



THE DOCUMENTATION OF WILD FRUIT IN KALINGA

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Abstract: *This study made a general documentation of the identified wild fruits in Kalinga, Philippines. The main instrument used is photography through the digital camera. An Interview was conducted among the tribes in the selected sites to identify the actual species of wild fruits utilized as foods in that place. Tour guides, hunters and volunteers were tapped in locating the species of wild fruits in their actual habitat and how this wild fruits adapt to their environment.*

Sixteen (16) species of wild fruits were identified and documented. This study recommends the establishment of the databank or gene bank for this wild fruit to be classified under the binomial nomenclature.

Keywords: *Wild Fruits, Kalinga, habitat, documentation, herbs, foods, medicinal fruits*

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BACKGROUND

The Philippines is a rich source of medicinal plants which provide traditional health care system mostly for the rural communities. The report of Oltoveros,et.al. (2007) On Plant Genetic Resources For Food And Agriculture Of The Philippines summarized that these species are mostly found as a component of traditional home gardens, naturally in the wild (Forest), in garden plots in community health centers and schoolyards. To date, a total of 1 687 plant species has been identified to be of use to the traditional healers. Of these, ten (10) have been clinically tested and three (3) are available in commercial preparations. There are no available statistics on area, volume and value of production of medicinal plants.

Driven by the need of foods, our ancestors utilized available fruits and vegetables available in our rich natural resources. Some of these fruits were can be gathered from trees, herbs, shrubs and vines that thrive in forest and nearby places. Depending on the variety of fruits, the people are very much aware of their importance to their health. Some members of the tribe use them for ritual purposes to heal the sick, but the majority of the tribe uses these fruits for food security.

Today, these species are the very concern of our tribe on how to propagate and conserve them for food security. There are some species of these documented wild fruits that may be endangered due to some activities of man specifically illegal logging. These wild fruits have proven medicinal values and consumptions of these wild fruits can prolong life. They are free from chemical spray, hence these wild fruits are anti-cancer and very much recommended for public consumption.

Comparing these wild fruits to the domesticated species, there are difficulties in propagating them not just anywhere. These wild fruits can be pollutant indicators because most of them do not thrive in a polluted environment. According to bio-assay, these wild fruits were comparable to those already analysed as a good source of fructose, calcium, magnesium, zinc, potassium , iron and Vitamin C and

The Kalinga people living in remote places are still dependent on wild fruits because of their availability. These species of wild fruits are still abundant and still high yielding for human consumption. Their adaptation and their habitat are yet to be considered as best suited for



them to thrive. These species can also contribute to ornamental plant as set-up in the environment.

Since, Kalinga belongs to be one of the poorest provinces. There is a need to rely on our rich natural resources for survival. The high price of pharmaceutical products affects the people living in the remote places, but it can be supported with the utilization of wild fruits that is preventive for human ailment. Hence, the documentation and identification of the species of wild fruits in the locality can strengthen the values of preserving and conserving them for the future. It will also increase environmental awareness of our rich natural resources. There is also a need to inculcate and educate the people in the locality for a sustainable environmental protection of our natural resources. The documented wild fruits can be disseminated to other places for their consumptions. It is better than the cultivated fruits when it comes to nutrient. The maintenance and cultivation of wild fruits need not be applied with agricultural insecticides and inorganic fertilizers. Their presence can help maintain ecological balance, hence, they can help in the conservation of our fragile environment.

The importance of this study is summarized as follows: a) The Socioeconomic Aspect: to documented species of wild fruits when recorded in data base and other disseminated in other media will serve as an alternative source of food. With the increasing price of many pharmaceutical products, these species of wild fruits can be utilized as herbal medicines. Wild fruits are easier to be gathered and propagated because it is inherently adaptable to the environment. Utilization of these wild fruits is healthful and it encourages involvement and awareness to the preservation of our rich natural resources.

b) Marketing Aspect: Species of wild fruits are palatable and attractive. It is cheaper, valuable and nutritious and it contains nutrient from organic substances. It does not involve expensive cultivation and it exists naturally. Hence, the market outlet is a problem.

c) Environment Impact Assessment: The research is an activity that is very basic to the Law of interdependent. The nature of the research is a pro-enterprise environment that enhances the protection of our degrading forest resources. It empowers the tribe on the value of self-reliance and resourcefulness.



OBJECTIVES

This study focused on the listing and pictorial presentation of the different unidentified wild fruit in Tanudan, Kalinga. Particularly, it sought answers to the following objectives:

1. To present the pictures of the different unidentified wild fruits in Tanudan, Kalinga, Philippines;
2. To describe characterize the different unidentified wild fruits in Tanudan, Kalinga, Philippines

METHODOLOGY

The paper documented the identified wild fruits in the wild forest land, particularly in Tanudan, Kalinga, Philippines. Interviews were conducted among the residents to identify the actual species of wild fruits utilized by the residents living in the study area. Digital cameras were then the main instrument to get the physical characteristics of the wild bearing plants. Tour guides, hunters, forest rangers and volunteers were tapped to usher the researcher to the actual habitat and adaptation of the species of wild fruits.

To be able to record the data, the time-table of the research was taken for the whole year round to accommodate the fruiting season. Some species of these wild fruits are seasonal and it can only be documented on specific month of the year.

RESULTS AND DISCUSSION

PICTORIALS OF DOCUMENTED WILD FRUITS



Figure 1. Agakap



Figure 2. Apras



Figure 3. Banoy



Figure 4. Barakbak



Figure 5. Barara



Figure 6. Binor



Figure 7. Buron



Figure 8. Busillo



Figure 9. Dongray



Figure 10. Isup



Figure 11. Koddog



Figure 12. Oppossan



Figure 12. Pornqipang



Figure 13. Puryupoy



Figure 14. Sag-ot



Figure 15. Wild Strawberry (Pinit)



Table 1. Summary of Wild Fruits and their characteristics.

Table 1 presents the description of wild fruits and the type of fruits whether simple, aggregate or multiple fruit. The location of the fruit where it is located in the plant is also observed. The common name are considered since their classification under the binomial nomenclature is not available.

Common name	Description	Type of fruit	Location of fruit
1. Agakap	Succulent and juicy fruit. Fleshy and orange-like fruit	Simple fruit`	Found in the branches of the tree
2. Apras	Rough skin , juicy small seeded fruit	Simple fruit, berry	Single fruit arising from the nodes near the base of the leaves.
3. Banoy	Smooth fruit skin, oval and seeded fruit. Arranged in two or three fruit.	Multiple fruit, pepo	Two to three fruits arising from the tip of the plant
4. Barakbak	Round to oval shape fruit.	Simple fruit, pome	Clustered fruit arising from a single receptacle located at the twigs .
5. Barara	Small oval shaped with single seed . Juicy and Fleshy	Simple fruit, berry	Fruit arise from the nodes near the base of the leaf
6. Binor	Juicy small clustered fruits	Aggregate fruit	Fruits arise from the branches with single receptacle
7. Buron	Fruits are oval and guava-like structure, succulent	Multiple fruit, pepo	Fruits arise from the branches in single.
8. Busil-loy	Clustered grapelike fruits. Not seeded soft and juicy	Aggregate fruit, berry	Arises from the trunk of the tree near the roots
9. Dongray	Clustered grapelike fruits. Tiny seeds, juicy and fleshy	Compound fruit, berry	Arises from the twigs with soft elongated receptacle
10. Isup	Clustered juicy with tiny seeds .	Aggregate, Drupe	Attached on the trunk of the tree.
11. Kod-dog	Dry fruit with seeds arrangement inside like santol	Dry fruit, Achene	Fruit arise from the branches.
12. Opus-san	Ovoid and fleshy fruits	Simple fruit, pome	Fruit arise from the base of the plant near the ground.
13. Pinit	Soft fruit , hollow	Simple fruit, berry	Arise from the nodes .



(wild strawberry)	inside.		
14. Pornqipang	Small clustered fruits	Aggregate , pome	Arise from the twigs
15. Puryupuy	Clustered and juicy fruit	Aggregate , pepo	Arise from the base of the plant near the roots
16. Sag-ot	Clustered and seeded	Aggregate , drupe	Arise from the base near the roots.

Table 2. Presents the Habitat Lifespan and Fruiting Season of Wild Fruits.

Table 2 presents the habitat where the wild fruits are located in the forest. Their fruiting season or the time of the year when these fruits are gathered is considered to avail of their savory and exotic taste. Their lifespan and fruit color are also studied.

Common name	Habitat	Lifespan	Color of Ripe Fruit	Fruiting Season
1. Agakap	Forested Part of mountains, hills, valleys	Perennial Tree	Red-orange	March-July
2. Apras	Open space of mountains and hills	Perennial	Red-violet	Year round
3. Banoy	Semi-shaded, base side of mountains, hills. Moist area	Annual	Green-yellow	Year round
4. Barakbak	Forested parts of mountains.	Perennial	Red-violet	July-September
5. Barara	Along riverbank	Perennial	Red-orange	April-July
6. Binor	Forested area of mountain and hills.	Perennial	Green-yellow	Year round
7. Buron	Forested area of mountains	Perennial	Green but yellow inside	April-June
8. Busil-loy	Forested area of mountains, hill and valleys.	Perennial	Yellow-brown	August-October
9. Dongray	Semi-shaded parts of hills, and mountain	annual	Green-yellow	March-July
10. Isup	Forested area of mountains	Perennial	Yellow-green	August-October
11. Kod-dog	Forested area of mountains	perennial	Yellow-green	March-June
12. Opus-san	Semi-shaded and moist area of mountains and hills	Annual	Violet-black	July-September
13. Pinit	Open space of	biennial	Orange-red	March-June



(wild strawberry)	mountains and hills			
14. Porngipang	Semi-shaded area of mountains and hills.	perennial	Pink-red	May-july
15. Puryupuy	Semi-shaded , moist area along side of mountains, hills	annual	Violet -red	August-November
16. Sag-ot	Semi-shaded, moist area of mountains and hills	Annual	Violet	August-October

Table 3. Presents the Wild Fruits and how it is utilized.

Table 3, presents the indigenous utilization of wild fruits in Tanudan. These wild fruits are believed to be medicinal and nutritious for consumption. The farmers and forest rangers used these wild fruits as viand in the absence of vegetables and cooked viand. They savor the fresh fruits eaten with rice during meal time. When needed these wild fruits are also gathered, to be given to their sick to enhance their appetite.

Common Name	Indigenous utilization of wild fruits
1. Agakap	As supplemental food. Can be eaten with rice in the absence of viand
2. Apras	Supplemental Food.
3. Banoy	Supplemental Food
4. Barakbak	Supplemental food and can be eaten with rice in the absence of viand.
5. Barara	Fermentation for wine, used as food supplement
6. Binor	Supplemental food, Juice can be extracted for drinks
7. Buron	Supplemental food. Pounded and mixed with water to be given to sick children for their fast recovery
8. Busil-loy	Supplemental food. Given to patient with difficulty in urinating
9. Dongray	Supplemental food. Given to patient with high fever. Believe to increase appetite
10. Isup	Supplemental food. Believe to be diuretic and energy booster
11. Kod-dog	Cooked and pounded to extract fruit flesh and juice. Appetizer for sick people .
12. Opus-san	Food supplement. Believe to give strength. Juice can be extracted for quack doctor to use.
13. Pinit (wild strawberry)	Supplemental food. Thirst-quencher.. Can be eaten with rice in the absence of viand by farmers
14. Porngipang	Supplemental food.
15. Puryupuy	Supplemental food . Working people can use it for viand
16. Sag-ot	Supplemental food. Workers in the field can use it for viand



FINDINGS AND DISCUSSIONS

The people of Tanudan continuously utilized this wild fruits to the present, the knowledge of utilization is being transferred from one generation to another. It is gathered during their fruiting season, that both adult and growing children savor it for their supplemental diet. Some of these fruits are believed to be medicinal like Buron, Kod-dog, Barakbak, and Porngipang that is given to the sick with high fever. The rest of the species of wild fruits are given to the sick as appetite enhancer, the dosage is prepared according to their indigenous practices. In time of thirst and hunger, hunters and passers-by gather available wild fruits while travelling in the forest.

These wild fruits are believed to be very nutritious and if these wild fruits will be chemically analyzed they are good source of the biologically needed elements in our body. Most of the people living in that place reaches the age of 100 years which the researcher attribute to the presence of wild fruits in their diet. It is also observed by the researcher that these wild fruits are pollutant indicators because these species of wild fruits do not thrive in places where garbage and pollutant are present.

According to the people whom I interviewed, these species of wild fruits were distributed in the forest naturally. Some farmers were able to propagate them successfully in their area like species of Akagap, Barakbak, Kod-dog and Buron. They gather them and sell it to nearby places as additional source of income. Species of Apras, Banoy, Barara, Isup, Pinit, and other wild fruit naturally grown in the forest are just gathered and if bountiful fruits are available they can bring it to the barrio and nearby places for sale.

Most of the wild fruits are juicy and succulent. It is eaten when ripened except for Kod-dog. Apras is a dry fruit which is not eaten when one is thirsty. Puryupuy and Sag-ot are gathered near the roots with the use of bolos and small shovels to remove the soil. Bussil-loy hangs from the base of the trunk and it can easily be gathered for consumption, that even roaming animals can easily avail of the fruit. Most of the fruits are red, orange and violet when ripened as shown in Table. 2. Almost all of these species of wild fruits are sweet and delicious except for Buron and Kod-dog that is still sour even when ripened. The Banoy fruit is not a fleshy fruit that the makes the small seeds embedded with fibers eaten as fruits.

The fruit covering of these wild fruit ranges from hard, soft, papery and hard rind covering. Agakap, Barakbak, Barara, Binor, Busil-loy, Dongray, Opus-san and Porngipang are covered



with papery and soft protection. Banoy and Buron are enclosed with hard rind covering. Apras is covered rough covering. Opos-san, Puryupuy, Pinit and Sag-ot with soft covering. No need to peel these species of wild fruits except for Banoy when eating.

Recommendations

Based from the findings, the following recommendations are offered:

1. These species of wild fruits should be submitted to the Gene-Bank for their proper taxonomic classifications.
2. Further studies should be conducted to document wild fruits in other municipalities of Kalinga.
3. There are species of wild fruits that are not documented in the virgin forest of other municipalities located in Kalinga that should be included in the studies.
4. Propagation of these wild fruits is highly recommended to help in the preservation and conservation of these species.
5. Wider dissemination on the utilization of these wild fruits should be introduced to other places.
6. Further research to be done should include the medicinal aspect and their potential as nutritional foods.
7. The research should also include the participation of the DENR, DOH, CHED and DEPED for wider scope.

REFERENCES

- [1] Oltoveros, et. al. (2007). Country Report on the State of Plant Genetic Resources For Food And Agriculture, Department of Agriculture Bureau of Plant Industry, Philippines
- [2] Mauseth, James D. (1998). Botany, An Introduction to Plant Biology (Multimedia Enhanced Edition). University of Texas, Austin, TX.
- [3] M. 2002. Documentation of Medicinal Plants used by Bhotiy and Shepa communities around Makalu Barun National Park and Buffer Zone, Eastern Nepal. M.Sc. Dissertation of Botany, T.U. Kathmandu, Nepal.
- [4] Bhattarai, S. (2003). Ethnobotanical Study of Manang district (Central Nepal) and Anti-Bacterial activities of some selected medicinal plants. M.Sc. Dissertation, Central Department of Botany, T.U. Kathmandu, Nepal.



- [5] Dangol, N. (2002). Documentation of the Ethno Botanical Knowledge of the Kumal community of Chitwan district, Central Nepal. M.Sc. Dissertation, Central Department of Botany, Tribhuvan University, Kathmandu, Nepal.
- [6] Devkota, R. (2003). Documentation of Indigenous Knowledge of Non-Timber Forest Products (NTFPs) in Gwallek VDC of Baitadi district. M.Sc. Dissertation, Central Department of Botany, Tribhuvan University, Kathmandu, Nepal.
- [7] Guatam, S. (2002). Medicinal Plants Used to treat Respiratory Complaints in Nawalparasi District (Southern Nepal) and their antibacterial activities. M.Sc. Dissertation of Botany, T.U. Kathmandu, Nepal.
- [8] Karki, L. (2001). Documentation of Indigenous Knowledge on the Utilization of Plant Resources by the Chepang community of Dhusa VDC, Dhading, Central Nepal. M.Sc. Dissertation of Botany, T.U. Kathmandu, Nepal.