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Botika sa Kalikasan: Medicinal Plants Used by Aetas of Sitio Parapal Hermosa Bataan, Philippines

INTRODUCTION

The folkloric use of plants has played a vital role on improving the quality of life of people for thousands of years. The surrounding areas of tribal communities have served as their pharmacy with its rich source of natural remedies. Cultivated primarily for sustenance, the serendipitous powers of plants for curative effect has led to the traditional use of plants as medicine. It is based on the empirical knowledge that plants contain natural substances that promotes health and alleviate diseases. The continued use of traditional medicines may be due to accessibility, affordability, and availability of natural remedies (Elvin-Lewis, 2000). The high patronage of medicinal plants can be subjective to cultural and social surroundings, as well as to the belief that natural products do not pose risk (Bussmann and Lopez, 2007). The diversity of ethnic knowledge, cultural practices and customs in the Philippines include health knowledge systems. Dela Cruz and Ramos (2006) cited 12,000 species of plants, from which 1,500 species are patronized by traditional herbalists. It is a public knowledge that indigenous peoples have identified the healing properties of several herbs for generations. The purported use of medicinal in the wild has brought convenience and prompt relief from ailments and other health conditions.

One of the earliest inhabitants in the Philippines are the Negritos or also known as the Aetas. Aeta groups of Luzon were relocated or migrated from other Asia Pacific locales (Molintas, 2004), and now has established communities in the provinces of Bataan, Zambales, Pampanga, Tarlac, and other distributed areas. Aeta groups have been subject to several ethnographic and ethnobotanical studies (Madulid, and Gaerlan, 1994). Madulid et al.; 1989; Zayas; 2008, Dela Peña, 2009) and their subgroups (Sia et al., 1998; Novellino, 2008; Datiles and Heinrich, 2013). The ethnobotanical data from these studies have been limited to the identification of plants used for medicines and other categories.

Ethnomedicinal studies make use of data analyses that are important to determine the most culturally significant species to the indigenous groups. Quantitative analyses show the high patronage of use and traditional knowledge. Quantitative ethnobotany methods through the use of indices have been established and applied to ethnobotanical data to test various hypotheses about the relationship between plant species and humans (Reyes-García et al., 2006).

Economic progress in rural cities and the constant migration of people have resulted in the rapid disappearance of traditional culture and natural resources. Hence, there is an urgent need to methodically document the medicinal plants used by the indigenous groups and how these plants are used as folk medicines and their traditional medical knowledge. The lack of written ethnopharmaceutical information may threaten the transfer of knowledge and eventually the practices of the next generations as it may be depleted and become extinct (Sam et al., 2013). The cultivation of these plants is equally important.

This research documented the medicinal plants used by an Aeta community in Sitio Parapal, Hermosa Bataan. The most used, most cited, and culturally relevant medicinal plants were determined as well.

METHODS

This ethnographic study was conducted to assess the knowledge and use of medicinal plants and plant-disease relationship. Purposive sampling was in the selection of the informants.

Subjects and study area

This Aeta community (25-30 families) resides in Sitio Parapal Barangay Mabiga Hermosa Bataan. The study site is 104 kilometers from the nation's capital. They have access to health care services but prefer the use of medicinal plants.

The group is a relocated community from the Mt. Pinatubo Pampanga area. The tribe members were mostly honey gatherers, forest food gatherers, hunters, etc. They have variable access to health care services but has continued using medicinal plants. Predominant activities of the community are on trade, agricultural farming, governmental and nongovernmental employees.

Data Gathering Tool

The semi-structured ethnopharmaceutical questionnaire was adopted from the study of Pablo et. al. (2010). Medicinal plants cited in this study was organized in a table according to an alphabetic order by botanical name. It is arranged as follows: Specimen number, botanical name, family, number of citation (NUR), Fidelity level (FL), Use Value (UV), local name, plant part used, disease/illness/condition, mode of preparation and administration, frequency of use, informant consensus factor and its ICD-10 category.

Data gathering procedure

The fieldwork was carried out during the period of January to April 2017. The study was launched via a meeting with the community tribal leaders. The first visit will be a tribal meeting, the introduction of the research, methodology, ethical issues, commitment for feedback and discussion of representation. The tribal leader then encouraged fellow Aetas to take part in the study. Written consent was obtained from each informant before interviews were administered. Aetas was visited at least two times during the study to validate the information provided. Collection of medicinal plants was from April to May. Plants were identified, pressed and authenticated at the UST Herbarium of the Thomas Aquinas Research Center and check-referenced in the Dictionary of Philippine Plant Names (Madulid, 2001). Triplicate plant specimens were deposited at the herbarium.

Ethical considerations

Ethical clearance was obtained from the ethics review board of the UST Graduate School (E-2016-08-OC). Informants were informed that they have the right to stop or skip questions during the interview at any time. Participation in the study is voluntary and informants are free to withdraw at any time of the study. The names of the informants were anonymized and data were digitalized and encrypted.

DATA ANALYSIS

Data collected was analyzed using the following indices:

1. Use-value (UV): was calculated using the formula $UV = \sum U/n$ where U is the number of use reports cited by each informant for a given plant species and n is the total number of informants interviewed for a given plant (Phillips & Gentry, 1993).

2. Fidelity level (FL): was calculated using the formula $FL (\%) = (N_p/N) \times 100$ where N_p refers to the number of use-reports for a given species reported to be used for a particular ailment category, and N is the total number of use reports cited for any given species (Friedman et al., 1986)
3. Informant consensus factor (Fic) was calculated using the formula $Fic = (Nur - Nt) / (Nur - 1)$ where Nur is the number of use citations in each category and Nt is the number of species reported in each category (Trotter and Logan, 1986).

RESULTS AND DISCUSSION

Demographic data

There were 21 informants - (11) of which are male and (10) are female. The oldest respondent was 70 years old and the youngest is 17 years old. They are mostly married (16), having an average of three children. They work as tribal health workers, manicurists, deliverymen, sewer, fruit and vegetable seller and barangay employee. Second most prominent occupation is farming.

Ethnobotanical Data

There were 407 recorded ethnomedicinals for its formulation. Seventy-seven (74) plants were cited by the respondents throughout the study, three of which are unidentified. This means the rich biodiversity in the place and more plants can be used for different ailments. Three of the most common plants cited are *Psidium guajava* L. (Bayabas) (10.47%), *Citrus japonica* Thunb. (Calamansi) (5.79%), and *Ageratum conyzoides* (L.) L. (Silisilihan) (5.23%). Seventy-seven diseases were documented. The top five diseases with the greatest number of citations from different species of plants are Cough (39), Diarrhea (31), Wounds (31), Toothache (24), and Stomach ache (20). The number of citations indicates the number of plant species that can be used to treat that particular disease.

Ethnotaxonomic data

Plants were identified by its morphology, belonging to thirty-eight families. The families with the highest number of species are Fabaceae (7), Lamiaceae (5), Asteraceae (5), and Euphorbiaceae (4).

Fourteen (14) plant parts were used by the Aetas of Parapal (Fig. 1). Plant part that was used with the highest frequency was leaves. This can be contributed to the accessibility

and abundance of the plant. The next most utilized plant part was fruits because it is mostly eaten for its health value. Other parts are bark, rhizomes, root, vine, juice, clove, flower, oil and others like the leaflet, seed, stem, resin.

Method of Preparation

There are twenty-four (24) different preparation methods for the medicinal plants before use (Fig. 2). Decoction, of which boiling the plants is the most used way of preparation. The boiled plants were strained afterward and drank for bath or for application to affected parts. "As is" meant plant part is used without any method done. Pound means it was reduced to small pieces, creating a mushy substance, with or without the use of mortar and pestle. Expressing is squeezing the juice freshly or after heating or boiling. Sometimes there is the addition of oil and gin, then wrapped in banana leaves, and placed in cotton or clean cloth. Another way of breaking down plant parts are by scraping the meat or by chewing. Heating would be by roasting or passing through flame or also known as "pasis" - a term of the Aetas. The method of preparation will be a guide during the extraction of the active substance that will give the desired medicinal effect for drug discovery. The preparation might be just one method, like boiling, or a complex mixture of methods such as wrapping in banana leaves, roasting, and 'expression'.

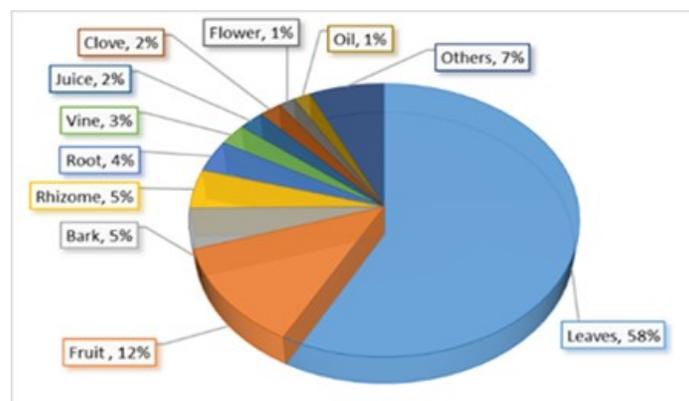


Figure 1. Plant Parts Used in Herbal Preparation

Table 1. Ethnobotanical Data

Specimen Number	Botanical Name	Family	NUR	FL (%)	U V	Iwak Plant Name	Plant Part	Disease or Illness or Condition	Mode of Preparation	Mode of Administration	Frequency of Administration	Fic	ICD #
CPP-005-2017	<i>Ageratum conyzoides</i> (L.) L.	Compositae	71	33.33	1	Silisihan or Lutok	L	Body pains	Put in hankie, triturate, add salt	Apply in the head	Change when dry, Until well	0.64	XVIII
			72	17.65	1.21	Silisihan or Lutok	L	Diarrhea	Triturate or Decoction	Drink	3x a day	0.63	XI
			35	76.47	1.21	Silisihan	L	Wounds	Triturate, express the juice or As is, add salt	Apply on affected part	Once	0.71	XIX
CPP-043-2017	<i>Albizia saman</i> (Jacq.) Merr.	Fabaceae	72	100	1	Acacia	Lf	Diarrhea	Decoction	Drink	3x a day	0.63	XI
CPP-064-2017	<i>Allium sativum</i>	Amaryllidaceae	72	9.09	1.57	Bawang	Fr	Canker sores	As is	Apply on affected part	When needed	0.63	XI
			35	9.09	1.57	Bawang	Fr	Dog bites	Slice, express the juice	Rub on affected part	Everyday	0.71	XIX
			4	9.09	1.57	Bawang	Fr	Ear ache	Collect the resin	Instill on affected area	When needed	0	VIII
			39	45.45	1.57	Bawang	Fr	Tinea versicolor or white spots	Triturate or As is	Rub on affected part	Once a day	0.61	I
			72	27.27	1.57	Bawang	Fr	Tooth ache	Remove the skin, triturate or As is	Apply on affected part	When needed	0.63	XI
CPP-056-2017	<i>Aloe vera</i> (L.) Burm. f.	Xanthorrhoeaceae	36	28.57	2.33	Aloe vera	L	Alopecia	Cut into half, express the juice	Rub on affected part	When needed	0.66	XII
			36	28.57	2.33	Aloe vera	L	Anti-dandruff	Cut into half, express the juice	Rub on affected part	When needed	0.66	XII
			36	28.57	2.33	Aloe vera	L	Anti-dandruff	Cut into half	Rub to affected area (leave for 1 hour)	Once a day	0.66	XII

Table 1. Ethnobotanical Data

Specimen Number	Botanical Name	Family	NU R	FL (%)	UV	Iwak Plant Name	Plant Part	Disease or Illness or Condition	Mode of Preparation	Mode of Administration	Frequency of Administration	Fic	IC D#
			35	14.29	2.33	Aloe vera	St	Burns	Shred	Apply on affected part, leave for 1 hour	Until well	0.71	XIX
			36	28.57	2.33	Aloe vera	L	Hair voluminizer	Cut into half, get juice	Rub on affected part	When needed	0.66	XII
			36	28.57	2.33	Aloe vera	St	Hair voluminizer	Shred	Apply on affected part, leave for 1 hour	Once a day	0.66	XII
CPP-059-2017	Alstonia scholaris (L.) R. Br.	Apocynaceae	39	100	1	Dirita	Bk	Malaria	Remove the skin, decoction	Drink	4 x a day (not for pregnant women)	0.61	I
CPP-061-2017	Anacardium occidentale L.	Anacardiaceae	9	80.00	1	Kasuy	Bk	Diabetes	Cut into pieces, decoction	Drink	Drink liberally	0.38	IV
			9	80.00	1	Kasuy	Fr	Diabetes	As is	Eaten	When needed	0.38	IV
			72	20.00	1	Kasuy	Bk	Tooth ache	Decoction in saline water	Garle	When needed	0.63	XI
CPP-015-2017	Annona muricata L.	Annonaceae	9	14.29	1.75	Guyabano	Fr	Diabetes	As is	Eaten	Everyday	0.38	IV
			4	28.57	1.75	Guyabano	L	High blood	Decoction	Drink	Drink liberally	0.33	IX
			72	14.29	1.75	Guyabano	L	Stomach ache	Place in a bottle or Decoction, add salt	Roll bottle on affected part or Drink	When needed	0.63	XI
			14	14.29	1.75	Guyabano	L	UTI	Decoction	Drink	Drink liberally	0.38	XIV
			71	14.29	1.75	Guyabano	L	Vertigo	Roast, decoction	Rub on affected part	Once	0.64	XVI II

Table 1. Ethnobotanical Data

Specimen Number	Botanical Name	Family	NUR	FL (%)	UV	Iwak Plant Name	Plant Part	Disease or Illness or Condition	Mode of Preparation	Mode of Administration	Frequency of Administration	F _c	ICD #
CPP-044-2017	<i>Antidesma bunius</i> (L.) Spreng.	Phyllanthaceae	4	100	1	Bignay	L	High blood	Decoction	Drink	3x a day	0.33	IX
CPP-017-2017	<i>Artemisia vulgaris</i> L.	Compositae	19	16.67	1.2	Damong maria	L	Colds	Triturate, strain the expressed juice	Drink	3 x a day	0.5	X
			71	16.67	1.2	Damong maria	L	Cough	Decoction or Roast strain the juice	Drink	3 x a day	0.64	XVII I
			72	33.33	1.2	Damong maria	L	Gastritis	Triturate or Roast or Decoction	Drink	3 x a day	0.63	XI
			72	16.67	1.2	Damong maria	L	Stomach ache	Decoction or express the juice	Rub on affected part	3x a day	0.63	XI
CPP-063-2017	<i>Artocarpus heterophyllus</i>	Moraceae	39	100	1	Langka	L	Scabies	Decoction or Crush roasted Langka in coconut oil	Rub on affected part	3x a day	0.61	I
CPP-066-2017	<i>Averrhoa bilimbi</i> L.	Oxalidaceae	36	100	1	Kamias	L	Skin rashes	As is	Whip on affected part, then place in from of a heated pan	Until well	0.66	XII
CPP-018-2017	<i>Bambusa</i> sp.	Poaceae	6	100	1	Buho	L	Increase lactation	Decoction	Drink	Once a day when needed	0	XV
CPP-045-2017	<i>Bixa orellana</i> L.	Bixaceae	71	100	1	Achuete	L	Headache	Coat with coconut oil, pass thru flame	Apply on affected part, leave for 1 hour	Until well	0.64	XVII I
CPP-003-2017	<i>Blumea balsamifera</i> (L.) DC.	Compositae	71	18.75	1.45	Sam-bong	L	Cough	Decoction	Drink	4x a day, when needed	0.64	XVII I
			72	31.25	1.45	Sam-bong	L	Diarrhea	Roast or Decoction	Drink	Until well	0.63	XI
			71	6.25	1.45	Sam-bong	L	For phlegm	Roast	Drink	3 x a day (not more than a week)	0.64	XVII I

Table 1. Ethnobotanical Data

Specimen Number	Botanical Name	Family	NUR	FL (%)	UV	Iwak Plant Name	Plant Part	Disease or Illness or Condition	Mode of Preparation	Mode of Administration	Frequency of Administration	Fic	ICD #
			71	12.50	1.45	Sambong	L	Head ache	Roast or Decoction	Drink	3 x a day (not more than a week)	0.64	XVIII
			72	12.50	1.45	Sambong	L	Stomach ache	Wrap on banana leaves, add salt, pass thru flame or Decoction	Rub on the whole body	When needed	0.63	XI
			72	6.25	1.45	Sambong	L	Ulcer	Decoction	Drink	3 x a day	0.63	XI
CPP-011-2017	<i>Bryophyllum pinna-tum (Lam.) Oken</i>	Crassulaceae	71	16.67	2	Katakataka	L	Chest pains	Roast, add coconut oil	Apply on affected part	bedtime or morning, when needed	0.64	XVIII
			4	16.67	2	Katakataka	L	Ear infection	Roast, add coconut oil	Instill on affected area	Morning and before bedtime	0	VIII
			10	16.67	2	Katakataka	L	Eye ache	Triturate, collect the juice	Instill on affected area	4 x a day	0.56	VII
			10	16.67	2	Katakataka	L	Speck in the eye	Triturate, collect the juice	Instill on affected area	3 x a day	0.56	VII
			72	33.33	2	Katakataka	L	Tooth ache	Triturate, add salt or Decoction	Apply on affected part or Drink	When needed	0.63	XI
CPP-034-2017	<i>Capsicum annum L</i>	Solanaceae	36	25.00	1.33	Sili-sili	L	Boils	Add gin, Prepare like a ventosa set-up	Apply on affected part	Once	0.66	XII
			72	25.00	1.33	Sili	Sd	Tooth ache	Gather the seeds, place in cotton	Apply on affected part	When needed	0.63	XI
			35	50.00	1.33	Sili-sili	L	Wounds	Pass thru flame, express the juice	Apply on affected part	Once	0.71	XIX
			35	50.00	1.33	Langis na may sili labuyo	Fr	Wounds	Cook Chili with coconut oil	Rub on affected part	Morning and evening	0.71	XIX

Table 1. Ethnobotanical Data

Specimen Number	Botanical Name	Family	NUMBER	FL (%)	UV	Iwak Plant Name	Plant Part	Disease or Illness or Condition	Mode of Preparation	Mode of Administration	Frequency of Administration	F _{ic}	ICD #
CPP-042-2017	<i>Carica papaya</i> L.	Cariaceae	72	50.00	1	Papaya	Fr	Constipation or Dyspepsia	As is	Eaten	Eat liberally	0.63	XI
			72	50.00	1	Papaya	Rt	Tooth ache	Triturate	Apply on affected part	Until well	0.63	XI
CPP-050-2017	<i>Centella asiatica</i> (L.) Urb.	Apiaceae	72	100	1	Takipkohol	L	Diarrhea	Place in banana leaf, roast, express the juice	Drink	Once a day	0.63	XI
CPP-019-2017	<i>Chrysophyllum cainito</i> L.	Sapotaceae	72	50.00	1	Kaimito	Fr	Diarrhea	As is	Eaten	Eat liberally	0.63	XI
			72	50.00	1	Kaimito	L	Stomach ache	Decoction	Drink	3x a day	0.63	XI
CPP-058-2017	<i>Citrus japonica</i> Thunb.	Rutaceae	36	16.67	1.5	Calamansi	Fr	Anti-dandruff	Express the juice or Slice	Use as shampoo	Every bath time	0.66	XII
			39	33.33	1.5	Calamansi	Fr	Athlete's foot	Express the juice or Boil in saline water	Rub on affected part	When needed	0.61	I
			35	5.56	1.5	Calamansi or buhangin or suka	Fr	For caterpillar venom	Express the juice	Apply on affected part	When needed	0.71	XIX
			19	5.56	1.5	Calamansi	Fr	Colds	Decoction	Drink	Once a day (for 3 days)	0.5	X
			19	5.56	1.5	Calamansi	L	Colds	Decoction, mix with water for bath	For bath	When needed	0.5	X
			71	27.78	1.5	Calamansi	Fr	Cough	Express the juice in water or Roast	Drink	Drink liberally	0.64	XVII I
			71	27.78	1.5	Calamansi	L	Cough	Roast, scrape the skin, mix the expressed juice with honey	Rub on affected part	Once a day	0.64	XVII I

Table 1. Ethnobotanical Data

Specimen Number	Botanical Name	Family	NUR	FL (%)	UV	Iwak Plant Name	Plant Part	Disease or Illness or Condition	Mode of Preparation	Mode of Administration	Frequency of Administration	F _{ic}	ICD #
			10	5.56	1.5	Calamansi	Fr	Sore eyes	Slice	Instill on affected area	2x a day	0.56	VII
CPP-046-2017	<i>Citrus maxima</i> (Burm.) Merr.	Rutaceae	39	100	1	Suha	Bk	Ringworm	Remove the skin	Rub on affected part	Until well	0.61	I
CPP-068-2017	<i>Cocos nucifera</i>	Arecaceae	36	14.29	1.17	Niyog	J	Alopecia	Scrape the meat, express the juice	As shampoo	Before bath time	0.66	XII
			14	16.67	1	Buko or Ligo	J	Anuria	As is	Drink	When needed	0.38	XIV
			14	16.67	1	Niyog	Rt	Anuria	Triturate, express the juice	Drink	3x a day (for 8 days)	0.38	XIV
			35	28.57	1.17	Niyog	O	Burns	Roast, cri	Rub on affected part	2x a day (for 3 days)	0.71	XIX
			35	28.57	1.17	Langis ng niyog	O	Burns	Warm, apply in Guava leaves	Rub on affected part	Morning and evening	0.71	XIX
			9	16.67	1	Buko (pula)	J	Diabetes	As is	Drink	In the morning	0.38	IV
			14	50.00	1	Buko	Fr	Kidney problems	As is	Drink	In the morning	0.38	XIV
			14	50.00	1	Buko	J	Kidney problems	As is	Drink	In the morning	0.38	XIV
			14	50.00	1	Buko (violet)	J	Kidney problems	As is	Drink	In the morning	0.38	XIV
			39	14.29	1.17	Niyog	F (Y)	Scabies	Boil until oil comes out	Rub on affected part	Once a day	0.61	I
			39	14.29	1.17	Niyog	F (Y)	Tinea cruris	Boil until oil comes out	Rub on affected part	Once a day	0.61	I
			72	28.57	1.17	Niyog	H	Tooth ache	Roast, put in a covered plate. Collect the moisture or Roast the husk, pulverize, put powder in cotton	Apply on affected part	When needed	0.63	XI

Table 1. Ethnobotanical Data

Specimen Number	Botanical Name	Family	NUR	FL (%)	UV	Iwak Plant Name	Plant Part	Disease or Illness or Condition	Mode of Preparation	Mode of Administration	Frequency of Administration	Fic	ICD #
			14	16.67	1	Buko	J	UTI	As is	Drink	When needed	0.38	XIV
CPP-070-2017	<i>Croton tiglium</i> Linn	Euphorbiaceae	14	100	1	Tuba	L	Strain	As is	Apply on affected part	Until well	0.23	XIII
CPP-071-2017	<i>Curcuma longa</i>	Zingiberaceae	71	16.67	2	Luyang lunas halaman	Fr	Flatulence	Triturate or scrape with spoon, soak in lukewarm water, strain	Drink	2x a day (for 1 week)	0.64	XVII I
			71	16.67	3	Luyang Dilaw	Fr	Head ache	As is	Apply on affected part, bind with clean cloth	Change when dry, Until well	0.64	XVII I
			14	16.67	3	Luyang Dilaw	Fr	Numbness	Decoction	Drink or rub on affected part	3 x a day	0.23	XIII
			14	16.67	3	Luyang Dilaw	Fr	Rheumatism	Soak in coconut oil	Rub on affected part	Morning and evening	0.23	XIII
			72	16.67	3	Luyang Dilaw	Fr	Stomach ache	Decoction	Drink	4 x a day	0.63	XI
			71	16.67	2	Luyang lunas halaman	Fr	Vomiting	Scrape with spoon, soak in lukewarm water	Drink	Once a day (for 1 week)	0.64	XVII I
CPP-010-2017	<i>Cymbopogon citratus</i> (DC.) Stapf	Poaceae	36	22.22	1.8	Tanglad	L	Alopecia	Triturate, soak in water for 15 minutes	As shampoo	Everyday	0.66	XII
			36	22.22	1.8	Tanglad	L	Alopecia	Decoction	As bath	Once	0.66	XII
			71	11.11	1.8	Tanglad	L	Head ache	Decoction or triturate and express with clean cloth or soak in water for 15 minutes	As bath	Everyday	0.64	XVII I
			4	11.11	1.8	Tanglad	Rt	High blood	Decoction, triturate	Drink	Until well	0.33	IX
			6	11.11	1.8	Tanglad	L	Post-partum tonic	Decoction	As bath	Once	0	XV
			71	11.11	1.8	Tanglad	Rt	Sore throat	Decoction	Drink	3x a day	0.64	XVII I

Table 1. Ethnobotanical Data

Specimen Number	Botanical Name	Family	NUR	FL (%)	UV	Iwak Plant Name	Plant Part	Disease or Illness or Condition	Mode of Preparation	Mode of Administration	Frequency of Administration	Fic	ICD #
CPP-072-2017	<i>Dioscorea bulbifera</i> Linn.	Dioscoreaceae	10	25.00	1	Bayag kabayo	Fr	Clarifying the eyes	Decoction	Instill on affected area	3 x a day	0.56	VII
			4	25.00	1	Bayag kabayo	Fr	Ear infection	Express the juice	Instill on affected area	Until well	0	VIII
			10	50.00	1	Bayag kabayo	Fr	Eye ache	Triturate to express the juice	Apply on affected part	Until well	0.56	VII
CPP-038-2017	<i>Entada phaseoloides</i> (L.) Merr.	Fabaceae	36	10.00	1.43	Gugo	W	Alopecia	Express the juice or Cut into half	As shampoo	Once	0.66	XII
			36	50.00	1.43	Gugo	Bk	Anti-dandruff	Triturate, express the juice	As bath on affected part	Once a day	0.66	XII
			36	50.00	1.43	Gugo	L	Anti-dandruff	Triturate	As shampoo	2x a day	0.66	XII
			36	50.00	1.43	Gugo	Rt	Anti-dandruff	Triturate, express the juice,	As shampoo	Everyday	0.66	XII
			36	50.00	1.43	Gugo	V	Anti-dandruff	Triturate, sun dry, wet with water, express the juice	As shampoo	Once a day	0.66	XII
			36	10.00	1.43	Gugo	Rt	Anti-dandruff or anti-lice	Triturate	As shampoo	Once	0.66	XII
			39	20.00	1.43	Gugo	L	Anti-lice	Decoction	As bath on affected part	Once a day	0.61	I
			36	10.00	1.43	Gugo	Rt	Hair conditioner	Triturate	As shampoo	2x a day	0.66	XII
CPP-060-2017	<i>Eucalyptus globulus</i> Labill.	Myrtaceae	19	100	1	Eucalyptus	L	Colds	Soak in water	Smell	When needed	0.5	X
CPP-029-2017	<i>Euphorbia hirta</i> L.	Euphorbiaceae	9	100	1	Tawa-tawa	L	Diabetes	Triturate	Drink	3x a day	0.38	IV
CPP-074-2017	<i>Ficus nota</i> (Blanco) Merr.	Moraceae	71	100	1	Tibig	Lf	Head ache	Decoction	Apply on affected part	Until well	0.64	XVIII

Table 1. Ethnobotanical Data

sSpecimen Number	Botanical Name	Family	NUR	FL (%)	UV	Iwak Plant Name	Plant Part	Disease or Illness or Condition	Mode of Preparation	Mode of Administration	Frequency of Administration	Fic	ICD #
CPP-026-2017	<i>Gliciridia sepium</i> (Jacq.) Walp.	Fabaceae	39	12.50	2.67	Kakawati or Tangan-tangan (madre cacao)	Rs	Athlete's foot	Scrape the middle part of leaf with bottle	Apply on affected part	Until well	0.61	I
			71	12.50	2.67	Kakawati or Madre cacao	L	Body pains	Collect the resin	Apply on affected part	When needed	0.64	XVIII
			71	12.50	2.67	Kakawati or Madre cacao	L	Fever	Pass thru flame, add coconut oil	Apply on affected part	When needed	0.64	XVIII
			71	12.50	2.67	Kakawati or Madre cacao	L	Headache	Pass thru flame, add coconut oil	Apply on affected part	When needed	0.64	XVIII
			36	12.50	2.67	Kakawati	L	Itchiness	Pass thru flame, add coconut oil	As bath	2x a day or every bath time	0.66	XII
			39	25.00	2.67	Kakawati	L	Scabies	Decoction	As bath	2x a day or every bath time	0.61	I
			14	12.50	2.67	Kakawati or Madre cacao	L	Strain	Decoction	Apply on affected part	When needed	0.23	XIII
CPP-053-2017	<i>Gonocaryum calleryanum</i> (Baill.) Becc.	Cardi- opterid aceae	71	100	1	Lunas bundok	W	Fever	Pass thru flame, add coconut oil	Drink	Once	0.64	XVIII
CPP-052-2017	<i>Helianthus annuus</i>	Aster- aceae	14	100	1	Sunflower	Wp	Kidney problems	Cut into small pieces, decoction	Drink	7x a day, or drink liberally	0.38	XIV
CPP-025-2017	<i>Hibiscus rosa-sinensis</i> L.	Malva- ceae	36	100	1	Gumamela	Fl	Boils	Decoction	Apply on affected part	Until well	0.66	XII
			36	100	1	Gumamela	Fl	Boils	Triturate	Apply on affected part	Change when dry, Until well	0.66	XII
CPP-006-2017	<i>Hyptis suaveolens</i> (L.) Poit.	Lami- aceae	39	66.67	1.5	Suag-kabayo	L	Athlete's foot	Triturate, add salt, put in a clean cloth, put a hole that will fit the affected part	Rub on affected part	Once a day	0.61	I
			35	33.33	1.5	Suag-kabayo	L	Wounds	Roast, express the juice	Rub on affected part	Once a day	0.71	XIX
CPP-037-2017	<i>Impatiens balsamina</i> Linn.	Balsa- minace ae	36	100	1	Kamantigi	Fl	Eczema	Roast, express the juice	Apply on affected part	3 x a day	0.66	XII

Table 1. Ethnobotanical Data

4Specimen Number	Botanical Name	Family	NUR	FL (%)	UV	Iwak Plant Name	Plant Part	Disease or Illness or Condition	Mode of Preparation	Mode of Administration	Frequency of Administration	F _{ic}	IC D #
CPP-030-2017	<i>Imperata cylindrica</i> (L.) Rausch	Poaceae	14	100	1	Kugon	Rt	UTI	Triturate	Drink	Drink liberally	0.38	XI V
CPP-031-2017	<i>Jatropha curcas</i> L.	Euphorbiaceae	71	33.3 3	1	Ga-lumbang	L	Body pains	Decoction	Apply on affected part	Once	0.64	XV III
			14	66.6 7	1	Ga-lumbang	L	Strain	Pass thru flame, add coconut oil	Apply on affected part	Change when dry, Until well	0.23	XII I
CPP-028-2017	<i>Jatropha gossypifolia</i> Linn.	Euphorbiaceae	14	100	1	Tubata	L	Strain	As is, add coconut oil or Pass thru flame and add coconut oil	Apply on affected part	2x a day	0.23	XII I
CPP-049-2017	<i>Lagerstroemia speciosa</i> (L.) Pers.	Lythraceae	4	50.0 0	2	Banaba	L	Ear infection	Roast, add oil or pass thru flame	Instill on affected area	When needed	0	VII I
CPP-049-2017			14	50.0 0	2	Banaba	L+Fr +Bk	Kidney stones	Collect the resin	Drink	Everyday	0.38	XI V
CPP-020-2017	<i>Mentha arvensis</i> Linn.	Labiatae	71	18.7 5	2.2 9	Yerbe Buena	L	Head ache	Decoction	Apply on affected part	When needed	0.64	XV III
CPP-036-2017	<i>Momordica charantia</i> L.	Cucurbitaceae	39	16.6 7	1.5	Ampalaya	L	Athlete's foot	Put on top of hot rice to wilt it, put in cloth	Rub on affected part	When needed	0.61	I
			19	16.6 7	1.5	Ampalaya	F+L	Colds	Express the juice	Drink	2x a day (morning and evening)	0.5	X
			71	33.3 3	1.5	Ampalaya	Fr+L	Cough	Wash with hot water, triturate, express the juice	Drink	2x a day (morning and evening)	0.64	XV III
			71	33.3 3	1.5	Ampalaya	L	Cough	Wash with hot water, triturate, express the juice	Drink	3 x a day	0.64	XV III
			72	33.3 3	3	Ampalayang Ligaw	L	Diarrhea	Roast, put in banana leaves, express in a spoon	Drink	3 x a day	0.63	XI
			71	16.6 7	1.5	Ampalaya	Fr+L	Fever	Decoction	Drink	2x a day (morning and evening)	0.64	XV III
			71	33.3 3	3	Ampalayang Ligaw	L	Fever	Wash with hot water, triturate, express the juice	Drink	Morning and noontime	0.64	XV III

Table 1. Ethnobotanical Data

Specimen Number	Botanical Name	Family	NU R	FL (%)	UV	Iwak Plant Name	Plant Part	Disease or Illness or Condition	Mode of Preparation	Mode of Administration	Frequency of Administration	F _{ic}	ICD #
			71	33.33	3	Ampalayang Ligaw	L	Sore throat	Decoction	Drink	Morning and evening	0.64	XVIII
CPP-032-2017	<i>Moringa oleifera Lam.</i>	Moringaceae	19	12.50	1.6	Malunggay	L	Colds	Decoction	Drink	3x a day	0.5	X
			71	12.50	1.6	Malunggay	L	Cough	Triturate, roast	Drink	3x a day	0.64	XVIII
			71	16.67	1.5	Malunggay	L	Flatulence	Triturate, roast	Drink	Once a day	0.64	XVIII
			6	12.50	1.6	Malunggay	L	Increase lactation	Triturate, express the juice	Drink	Morning or during break-fast	0	XV
			72	50.00	1.6	Malunggay	Bk	Tooth ache	Decoction	Apply on affected part or Gargle	When needed	0.63	XI
			72	50.00	1.6	Malunggay	Rt	Tooth ache	Cut into pieces or Decoction	Gargle	3x a day	0.63	XI
			35	12.50	1.6	Malunggay	L	Wounds	Decoction	Instill on affected area	3x a day	0.71	XIX
CPP-014-2017	<i>Musa x paradisiaca L.</i>	Musaceae	72	50.00	1	Saging saba	Rs	Canker sores	Triturate, express the juice	Rub on affected part	2x a day	0.63	XI
			72	42.86	1.17	Saging	St	Diarrhea	Put collected resin in clean cloth	Drink	Once a day	0.63	XI
			72	42.86	1.17	Saging	Fr	Diarrhea	Roast, put in a glass and stand until juice comes out	Eaten	Until well	0.63	XI
			72	42.86	1.17	Saging	Fr	Diarrhea	As is	Eaten	Eat liberally	0.63	XI
			72	50.00	1	Saging saba	Fr (yellowish)	Diarrhea (children)	As is	Drink	3 x a day	0.63	XI
			2	14.29	1.17	Saging	Rs	Laso - traditional	Roast, express the juice or decoction	Instill on affected area	When needed	0	XXII
			35	42.86	1.17	Saging	Lf	Wounds	Collect resin	Apply on affected part	Until well	0.71	XIX
			35	42.86	1.17	Saging	Rs	Wounds	Triturate	Apply on affected part	Until well	0.71	XIX 12033

Table 1. Ethnobotanical Data

Specimen Number	Botanical Name	Family	NUR	FL (%)	UV	Iwak Plant Name	Plant Part	Disease or Illness or Condition	Mode of Preparation	Mode of Administration	Frequency of Administration	Fic	ICD #
			35	42.86	1.17	Saging	Rs	Wounds	Collect resin	Apply on affected part	Apply liberally	0.71	XIX
CPP-041-2017	<i>Ocimum basilicum</i> L.	Lamiaceae	19	100	1	Basil	L	Colds	Express the juice or Triturate	Drink	3 x a day	0.5	X
CPP-013-2017	<i>Pachyrhizus erosus</i> (L.) Urb.	Fabaceae	10	100	1	Sing-kamas	Fr	Sore eyes	Express the juice	Instill on affected area	2x a day	0.56	VII
CPP-002-2017	<i>Pandanus</i> sp.	Pandanaceae	71	33.33	1	Pandan Lalaki	L	Cough	Scrape the fruit, express the juice	Drink	3 x a day	0.64	XVI II
			14	66.67	1	Pandan Lalaki	L	Kidney stones	Decoction	Drink	3 x a day	0.38	XIV
CPP-012-2017	<i>Piper betel</i> Blanco	Piperaceae	35	100	1	Nganga	Fr	Burns	Decoction	Apply on affected part	When needed	0.71	XIX
CPP-016-2017	<i>Plectranthus amboinicus</i> (Lour.) Spreng.	Lamiaceae	19	18.75	1.23	Oregano	L	Colds	Crush	Drink	Infant: twice; Adult: until well	0.5	X
			71	25.00	1.23	Oregano	L	Cough	Roast, express the juice, strain or Place on top of hot rice or put in hot coals or Decoction	Drink	Infant: twice; Adult: until well	0.64	XVI II
			19	18.75	1.23	Oregano	L	Cough + colds	Place on top of hot rice or put in hot coals or Decoction or Wrap in banana leaves, roast, express the juice	Drink	Until well	0.5	X
			71	6.25	1.23	Oregano	L	Flatulence	Express the juice	Drink	Infant: twice; Adult: until well	0.64	XVI II
			10	12.50	1.23	Oregano	L	Sore eyes	Place on top of hot rice or put in hot coals	Instill on affected area	Until well	0.56	VII
			14	6.25	1.23	Oregano	L	Strain	Express the juice, strain in cotton	Apply on affected part	Once	0.23	XIII
			10	6.25	1.23	Oregano	L	Sty	Pass thru flame	Instill on affected area	Once a day	0.56	VII
CPP-022-2017	<i>Psidium guajava</i> L.	Myrtaceae	39	3.13	2.91	Bayabas	L	Athlete's foot	Roast, express the juice, strain	As bath for affected part	3x a day	0.61	I

Table 1. Ethnobotanical Data

Specimen Number	Botanical Name	Family	NUR	FL (%)	UV	Iwak Plant Name	Plant Part	Disease or Illness or Condition	Mode of Preparation	Mode of Administration	Frequency of Administration	Fic	ICD #
			72	3.13	2.91	Bayabas	L	Canker sores	Decoction	Gargle	Morning and afternoon	0.63	XI
			4	9.38	2.91	Bayabas	L	Circumcision	Decoction	Apply on affected area	3x a day (for 2 days)	1	XXI
			4	9.38	2.91	Bayabas	Lf	Circumcision	As is	As bath on affected part	When needed	1	XXI
			71	3.13	2.91	Bayabas	L	Cough	Decoction	Drink	3x a day	0.64	XVIII
			72	21.88	2.91	*Bayabas	Bk	Diarrhea	Triturate, wrap in banana leaves, roast or pass thru flame	Drink	2-3x a day (for 1 week)	0.63	XI
			72	21.88	2.91	Bayabas	Lf	Diarrhea	Decoction	Eaten	Eat liberally	0.63	XI
			72	21.88	2.91	Bayabas	L	Diarrhea	Chew	Drink	Drink liberally	0.63	XI
			72	21.88	2.91	Bayabas	Lf	Diarrhea	Decoction	Drink	Drink liberally	0.63	XI
			71	3.13	2.91	Bayabas	Lf	Dizziness	Decoction or Triturate express the juice	Smell	When needed	0.64	XVIII
			72	3.13	2.91	Bayabas	Lf	Gastritis	As is	Chew and rub on affected part	When needed	0.63	XI
			71	3.13	2.91	Bayabas	Lf	Itchy throat	Chew to remove juice	Eat to express the juice	Everyday	0.64	XVIII
			72	15.63	2.91	Bayabas	L	Stomach ache	As is	Rub on affected part or Drink or Eat to express the juice	When needed	0.63	XI
			72	15.63	2.91	Bayabas	L or Lf	Stomach ache	Decoction, add salt or As is or Chewed	Eat to express the juice or Drink	When needed	0.63	XI
			35	28.13	2.91	Bayabas	L or Lf	Wounds	As is or Decoction or Chewed	As bath on affected part or Rub to affected part	Use liberally	0.71	XIX
CPP-062-2017	Rauwolfia serpentina (L.) Benth. Ex kurz	Apocynaceae	71	50.00	1	Serpentina	L	Cough	Decoction or As is or Decoction or Chew to break leaves	Drink	2x a day	0.64	XVIII
			72	50.00	1	Serpentina	L	Diarrhea	Decoction	Drink	Drink liberally or 3x a day	0.63	XI

Table 1. Ethnobotanical Data

Specimen Number	Botanical Name	Family	NUR	FL (%)	UV	Iwak Plant Name	Plant Part	Disease or Illness or Condition	Mode of Preparation	Mode of Administration	Frequency of Administration	Fic	ICD #
CPP-039-2017	<i>Sandoricum koetjape</i> (Burmf.) Merr.	Meliaceae	71	100	1	Santol	L	Fever	Soak in water for a few minutes (solution should not be bitter)	Apply on affected part	When needed	0.64	XVII I
CPP-009-2017	<i>Semecarpus cuneiformis Blanco</i>	Anacardiaceae	36	50.00	1	Kaming	L	Allergy	As is, add salt, put in a clean cloth	As steam bath	Once a day	0.66	XII
			36	50.00	1	Kaming	L	Pruritus	Roast or	As steam bath	Once	0.66	XII
CPP-004-2017	<i>Senna alata</i> (L.) Roxb.	Fabaceae	39	60.00	1.25	Akapulko	L or Lf	Ringsworm	Put in a pot cover or	Rub on affected part	Until well	0.61	I
			39	20.00	1.25	Akapulko	Lf	Tinea versicolor or white spots	Triturate or Roast or add salt	Rub on affected part	3 x a day	0.61	I
			39	20.00	1.25	Akapulko	Bk	Tinea versicolor or white spots or Ringsworm	Triturate + Roast	As bath on affected part or Rub to affected part	Until well	0.61	I
CPP-007-2017	<i>Stachytarpheta jamaicensis</i> (L.) Vahl.	Verbenaceae	72	100	1	Hikaw hikawan	Rt	Tooth ache	Decoction or Triturate express the juice	Drink or gargle	3 x a day	0.63	XI
CPP-048-2017	<i>Swietenia macrophylla</i> King	Meliaceae	6	50.00	1	Mahogany	Sd	Abortifacient	Decoction	Drink	3 x a day (for 1 week)	0	XV
			71	50.00	1	Mahogany	Fr	Cough	Remove part of the endocarp	Drink	3 x a day	0.64	XVII I
CPP-040-2017	<i>Syzgium cumini</i> (L.) Skeels	Myrtaceae	72	16.67	1.2	Duhat	Bk	Canker sores	Decoction	Instill on affected area or gargle	3 x a day, until well	0.63	XI
			9	16.67	1.2	Duhat	Bk	Diabetes	Scrape the meat or decoction	Drink	3 x a day	0.38	IV
			72	16.67	1.2	Duhat	Fr+Lf + Bk	Diarrhea	Decoction	Drink	4 x a day	0.63	XI
			2	16.67	1.2	Duhat	Bk	Laso - Traditional	Scrape the meat, Decoction with leaves	Rub on affected part	Until well	0	XXII
			72	16.67	1.2	Duhat	Fr+Lf + Bk	Stomach ache	Triturate, put in towel	Drink	3 x a day	0.63	XI
			72	16.67	1.2	Duhat	Bk	Tooth ache	Scrape the meat, Decoction with leaves	Gargle	When needed	0.63	XI
CPP-023-2017	<i>Tabernaemontana pan-dacaqui</i> Lam.	Apocynaceae	72	75.00	1.33	Pan-dacaqui	L	Tooth ache	Decoction in saline water	Apply on affected part	When needed	0.63	XI

Table 1. Ethnobotanical Data

Specimen Number	Botanical Name	Family	NUR	FL (%)	UV	Iwak Plant Name	Plant Part	Disease or Illness or Condition	Mode of Preparation	Mode of Administration	Frequency of Administration	F _{ic}	ICD #
			1	25.00	1.33	Pandacaqui	Fr	Cancer	Crush to collect resin or Pass thru flame, triturate	Drink	3x a day	0	II
			72	75.00	1.33	Pandacaqui	Rt	Tooth ache	Decoction	Apply on affected part	Every day (when needed)	0.63	XI
			72	75.00	1.33	Pandacaqui	St	Tooth ache	Arrange the roots, add salt	Apply on affected part	Once a day	0.63	XI
CPP-008-2017	<i>Tinospora crispa</i> (L.) Hook. f. & Thomson	Menispermaceae	6	20.00	1.67	Makabuhay	V	Abortifacient	Triturate, mix with lime	Drink	3x a day	0	XV
			39	20	1.67	Makabuhay	V	Athlete's foot	Decoction	Apply on affected part	Every evening	0.61	I
			72	20.00	1.67	Makabuhay	L	Stomach ache	As is, add coconut oil	Drink	When needed	0.63	XI
			14	20.00	1.67	Makabuhay	V	Strain	Decoction	Rub on affected part or massage on affected part	When needed	0.23	XIII
			72	20.00	1.67	Makabuhay	L	Tooth ache	As is, add coconut oil	Drink	When needed	0.63	XI
NONE	UNCOL-LECTED	UNIDENTIFIED	39	100	1	Hakbat or Yellow vine	V	Malaria	Decoction	Drink	"3 x a day (not for pregnant women)"	0.61	I
NONE	UNIDENTIFIED	UNIDENTIFIED	71	12.50	2.29	Payuyut	L	Body pains	Decoction	Whip on affected part or Massage on affected part	"	0.64	XVIII
			19	31.25	2.29	Payuyut	L	Colds	As is or Triturate	Rub on the whole body or as necklace or bracelet	Until leaves are dry	0.5	X
			71	6.25	2.29	Payuyut	L	Fever	Wrap on banana leaves, add salt, pass thru flame or As is, add salt	As necklace	Until well	0.64	XVIII
			71	18.75	2.29	Payuyut	L	Head ache	As is	Rub on the whole body	Until leaves are dry	0.64	XVIII
			71	18.75	2.29	Payuyut	L or Wd	Head ache	Wrap on banana leaves, add salt, pass thru flame	As necklace	Once a day, in the afternoon	0.64	XVIII
			71	12.50	2.29	Payuyut	L	Sore throat	As is	As necklace or bracelet	Everyday	0.64	XVIII
			71	12.50	2.29	Payuyut	L or Wd	Sore throat	As is, add salt, roll and tie it	As necklace	Until well	0.64	XVIII

Table 1. Ethnobotanical Data

Specimen Number	Botanical Name	Family	NUR	FL (%)	UV	Iwak Plant Name	Plant Part	Disease or Illness or Condition	Mode of Preparation	Mode of Administration	Frequency of Administration	F _{ic}	ICD #
NONE	UNIDENTIFIED		71	18.75	2.29	Payuyut	L	Head ache	As is	Apply on affected part	Everyday	0.64	XVIII
NONE	UNIDENTIFIED	UNIDENTIFIED	19	100	1	Ukpoyor Water vine	V	Asthma	As is	Drink	When needed	0.5	X
CPP-051-2017	<i>Vigna unguiculata (L.) Walp.</i>	Fabaceae	39	100	1	Sitaw	L	Athlete's foot	Triturate and stand in a bottle to let juice come out	Rub on affected part	3x a day	0.61	I
CPP-033-2017	<i>Vitex negundo L.</i>	Lamiaceae	19	10.00	2	Lagundi	L	Asthma	Express the juice	Drink	When needed	0.5	X
			71	40.00	2	Lagundi	L	Cough	Decoction	Drink	Every day or when needed	0.64	XVIII
			9	10.00	2	Lagundi	L	Diabetes	Decoction	Drink	Drink liberally	0.38	IV
			71	10.00	2	Lagundi	L	Fever	Decoction	Drink	Everyday	0.64	XVIII
			6	10.00	2	Lagundi	L	Post-partum Binat - Traditional	Decoction	As bath	Morning and evening	0	XV
			72	10.00	2	Lagundi	L	Stomach ache	Decoction with 7 plants	Drink	First bath time after giving birth	0.63	XI
CPP-001-2017	Zingiber officinale	Zingiberaceae	72	10.00	2	Lagundi	L	Tooth ache	Decoction	Gargle	When needed	0.63	XI
	Roscoe		71	20.00	1	Luya	Fr	Cough	Decoction	Drink	When needed	0.64	XVIII
			71	20.00	1	Luya	L	Cough	Decoction, Triturate, express the juice, mix with flour	Drink	when needed	0.64	XVIII
			36	20.00	1	Luya	Rh	Pimples	Decoction	As bath on affected part	Once, when needed	0.66	XII
			71	20.00	1	Luya	Fr	Sore throat	Soak in hot water or Triturate	Drink	2-3x a day	0.64	XVIII
			72	20.00	1	Luya	Rh	Tooth ache	Decoction, add salt	Apply on affected part	When needed	0.63	XI
Legend:	L-leaves, Fr-Fruit, St-Stem, Bk-Bark, Rt-Roots, PH-palm/heart, Sd-Seed, S of Fr-Skin of fruit, O-Oil, J-Juice, H-Husk, V-Vine, Lf-Leaflets, Rs-Resin, Wp-Whole												

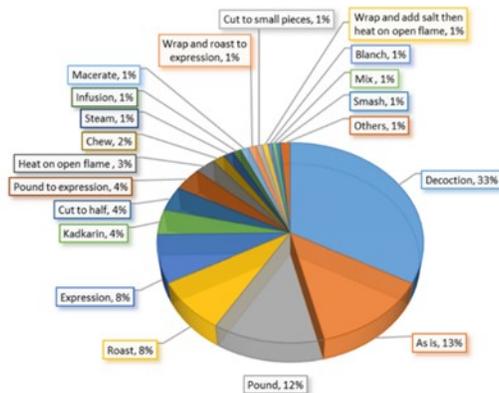


Figure 2. Methods of Preparation

Mode of Administration

The mode of administration is through the method of intake, application, or use of herbal preparation. There are 22 herbal preparations mentioned (Fig 3). The highest percentage is per orem (PO), drinking by mouth, or eating. These are prepared through boiling, infusion, or expression. Bath is used for the whole body or per specified part such as hair, feet or circumcised genitalia. Topical application can be instilled in the eyes and ear. The traditional way of application is the usage of necklace or bracelet to ease cough. Another, by whipping or gently striking to different parts of the body like at the back and stomach. For intake or application, liquid and ointment are used.

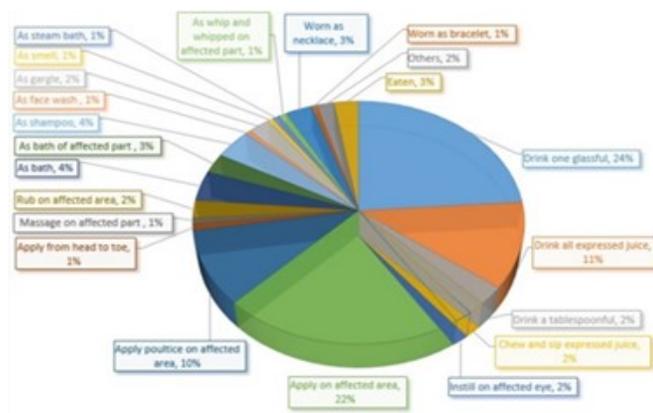


Figure 3. Mode of Administration

Frequency of Administration

On the frequency of the intake or application, Aetas have no specific number of days to measure their health improvement. Out of ten who have no frequency of application,

most of them would say 'until well' (31%), 'only when needed' (14%). The frequency of the number of intakes per day is three times (3x) (10%), once (8%), and exact time of the day like afternoon or on bedtime. Drink liberally meant taking it like water or juice, eat liberally is eating as much as one can take it. Twice a day (2x a day) may be morning and evening, or morning and noon. Non-committal frequency is taking when needed. This might be due to acute illnesses or conditions only. The safety of the medicinal plants posed no concern with its 'Until well' administration. The length of intake is also not a concern, for if an illness or condition is not improving, alternative plants will be taken. Frequency is the number of days it should be taken as a drug.

Illnesses and Diseases According to Body Systems and Conditions

Medicinal plants were classified into categories by the International Classification of Diseases (ICD-10) which is developed by the World Health Organization (WHO) and 10 international centers (see figure 4). Symptoms, signs and abnormal finding have the highest frequency with a total of 77 out of 369 species of plants under this category - Traditional: Laso-Maputi for the whitish substance in the babies mouth, Pitu-pitu as body bath, and Tagulabay for Tinea versicolor. For the highest frequency, the reported diseases are flatulence, fever, cough, cough with phlegm, dizziness, vomiting, body pains, sore throat, headache, and chest pains. This is important because they are the most prevalent disease that the community suffers. The next highest is the digestive category which are diarrhea, liver disease, stomach ache, toothache, canker sore, hyperacidity, and ulcer.

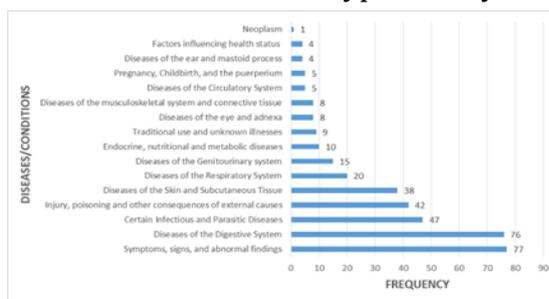


Figure 8. Frequency Distribution of the Diseases/Conditions per Category

Ethnobotanical indices

The ethnomedicinal data of *Aetas* of Sitio Parapal Hermosa Bataan was analyzed using the informant consensus factor (ICF) for consistency of informant knowledge, the fidelity level (FL) of plant for a particular disease, and use value (UV) for use-reports of certain plants. The low values of ICF in data indicate the high number of plants used for treatment in a particular disease. A high FL could be taken as an indication of the good healing potential of the plants and it also implies that the plant is important.

Use value

There are three plants with the highest use of values, which are *Ampalaya* (3.0) used in 2 categories, *Luyang dilaw* (3.), *Bayabas* with (2.91) used in 5 categories and *Kakawati* (2.67) used in 4 categories and *Aloe vera* (2.33). High UV values of the species indicate that the plants are considered as the most important plants used by the Aeta Community in Sitio Parapal, Hermosa Bataan for medicinal purposes. This is partly due to the abundance of medicinal plants that are found plenty in the community.

Fidelity level

Fidelity level values indicate that the particular plant is the most preferred medicinal use, according to the informants. Equal frequencies of the plant species in the same category were considered as the most frequently used species, having multiple FL values. This is used to determine the most preferred species for a particular ailment. Thirty species found to have 100% fidelity level values, however, these thirty species has only one-use report. The two predominant plants that have multiple uses are *Gumamela* for wounds, (100%) *Kasuy* (80%) and *Silisilihan* (76.47%).

Informed consensus factor

Using use-reports, informant consensus factor values of each category was calculated, yielding a range of 0-1. Category 15, Injury poisoning and certain other consequences of external causes obtained an ICF value of 0.71, under of which are wounds with *Silisilihan* and *Bayabas* are the highest. This implies that the same plant species was used by most informants for treating diseases or conditions under this category. Informants used a total number of 11 medicinal plant taxa recorded from 35 use-reports. For Factors influ-

encing health, there is only one plant for a particular category - *Bayabas*. For having a value of 0, Neoplasm, Nervous system, Ear, Pregnancy, Traditional; there was a disagreement among informants over which plant to use for each category. Examples of these plants are *Pandakaki* for cancer, *Tanglad* for migraine, *Suag kabayo* for the ears, *Duhat*, and *Saging* for *laso*.

CONCLUSION

Twenty-one (21) Aetas were interviewed. Seventy-four (74) plants were identified for use. Leaves were predominantly collected - prepared through boiling and used through skin application and drinking. The informants take their herbal preparation until well. There are seventy-seven 77 cited diseases or conditions under signs symptoms and other abnormal finding such as flatulence, fever, cough etc. The most important plants used by the community are Ampalaya, Bayabas, and Kakawate. The most preferred plants for a particular disease are Kasuy for diabetes, Gumamela and Silisilihan for wound healing. The most preferred plants for a particular category are Silisilihan and Bayabas, which are for wounds under injury; poisoning and other consequences for external causes. The bio-diverse flora provides myriads of natural remedies readily available for use. These herbal plants are offered by nature for free, purportedly effective and hardly with adverse effects. The healing benefits of these plants are part of the cultural integrity of the indigenous groups in recognition of their rich practice bound by tradition. It recognizes respect and protection of rights of the indigenous cultural communities to preserve and develop their tradition and institution. It is from this reason that this literature will add to the rich ethnographic profile of the Aetas, further empower their ethnicity and preserve their culture.

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