dwellers and mothers who supplied the necessary information.
2. Informants' distribution is given in Table 1.

Informants Group	No.
Farmers	25
Healers	6
Forest dwellers	15
Mothers	19
Total	**65**

Species identification

Plant specimens were named and collected by the informants and with the help of floristic literature it was correctly identified.

Plants Species

The sum of 17 plant species and 15 families are recorded in the present study, which are being used for food (5 unique uses) and medicinal (12 unique uses) purposes. Illustrations of the identified plant species were given in Table 2 which includes photos, botanical names, local name, family and ethnobotanical uses as identified by the respondents.

Perceived uses

For the perceived uses of plants 88% or 12 species are known to the respondents with medicinal uses. The identified plants arespeficifically used for treatment common disease like, cold and cough (*ubo at sipon),* fever*(lagnat*) diarrhea (*pagtatae*) , head ache(*sakit ng ulo*) and minor wound (*sugat*) while 12% or five species are used with culinary purposes that can be prepared as an appetizer , special ingredient to added nutritive value for the dish.

Table 2. Botanical and Local Names and corresponding Botanical Uses

Photos	Botanical name	Local Name	Family	Ethnobotanical uses
	Premna odorata Blanco	Alagaw	Vernaceae	Medicinal
	Momordica charantia Linn	Ampalaya	Cucurbitaceae	Food/Medicinal
	Alluim sativum	Bawang	Amaryllidaceae	Medicinal
	Psidium guajava	Bayabas	Myrtaceae	Medicinal
	Artamesia vulgaris Linn	Damong Maria	Asteraceae	Medicinal
	Cajanus cajan	Kadyos	Fabaceae	Food
	Cucurbita maxima Duschene	Kalabasa	Cucurbitaceae	Food
	Citrus x microcarpa Bunge	Kalamansi	Rutaceae	Medicinal
	Lycopersicon Esculentum Mill	Kamatis	Solanaceae	Food
	Averrhoa bilimbi Linn	Kamias	Oxolidceae	Food
	Brassica juncea Hook.f.	Mustasa	Brassicaceae	Food
	Cocos nucifera Linn.	Niyog	Arecaceae	Medicinal
	Oryza sativa Linn.	Palay	Poaceae	Medicinal
	Musa sapientum Linn.	Saging	Musaceae	Medicinal
	Blumea balsamifera	Sambong	Asteraceae	Medicinal

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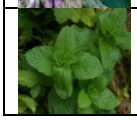
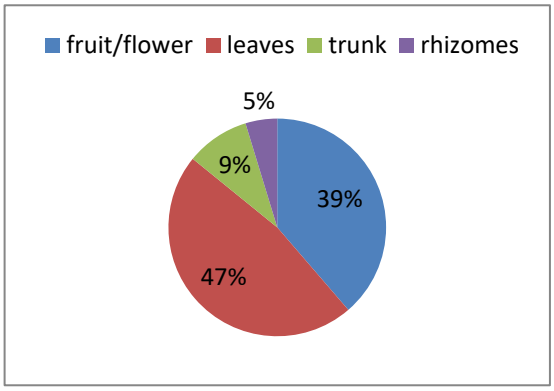
	Alluima scalonicum L.	Sibuyas Tagalog	Liliaceae	Medicinal
	Mentha cordifolia	Yerba Buena	Lamiaceae	Medicinal

Plant Parts Used

For the part plants distribution, mostly of the plant parts utilized are the leaves with 47% or eight of plant species are used for the known perceived uses of being medicinal or for cooking purposes with a special preparation known to the respondents. It was followed by fruit or its flower with 39% or seven species. The least utilized parts are the rhizomes with only five % of the total identified plants with the unique and important used in the study area.



A. *Figure 2. Plant Parts Used*

DISCUSSION

Developed Printed Materials


Benigno C. Montemayor, Jr*


Marco Schmidt*


Richard R. Handley*


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**Photo Credit*

Figure 3. Photos of plants with medicinal and culinary purposes.

The two enumerated Ethnobotanical use of plants were of medicinal and culinary purposes. As indicated there was a larger number of species that are used for medicinal purposes (12 spp., 88%). The factors that contributed for the bigger number of plants used as medicine was the lack of access for primary health care provided to the informants thus, they rely on what the nature can offer as immediate response for their health needs. Leaves are frequently used for medicinal purposes while fruits are used for culinary uses. It was notable that the process supplemented by the informants in preparing medicinal plants as cure for a common ailment uses the head of a hard broom in pounding the leaves of the plant. Most of the informants preferred boiling as a mode of preparation for herbal medicinal treatment.

The remaining (5spp., 12%) of the plant species are

of culinary uses. The remarkable response of the informants was more on the food preservation that utilizes drying, aging and the used of *hugas na bigas* or the water used to wash the rice before cooking as the special ingredients to enhance the nutritive value of the dish. Since the town was considered multi-cultural place because most or the residents are migrants from Batangas, Bikol and the pure natives the aetas . Recipes such as *bulanglang*, a simple dish where vegetables are cooked in hugas na bigas onion, garlic and tomatoes, *sinaing na isda sa tinuyong bunga ng kalamyas* , fish cooked with water and dried fruit of kamias, at burong mustasa, the picked mustard leaves. This innovation is a way of preserving foods to prolong freshness as well its shelf life to sustained their basic needs for survival.

A leaflet was developed that contains the procedure on how plants are used and prepared for medicinal purposes on one side and on the other side was the step by step preparation of the ingredients and how the known recipes are prepared. It was design using the plant photos and titled *Pamanang Kaalaman sa Pag-gamit ng Halamang Gamot . Panglunas sa simpleng karamdaman at Kinaugaliang Masustansyang Lutuin.*. The title and content of the leaflet was written in tagalong the dialect

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used by the respondents for it was done intended for them.

CONCLUSION

A number of plants that were known to the respondents are distinctively prepared and utilized in the study area. Several methods of preparation for medicinal uses and culinary purposes has been identified that are commonly done by residents which considered it to be uniquely done in the place. This traditional knowledge on the methods of plants are of significant value since transmission of medicinal plant knowledge and other plants uses are done verbally or learned through experience and observation only. With the passing of time everything changes, even the way of life of man and through this study simple, ways of daily living with old practices that are time tested will also provide alternatives for improving life that is based on plants and nature. This study is limited only for the unique traditional uses of plant in a given municipality hence a bigger and broader of scope of number of respondent in a provincial level can also be done for a more validated results. More likely, the existence social media can be a better way of disseminating this traditional knowledge it is also suggested to developed a more technological enhanced learning material like infographics that will posted in Facebook page of similar means of social media.

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