

Indigenous Food Crops Cultivated and Wild Plants Foraged by the Pala'wan Tribe in Southern Palawan

C. N. Bernadas, Jr. and M.D. Peralta

Abstract—Indigenous knowledge system stands the test of time because of its sustainability and applicability. Based on this theoretical construct this qualitative research was conducted in order to identify the indigenous food crops, vegetables and fruits cultivated and foraged by the tribal members in Southern Palawan which could be beneficial for dissemination and utilization. The data were collected through site immersion, indirect participant-observation, informal interviews and triangulations method of validation. The study found out that there are 22 food crops considered to be sources of carbohydrates, 13 of these are cultivated; and nine foraged from the wild. These are classified as grains, tubers, corms and palm (source of *natek*, starch/flour). Moreover, there are 63 types of wild vegetables and 37 fruit-bearing plants identified. For the cultivated cereal crops, upland rice is indispensable. The Pala'wan tribe is a rice-eating people. Corn and sorghum are also planted sparingly on the field. In addition, tuber and corm crops are considered best alternative to rice. Leafy vegetables, mushrooms and *ubod* from palms, bamboo and other plants collected from the wild are important vegetable stuffs. Durian, *mante*, *badak* and *tabo* are the common fruits they eat. The Pala'wan tribe has a reservoir of knowledge regarding food sources necessary for survival.

Keywords—Indigenous food crops, vegetables, fruits, cultivated, foraged, Pala'wan tribe.

I. INTRODUCTION

The National Statistics Coordination Board (NSCB) of the Philippines, based on the findings of the Borgen Project (2013), reports on April 23, 2013 that about 28 percent of the Filipinos were living below the poverty line. This means that about one-third of the 100 million Filipinos are so poor; and, 80 percent of them are found in the rural areas suffering with the lack of nutritious food. However, it was noted that the Pala'wan tribe in Southern Palawan has an impressive wealth of knowledge regarding indigenous food crops, vegetables and fruits. Aside from eating organic upland rice which they planted once a year, they have other sources of food from the wild which they utilize to augment their food supplies. Hence, this study was conducted to identify the food crops, vegetables and fruits they are eating so as to have pool of information which could contribute in easing food shortage in the countryside.

C. N. Bernadas, Jr. and M.D. Peralta, Faculty Members, CAFES and CEEd, Western Philippines University, Aborlan, Palawan, Philippines

II. METHODOLOGY

This study which was conducted in the municipalities of Rizal and Quezon in Palawan of the Philippines (Fig. 1) is an anthropological research employing indirect participant-observation, community immersion, and unstructured interviews with tribal leaders and elders as key informants, and triangulation method with the tribal members. Pictures of food crops and plants' parts, e.g. fruits, were taken during the conduct of the study in the field. Then, data were collated and interpreted.

III. RESULTS AND DISCUSSION

This section is organized according to the expected outputs spelled out in the objectives of the study: indigenous food crops, vegetables and fruits cultivated and foraged or collected in the wild.

Indigenous Food Crops. There are 23 sources of carbohydrates of the tribe identified; 14 of these food crops are cultivated; and nine foraged from the wild. They are classified as grains, tubers, corms, palm as sources of *natek* (flour/starch) and fruits. Rice, corn, sorghum and *etorey* are the common grain crops they planted on their farm. Rice, with 55 identified cultivars – both sticky and non-sticky, is the principal crop as their farming system is upland rice-based. For corn, like rice, there are sticky and non-sticky lines or cultivars.



A. Upland rice with sorghum



B. *Etorey*

The common food crops they collected from the wild are of the *Dioscorea species*, especially the *Dioscorea pentaphylla* and *hispidia*. There are four kinds of these wild species.



A. *D.pentaphylla*

B. *D. specie*

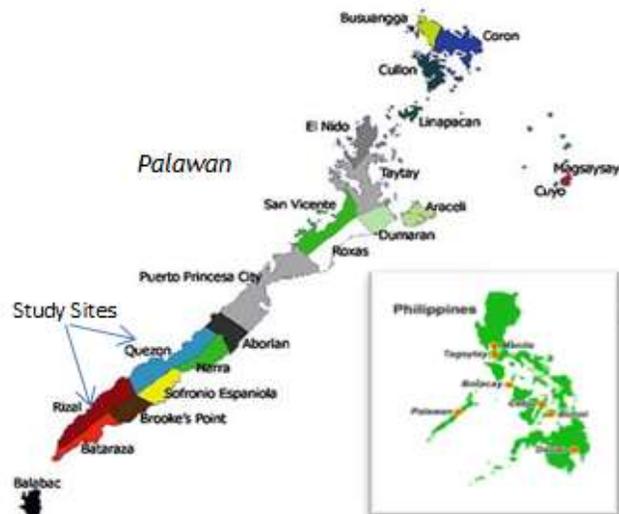


Fig.1. Map of Palawan showing the study sites



Dioscorea hispida

Note: images are taken from

www.stuartxchange.com%2FNami.html&psig

Indigenous Vegetables. There are 63 types of vegetables identified. Indigenous vegetables are classified into tree-type, vine/climbing-type, herb-type, mushrooms, rattans, palm-type and bamboo-type of plants. These vegetables are readily available the whole year round. Common of these are *bago* (*Gnetum sp.*), *kamansi* and *badak* (*Artocarpus sp.*). Young leaves and fruits are used as food. For climbing/vine-type vegetables, there are 12; 11 for herb-type; 14 mushrooms, four rattans, six palms and seven for bamboo-type.



A. *Perya leot*

B. Mushroom



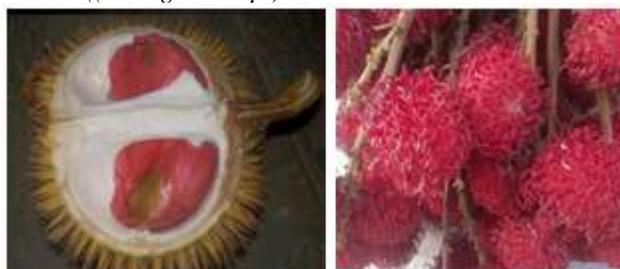
C. Shoot of wild bamboo *sp.*

D. *Amaranth*

Indigenous Fruits. For indigenous plants of which fruits are used as food, 37 are identified. These are classified as tree-type, vine/climbing type, and other types of fruit plants.

For tree-type fruit-bearing plants, 27 are identified; common of these plants are the wild mango, wild *rambutan* (several kinds), and durian. There are five kinds of vine/climbing type of fruit-bearing plants; and, six for other types.

The most common of these fruit-bearing plants/trees are the durian (*Durio sp.*), *rambutan* (*Nephelium spp.*), wild mango and *tabo* (*Willughbeia sp.*)



A. Wild durian

B. Wild rambutan



C. Boneg(*Garcinia sp.*)

D. Tabo

Aside from such noted fruits which could be found in the market place during fruit-bearing season, there are a lot more kinds of fruits collected and used as food stuffs by the Pala'wan tribe. These are endemic to the place; e.g., *meraring*, *kandis*, *eloyew*, *badak* and among others.



E. Badak



F. Balenewnew



G. Penoen



H. Eloyew

IV. CONCLUSION

The study revealed that the Pala'wan tribe is cultivating 14 cultivars of indigenous crops which served as their sources of carbohydrates (food). But, aside from this, they also gathered food stuffs from the wild. These food sources which they gathered from the wild constitute nine kinds of sources of carbohydrates, 63 vegetables, and 37 various fruits. Besides, the data clearly show that there are many plants which are considered vegetables, and sources of fruits.

V. RECOMMENDATION

The two main factors that could affect the sustainable way of life of the Pala'wan farmers are the encroaching of the settlers on their previously fallowed plots and the virgin forests which were converted into agricultural lands under the "modern" agriculture system of crop production. The second one is the influence of these settlers on their way of life, specifically in the use of commercial agricultural inputs in doing agriculture. Once their habitat is destroyed and altered to the level where its (forest) ecosystem is no longer sustainable, they will ultimately be assimilated to the lowlanders' worldview. Once assimilated, their knowledge system does not only erode but would be forgotten. Then, their knowledge on indigenous sources of food would become things in the past. Simultaneously, the plants which are their sources of nutritious food stuffs would also be lost as the forest is cleared to give way to modern agriculture.

Hence, based on the above-mentioned premises, the following are recommended to be done:

1. Collect all the identified plant species to be planted *ex situ*. A pilot site where Pala'wan community is occupying is an ideal one to be used as *ex situ* site. They will be the ones to manage such project because they are knowledgeable about it. This is an urgent call considering that the conversion of the forest into agricultural lands is so high nowadays. Besides, the province is mineral

resources-laden; hence, many applications for mining are in the pipeline.

2. An action research could be implemented in a pilot indigenous community where all indigenous plants would be planted and used. And, the income and health status of the community people would be determined; and, be compared with other indigenous community not planting and using such plants.
3. There is a need also to conduct a study to determine the nutritional properties of the identified plants which are considered sources of food by the Pala'wan farmers.
4. Commercialization of promising indigenous crops, vegetables and fruits could be implemented through the indigenous community. This could be a good source of income. Vegetables and fruit products could also be processed, canned and sold in the market.

REFERENCES

- [1] Anselmo, L.D (2002). Food Crops Used and Cultivated by the Pala'wan Tribes of Quezon and Rizal, Palawan. SPCP-Quinlogan Community College. A thesis in Bachelor of Science in Rural Development Management. Unpublished.
- [2] Bernadas, C. N. Jr. (1995). Indigenous Soil and Water Conservation Practices of the Tribal Minorities in Tao't Bato, Rizal, Palawan. UNESCO-MAB Program
- [3] <http://borgenproject.org/latest-statistics-on-philippine-poverty/>
- [4] <http://chette.tripod.com/id1.html>
- [5] <http://www.philstar.com/nation/699812/eu-pleased-funded-projects-palawan>
- [6] PCSDS (2010). State of the Environment 2009 Updates. Puerto Princesa: PCSDS
- [7] www.stuartxchange.com%2FNami.html&psig