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Traditional Foods of Ilokanos

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ABSTRACT

This study aimed to discover the traditional foods of Ilokanos in the Province of Ilocos Sur. Employing a phenomenological design, in-depth interview with 27 elders, and triangulated by observations was conducted. The study found out that Ilokanos, from all walks of life, still embraced the importance of traditional foods such as buga, karot, ballaiba, papait, and tabtaba. These foods served as rice substitutes, especially in crisis times, believing these have nutritious values to satisfy daily energy requirements. Ilokanos practice easy ways to prepare these traditional foods for consumption. The traditional foods for Ilokanos are seasonal, the community knows how to preserve for future utilization to be appreciated by the next generation. These important traditional foods are unknown to the younger generation because they are already endangered due to pollution, and abuse, and are seldom served during social gatherings. The researcher recommended that in-depth studies be undertaken to explore other opportunities and future research about the nutritional components of these traditional foods.

Keywords: *Ilokano foods, foods' value, Ilokano heritage, Ilokano culture*

INTRODUCTION

Ilokanos were known to be resilient even though they lived in coastal, agricultural, and mountainous areas. They would not easily surrender in times of crisis. They are resourceful for looking around their surroundings for survival, especially in creepy places. They could find ways and means for the whole family not to suffer from hunger. They often say, that as long as they have rice and fish sauce, they could make the insuperable to achievable because of the presence of the traditional foods available like; vegetables, root crops, and mollusks; thus, could lessen their need for food because of the conventional fruits existing in the harsh environment.

Traditional foods are foods and dishes passed through generations or consumed for many generations; they are prepared and raw, from vegetables and fruits to meat, poultry, and fish, to dairy, eggs, legumes, nuts, and seeds. Beograd (2019) and Guerrero et al. (2009: 348) define traditional foods as the use of particular food preparation methods that have been passed on from one generation to the next. A culture's traditional cuisine reflects that culture and suggests cooperation between the territory's inhabitants Bertozzi (1998).

The researcher observes that some Ilokanos are vegan, for they are gratified with the available veggies in their backyards. They are confident these are more nutritious. Ilokanos love " dinengdeng," a delicious Ilokano dish/viand, for it is delicious and healthy food; boiling, roasting, and grilling are still the most common cooking methods. These would also manifest that Ilokanos are thrifty, as mentioned by Let's

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Preserve and Restore. The Ilocano Culture (n.d.), since the leftover fried fish or roasted fish is good enough to make their sumptuous meal.

The Philippines is very fortunate to have an abundance of vegetables because of its status as an agricultural country. Filipinos are hindered from getting green benefits because of the high price. People who do not eat enough vegetables would suffer from micronutrient malnutrition or lack of the essential vitamins and minerals the human body needs to function well. Also, as Gavilan (2015) made mention, that Food and Nutrition Research Institute (FNRI) listed the indigenous vegetables as follows; alugbati, alukon, katuray, kulitis, kadyos, kalabasa, labanos, labong, malunggay, mustasa, pako, patola, pipino, sayote, sigarilyas, sitaw talinum, talong and upo. Spector (2013) mentioned the 15 indigenous vegetables that are nutritious, delicious, and could contribute to people's livelihoods. They are as follows; amaranth, bunya nut, cowpea, enset, filder pointed cabbage, Formed by asparagus, hinkelhatz pepper, kumara,lifou island yam, malselvnep turnip, mung bean, okra, papalo, perinaldo artichokes, and rourou (taro leaves). Lifestyle INQ. (2020) discusses those vegetables make Ilocano cooking distinct from other regions' cuisines because the cooking itself is pretty simple.

Zulueta (2016) mentioned that Ilocos Sur is a food haven because it offers a unique and exciting cuisine; loaded with meats and vegetable dishes. Ilokanos would provide the following to the tourists; empanada, longganisa, bagnet (crispy pork belly), poqui-puqui (mashed eggplant with eggs), pinakbet (a vegetable dish that combines okra, squash, bitter gourd, eggplant, and string beans, and is cooked in a bagoong base) dinengdeng (soupier than pinakbet), dinardaraan and sapsapuriket(two Ilokano versions of the classic dinuguan blood stew), and dinakdakan (local sisig that uses pork mash and vinegar).

Manghirang (2017) studied one indigenous vegetable that is "kapas-kapas" (pusapusa/bagbagkong, kapuk-kapuk, latok). He found out that this vegetable can be found in thickets and secondary forests from Ilocos Norte to Sorsogon, Mindoro, Cuyo, Biliran, Leyte, Negros, Mindanao, and Basilan. It is also found in Vietnam, Thailand, and China. Kapas kapas flowers are visible during the summertime, while its fruits are sold in bunches in August and can be cooked as dinengdeng or roasted.

These locally grown fruits, vegetables, and mollusks would not only provide an immediate. Phytochemicals are present in these native fruits but are not necessary for Ilokanos. As said by Mbhenyane (2013) found that eating these local fruits can help prevent the growth of various.

These locally grown fruits have undergone chemical analysis and contain active substances such as phytosterol glycosides, polyacetylenes, hypoglycemic alkaloids, flavonoids, and organic sulfur. Additionally, Durst (2014) revealed that conventional and native fruit crops are less harmful to environmental concerns and cultural needs; doing so would help to protect local cultural assets.

Communities. The food and Nutrition Research Institute of the Department of Science and Technology (FNRI-DOST) have concluded that a collaboration with the International Institute for Rural Reconstruction (IIRR), the Department of Education and International (IDRC), and Nutrition Security of the Philippines, have initiated programs

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to utilize indigenous vegetables from school gardens in supplementary feeding programs among-school-aged children. FNRI–DOST has also developed recipes using indigenous vegetables that can be found in the school garden. According to FNRI, introducing indigenous vegetables to school children familiarizes them with the local produce of high-yielding and foreign crops.

Antonio (2018) added a catalog that serves as reference material for the project implementers, extension workers, researchers, students, students, and household consumers for the vanishing and hardly-seen vegetable plants; balinsuek, red cowpea, cayenne pepper, kundol, kapaskapas/sugod-sugod, himbabao, and wild sponge gourd; among the fruits trees are dalayap (Citrus aurantifolia), caburao (Citrus macroptera), darukis (Citrus sp.), custard apple or anonang (Anona reticulate), mansanitas (Zyzyphus mauritiana) Antipolo (Artocarpus blanco), balayang (Musa errans), pomegranate (Punica granatum), bugnay((Antidesma bunius), Carissa (Carissa carandas), zapote Negro (Diospyros ebenaster), and pannalayapen or aping. They have also discovered that the vanishing fruit and forest fruit trees have medicinal uses. Gayao (2018) emphasizes that the indigenous people of Northern Philippines have always considered roots and tubers as staple food and vegetable but very alarming that the younger generation and lack of documentation and indigenous knowledge on roots and tubers are at risk of disappearing.

Ivanova (2014) listed some characteristics of traditional foods as popular within a particular region, having an authentic way of cooking, relatively long and accurate history of consumption and production, persistent high-quality safety, healthiness, and good taste, and most importantly is, nutrient-rich and have a long history of supporting health and wellness. DeWaal (2022) mentions that traditional markets frequently have minimal food safety oversight, inspection, and enforcement. There are no normative requirements particular to conventional food markets, so a study was done to see how the rules for items sold on the street applied to traditional food markets. Marrero(2022) concluded that future public health work should integrate rigorous interdisciplinary research within community-based action and use local expertise to foster a healthy, culturally relevant, and self-determined local food system.

It is a reality that nowadays, millennials are strangers to these traditional foods because they are exposed to foods that are being purchased in reputable restaurants or fast foods—not knowing the adverse effects, compared to conventional foods found in their own localities that are nourishing.

As an Ilokano researcher, this study is essential to all. This would help preserve the Ilokano culture by protecting the traditional foods available in the province of Ilocos Sur. Moreover, an instrument for the readers to be informed about the nutritional contents of these traditional foods; this research will also serve as an eye opener to everyone to keep a healthy environment. Lastly, the College of Teacher Education can see future extension programs to be catered in the province of Ilocos Sur. Therefore, this study aims to determine some traditional food for Ilokanos and how these traditional foods are being prepared.

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METHODOLOGY

This study uncovered some of the traditional foods in the province of Ilocos Sur based on the elders' constant answers during the interviews. Moreover, this study also discovered how traditional foods are being prepared for consumption, especially in appetency times.

Research Design. The researcher employed a phenomenological design to gather the data needed for the study. It was also utilized by Abarquez, et al. (2022) with good results. In addition, Rafanan, et al. (2022) used case study analysis which also helps the researcher to formulate some realistic in-depth analysis. Moreover, the researcher also considered the way the interview was conducted by Chan (2020) in his study. Phenomenological research identifies the meaning of the lived experience of individuals related to a specific phenomenon and then develops a composite description of the phenomenon (Creswell, 2007).

Population and Sample. The study's respondents were 27 elders (15 females and 12 males in the selected towns in the province of Ilocos Sur'. They were interviewed to gather the data needed and triangulated by observations to obtain the data. The research informants are aged 60 and above and are expected to believe that these foods have a leg up against them in crisis times.

Data Gathering Instrument. The researcher used the interview guide she prepared. Part I identified the Ilokanos' traditional foods, and Part II presented some descriptions of the conventional foods and how they are being prepared for comestible.

Data Gathering Procedure. The interviews were conducted in person and through dialogue. The respondents decided upon the time and place. The discussions were audio recorded after permission from the respondents had been sought. A thorough transcription and coding of the individual interviews were performed for analysis.

Ethical Consideration. This study passed through the ethical review committee of the university and complied with all the documentary requirements.

RESULTS AND DISCUSSION

1. Traditional Foods of Ilokanos. Ilokanos eat a variety of foods to prevail in this world. Ilokanos are often compared to animals because they could survive even just for vines, root crops, and other wild plants that sprung up in their communities. Some of the traditional foods that they used to eat are buga (Yam), and karot (Asian bitter Yam) could substitute the Ilocano rice as their staple food in times their palay crop is being devastated by pests or typhoons; because these foods could withstand with heavy

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rainfall or in times of drought. The other traditional foods that serve as their dishes are ballaiba (eelgrass), papait (bitter leaf/sarsalida), and tabtaba (blue-green algae).

Bhat (2014) has said that Anna or food is an aspect of man, a gift from Parmatma, and must be treated with great respect. The body nourishes and grows by absorbing the energies from food; likewise, traditional foods significantly maintain indigenous people's well-being and health.

As one of the respondents in his early 60s said, " If my *Nanang* cooked karot, the whole family would not crave for rice anymore because we are full, so in that sense, the family could save rice and a viand, *Nanang* would only add a pinch of salt, right away our meal is complete. Wells (2019) mentioned that aside from the fantastic taste and culinary uses of traditional foods, they boost the immune system and improve the digestive system. Also, traditional food contains fewer chemicals and is cheaper, creates jobs and small businesses, and brings economic progress if households in every community spend their money shifting this kind of food.

Another respondent in her late 50s mentioned the importance of eelgrass and the bitter leaf and how Ilokanos prepare these traditional foods. Furthermore, these would support the study of Ivanova (2014), giving the characteristics of the conventional foods as follows; popular within the region, it has an authentic way of cooking, persistent high quality by safety, healthiness, and good taste, they are cheap, easy to buy, attract tourism, the cost is not much, it does not take much time to prepare the food, fewer calories, less saturated fat, more iron, more zinc, more Vitamin A, more calcium and could strengthen the cultural capacity of well-being. Meanwhile, the Center for Indigenous Peoples' Nutrition and Environment has listed some benefits of eating traditional foods. Some of it is fewer calories, less saturated fat, more iron-better for muscles and blood, more zinc, more Vitamin A, more calcium, and traditional foods could strengthen cultural capacity and well-being.

Mostly, the research informants have said that buga, karot, papait, ballaiba, and tabtaba are disappearing. These Ilokano standpoints supported Fernandez's (2010) findings that traditional foods face extinction, which could be attributed to little efforts to safeguard and conserve these plants. Likewise, initiatives from residents also need to be revised to protect these from extinction.

2. Preparation of Traditional Foods. Ilokanos have different, unique, and simple ways to prepare these traditional foods the Buga (Yam) (Dioscorea balcanica), Karot (Nami) (Dioscorea hispida Dennst.), papait (bitter leaf) (Mollungo Oppositifolia), tab-taba (blue-green algae) (Nostoc linkia) (Nostoc Commune), and ballaiba (eelgrass) (Zostera Marina). Ilokanos use most of these traditional foods during hunger, famine, drought, rainy seasons, and monsoon rains.

a. Buga (ILK.) Yam (English) (Dioscorea balcanica). They are tuberous herbaceous perennial lianas growing to 12 meters or taller. It is named after the Ancient Greek Physician and Botanist Pedanios Dioscorides. Buga is available from October to November. To Ilokanos, this is a fantastic

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traditional food because the preparation is effortless. The respondent in his 60s said that buga could fill rice during World War II.

Since they evacuated in the woody forest, it was easy for them to search and look for Yam. Besides, one respondent said that *if there was much buga my husband could get, he used to feed his pigs.*

Ilokanos boiled buga, and others will mix it with "ginataan" as a camote substitute in cooking "buridibod." This buga is essential to the Ilokanos. Aside from rice substitute, it is very rich in Vitamins and minerals. Ilokanos's views would support the study of Bantilan (2019) and Siquerra(2011) enumerated the health benefits of eating buga, such as; enhancing brain function (diosgenin), easing symptoms of menopause, having cancer-fighting properties, reducing inflammation, improves blood sugar control, improves digestive health, and weight loss it has antimicrobial effects, improved cholesterol level and easily adjust to one's diet. Moreover, Okwu (2006) also mentioned that buga cleanses skin impurities like rashes and treats anemic patients.

In Ilocos Sur, this root crop is found in Sinait (Cadanglaan, Quibit-qubit, Marnay), San Juan (Mallamin), Galimuyod (Sabangan Bato, Bittong, Abaya, San Vicente), Sta. Maria (Marnaay) and Narvacan(Parparia). A respondent in his early 70s was sad that millennials are unaware of buga and addicted to the foods purchased in food establishments. This status of buga would support the study's findings (Chivenge (2015). Traditional foods like taro, Yam, and other edible root crops must be developed to transform them into industrial goods that can be traded locally and in the market. Moreover, he suggested a concerted effort to improve the utilization and conservation of genetic resources.

In Africa, in the study of Balbach (1993) mentioned that buga was found to have a folkloric use that could increase fertility in women who habitually consumed it. This finding of Yam's service would also support the conclusion of Rinkesh (2017) that buga/ yam can produce "natural" progesterone, which is crucial in helping a uterus prepare for a fertilized egg, and this is called Dioscorea villosa.

Zainey (2016), Bantillan (2019), and Firdous (2017) mentioned the other health benefits of buga/yam and allergies if it is not used in moderation.

On the other hand, the following are its adverse effects of buga if not consumed in moderate amounts; it might be fatal for breastfeeding babies, affect conditions related to estrogen imbalance in the body, endometriosis, ovarian cancer, uterine cancer or breast cancer, so Yam must be use-up in minimal amount. Lastly, people with protein S deficiency should not consume Yam because it may increase the blood clot risk.

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b. Karot/Nami (Tagalog)/ Gayos (Bisaya)Asiatic bitter yam, Intoxicating yam (Dioscorea Hispida Dennst.)

Karot is a twining vine from tuberous roots reaching a length of several meters. Stems covered with few or many short sharp spines. Leaves are three foliates, the leaflets 12 to 20 centimeters long, hairy, the lateral one's oblique, oblong-ovate, and the terminal one equilateral oblong to oblate or bovate. According to one of the respondents in the second district of Ilocos Sur have said, *during a famine, my father used to get karot, and my mom would also prepare it until it was edible*. Karot preparation is very tough because one must remove the toxin in it. Indians, Nepal aborigines, Ghana, Nigeria, the Caribbean Island, China, Japan, Malaysia, Thailand, and Taiwan also used this karot during the famine.

This famine food is available from August to September and is found in Galimuyod (Sabangan Bato, San Vicente, Bitong), Sta. Maria (Gusing, Baballasioan), Narvacan (Parparia and Buccalan), Candon (Bagani Campo), Sta. Cruz (Camanggaan), Sinait(Marnay, Kibit-kibit, Cadangla-an, Nagrebkan), Cabugao (Catukdaan), and San Juan (Malammin, Kakandungan, Muraya). The research informants shared how they prepared this food. Most of them used to place the karot in the after-boiled rice (no steamer available), and some would fry /saute' (ipidas da ti paryok).

The respondents interviewed karot was an excellent rice substitute; the big problem was the difficulty in removing the toxic part of karot. Thai called the toxic part *kloi*. The respondents in their late 70s mentioned the different steps to consider in the preparation. One requires thin slicing of karot, soaking in salted water for three days, placing in a sack to re-soak in a flowing river for three days, and finally, testing its edibility. People who consume karot have various techniques to eliminate bitterness. In Papua New Guinea, the tuber is sliced and boiled for two days before cooking. While the Sakai, Thailand, removes the toxins by boiling with wood ashes. Bhandari (2005) said that the Nepals remove the toxins by soaking them overnight and subjected to successive boiling to remove the bitterness.

Aside from karot as a rice substitute, Stuart (2018) mentioned the health benefits of karot as follows; anti-infectious, antiphlogistic, anti-contusion, hemostatic, juice of underground stem reported to possess narcotic properties, anthelmintic activity against Pheretima Posthuma results showed it is anthelmintic (comparable to standard Albendazole), antioxidants, anti-inflammatory, analgesic, and anti-tumor properties. It may also help lose weight due to the present galactomannan when

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extracted. Karot serves as Aeta's food source from Porac, Pampanga, during the rainy season and monsoon rains since it is rich in carbohydrates. In Thailand, this tuber makes a dessert called Kao Nuew Kloi. In Kerala, India, the herb is cooked with salt, chili, tamarind, and turmeric powder and is used as curry.

On the other hand, karot has adverse effects if the toxin is not removed correctly. Beuy (2014) mentions that Karot has dangerous and problematic properties. It is a nervous system paralyzing, not a protoplasmic poison. Neurotoxicity manifestations range from dizziness, altered consciousness, muscle paralysis, and seizures. It has also been reported as criminal poisoning.

Nashriyah (2012) also found out in her study that the villagers of Malaysia use karot (Ubi gadong) as their traditional deworming medicine; to cure hernia and asthma. The fishermen use it to catch prawns and to poison the fish to see them easily.

c. Papait. (Ilk.) Sarsalida/malagoso (Tagalog) Bitter leaf/ Slender Carpetweed (English) (Mollugo oppositifolia). Ilokanos consider Papait a nutritious traditional food because of the health benefits that could be derived from it. One of the respondents said papait was too valuable to his balikbayan aunt. His aunt believes in the various benefits of papait. This papait is visible in the province as long as the area has ample moisture.

Papait can be gathered in Narvacan (Rivadavia), Sta. Maria (Gusing, Ag-agrao), and Sto. Domingo (Borobor, Paras, Parada, Pussuac, Cabaritan).

This papait is called carpetweed because they crawl and expand around its main root, spreading and covering the soil. It has tiny multiple tiny branches, branching out and criss crossing each other. It is a slender spreading or ascending, smooth, branched, annual herb with stems as long as 10 to 40 centimeters. When this plant is still tender, some will eat the roots. When watered, regrowth is quick for the leaves for the next harvest. Papait is a green and leafy vegetable, and as the name implies for the Ilokanos, "Pait" means bitter. This plant stands for its bitterly appealing. Papait with pinablad (boiled) balatong, mung bean, or other beans is delicious for Ilokanos. However, most Ilokanos are more significant as a salad, blanched and garnished with tomato, fish

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sauce, and onions. Stuart (2016) and The Philippine Star (2015) have mentioned the health benefits of papait: as a source of iron and calcium, appetizer, aperient antiseptic, uterine stimulant, and antioxidant. Papait has anti-diabetic potential effectiveness of plant performance is better than the standard drug Glibenclamide.

Besides the Philippines, papait is also visible in India, Bangladesh, Thailand, China, tropical Africa, and Australia. In India, papait is used by tribal people for liver diseases. In Mali, Africa, papait treats malaria, joint pains, inflammation, intestinal parasites, furuncles, and wounds. Aerial parts and dried stems ground into a fine powder added to food used for abdominal pains and jaundice—fresh leaves used against dizziness to stimulate the appetite. In Bangladesh, it is used to lessen joint pains, inflammation, diarrhea, fever, boils, and skin disorders. While in Thailand, they use the papait leaves as an expectorant and antipyretic. At the same time, the Chinese use it as a traditional medicine to treat herpes zoster and herpangina.

d. Tab-taba (Ilk.), barbaradio,bakbakasi,dodol-dodol, bibildong, star jelly, cyanobacteria, witch butter, mare's eggs, fah-Tsai, facai, blue-green algae (Eng.), (Nostoc Commune Vaucher) (Nostoc linkia, Nostoc Kurzianum Zeller, Nostocella communis, Tremella nostoc Linnaeus) A traditional food that appears after a long term rainy days during August and September in the field or at the foot of the mountains.

The respondents from the second district of Ilocos Sur have said that tabtaba is their most awaited food to appear. Most of the respondents interviewed, tabtaba is being prepared as a salad.

Tabtaba is considered a freshwater alga (lumot) named blue-green algae; they are predominantly terrestrial, growing on rocks and soil, and a few succeed in the water. These characteristics make people comfortable collecting by hand. Furthermore, colonies of tabtaba can be dried and will return to the standard shape and size once rewetted. This tabtaba is visible in fields (katal-talunan) in Narvacan (Rivadavia), Sta. Maria (Gusing, Ag-agrao), Sta. Cruz (Camanggaan) and San Juan (Mallamin).

Wash and rinse the tabtaba to get the dirt stuck to its lobes; put it in a bowl, pour hot water for some minutes, and drain. To taste, they dress in calamansi/tomato, onion slices, ginger, and a little bagoong juice (fish sauce). In comparison, others prefer to cook it and add all the ingredients. Ilokanos practicing this believed it is safer than eating fresh. Some others wanted to sauté tabtaba in a bit of cooking oil, garlic, onion, and tomatoes.

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Borowitzka (2018) mentioned that tabtaba is also eaten in Indonesia, Thailand, Fiji, Peru, Ecuador, Mexico, Mongolia, Siberia, Japan, and China. Tabtaba is also seen in Singapore and grows in alkaline soils, brackish water, paddy fields, cliffs, and wet rocks. In China, it is nicknamed *you lai gu* (meaning post-rain mushroom) in Mandarin as Fa-Cai (vegetables). While in China, it is considered exceptional food because this traditional food is served during Lunar New Year. After all, for them, it symbolizes good luck. It is also considered a famine food and nutritional and delicious wild food as a food delicacy. It has been an ingredient in ancient medicine since the Jin Dynasty (317-420 A.D.), as recorded in the Compendium of Materia Medica. It was also introduced to the ailing Emperor and recovered his health after long-term consumption. For that, the Emperor was very grateful that he granted the name Ge-Xian-Me (Rice of Immortal Ge) in honor of Ge Hong. This alga continues to be consumed in China, especially Guangdong, and by overseas Chinese because of its food values and spiritual image. Tabtaba is popular and valuable due to the limited supply that fake Nostoc is being sold in Hong Kong. The amount of Nostoc Commune (tabtaba) harvested from Hefeng Country, China's paddy fields, has also declined due to pesticides and fertilizers.

Li (2018) and Paredes (2015) have mentioned the health benefits of tabtaba as a significant cytotoxic and genotoxic activity; antibacterial activity towards S. aureoles but weak against E. coli at different concentrations. A precious source of natural drugs and agents for developing medicines and functional food for disease prevention and health promotion. The extracted juice contains anti-inflammatory effects, anti-infectious and antibacterial activity, and serum cholesterol reduction. Furthermore, most importantly, it has anticancer potential, which was successfully proven and verified by precise experiments by Zhang (2017). According to his research, the extracted crude from the tabtaba significantly inhibited the proliferation of A549 and SMMC-7721 cells with IC50 Of 24.79 and 51.33 ug/ml, respectively.

e. Ballaiba "buok ti sirena"(Ilk.) Eelgrass /tape grass/ribbon grass (Eng.) Zostera Marina (Scientific Name) Ballaiba is one of Ilokanos' traditional fast-vanishing foods. This food was exceedingly abundant in flowing rivers and fishponds. Ilokanos could quickly locate where to gather if ever they needed. Some housewives would accidentally collect if they wished to get some snails in the fishpond. One 75-year-old respondent said," if my friends and I would wish to get some snails, but unluckily we only get a few we have to get some ballaiba instead, it is even easier to prepare, just slice it to the desired size add a little amount of salt, smash then rinse it well." The respondent explains how they gather and prepare this ballaiba. She said that *What you see is what you get- what you ingest is*

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*what you undigest*ed. This plant is more abundant in the first district of Ilocos Sur than the Second District. They grow in fishponds and bedsides of freshwater, Sinait (Dadalaquiten, Cabangtalan), Narvacan (Rivadavia), and Sta. Maria (Penned, Butir) and in Sta. Cruz Ilocos Sur is found only in Brgy. Bani. That is why consumers have in their mind that it is safe to be consumed by humans aside from being the habitat of fish.

Ballaiba is an underwater flowering plant with ¼ inch-broad leaves that can reach lengths of 3 feet. Eelgrass is submerged and considered as rhizomes. It is also referred to as SAV (Submerged Aquatic Vegetation). Ilokanos, they are known as seaweed alga or smooth cordgrass. It blooms in early spring and summer. Ballaiba would serve as a special viand for Ilokanos and is also friendly to the environment. This plant filters the excess nutrients out of the water and helps prevent flooding and erosion by establishing sediment and buffering wave action. Ballayba requires a specific amount of light and clear water to propagate; therefore, the said flowering plant indicates healthy water quality and could help fight against climate change.

Nowadays, this ballaiba is fast vanishing, and some of the reasons were given by the respondents interviewed. A few reasons are increased water pollution, waste disease, irresponsible consumption, and global warming. Massie (1998) and Taylor (2019) have noted that eelgrass could reduce water pollution. The fast loss dramatically affects the fish sanctuary and wildlife population and produces the oxygen we breathe daily. Eelgrass could provide ecological services by providing food for waterfowl and a habitat for fish and aquatic invertebrates.

Shively (2019) enumerated some importance of ballaiba, and they are as follows; eelgrass beds provide natural buffers against coastal storms by absorbing the force from waves, and through their extensive root systems, preventing some shoreline sediments from washing away, it absorbs carbon dioxide and methane-both climate-warming greenhouse gases-and stores them in its root system, it provides food chain by providing habitat where microorganisms such as plankton thrive, (the swaying grasses also offer shelter and foraging areas for rockfish, salmon and Dungeness crab), serves as the foods of migratory fowl the Pacific black brant, green turtles, manatees, dugongs, and other marine mammals, it also helps improve water quality by absorbing pollutants, and lastly ballaiba beds support fish and shellfish that are integral to the commercial and recreational fishing industries.

Eelgrass is visible in the Northern Hemisphere and Australian seashores, New Zealand, Southeast Asia, and Southern Africa. Eelgrass has been used for food by the Seri tribe of Native Americans on the coast of Sonora, Mexico. The natives eat this plant fresh or dried into cakes for winter food. It was also used for smoking deer meat. The Seri is called the month of April xnoois when the eelgrass seed is mature. This eelgrass has been used as packing material and stuffing for mattresses and cushions. France barracks also used dried eelgrass as mattresses stuffed during WWI. While on the Danish Island of Laeso, they use the leaves for thatching roofs since the eelgrass is heavy, longer-lasting, and more accessible to thatch. Moreover, this plant has been used when dry for insulation in eco-friendly houses and as a ground cover in permaculture gardens once its salt layer is washed off.

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CONCLUSION

Whether rich or poor, Ilokanos still embrace the importance of traditional foods such as the buga, karot, ballaiba, papait, and tabtaba. These conventional foods serve as rice substitutes, especially in times of crisis/famine in early times. Moreover, these foods are believed to be nutritious and have therapeutic claims, thinking they cure various ailments. Ilokanos from the province of Ilocos Sur practice easy ways/procedures to prepare these foods for consumption. Some of these traditional foods are seasonal; therefore, Ilokanos need to learn how to preserve and use them aside from being consumed. As time flies fast, these important traditional foods are unknown to the younger generation because they are already endangered due to pollution and being abused; and seldom served during social gatherings.

RECOMMENDATION

Based on the findings and conclusions drawn from this study, the researcher forwarded the following recommendations (1) The researcher recommended that in-depth studies should be undertaken to learn more about the nutritional components of these traditional foods and how to preserve them from being visible and appreciated by the next generations to come. (2) Moreover, the College of Teacher Education could align an extension activity focusing on protecting these traditional foods as a part of the Ilokano heritage.

REFERENCES

Abarquez, S. IV, Mata, L. & Lopez, R. (2022). Ethical decision making of gen z student leaders in the phenomenological-empirical context. *Asian Journal of Education and Human Development (AJEHD)*, *2*(1), 67-84. https://ajehd.unp.edu.ph/index.php/ajehd/article/view/29

Antonio, M. (2018). MMSU launches catalog on indigenous food plants. https://www. mmsu.edu.ph> news

Balbach, A. (1993). As hortalicus and medicinal natural. https:// www.scielo.php? Script=sci& ref=00064&ref=000064pid=S0102S0102-0536201100001

Bhandari, R. (2005). Bitterness and toxicity in wild yam Tubers of Nepal.

Bantilan, C. (2019). 11 Health and nutrition benefits of yam.

Bertozzi, L. (1998). Tipicidad alimentaria y dieta mediterránea. In A. Medina, F. Medina, & G. Colesanti (Eds.), El color de la alimentación mediterránea. Elementos sensoriales y culturales de la nutrición (pp. 15–41). Barcelona: Icaria.

Bhat, S. (2014). Importance of traditional food system. https://academia.edu/32085641/Importance _of_ traditional_food-system

Chan, R. R. T. (2020). The festival extravaganza of Vigan city, Philippines. *The Vector: International Journal of Emerging Science, Technology and Management (IJESTM)*, *29*(1),64-82. https://vector.unp.edu.ph/index.php/1/article/view/57

Chivenge, P. (2015). The potential role of neglected and underutilized crop species as future crops under the water-scarce condition in Sub-Saharan Africa https://ncbi.nlm.nih.gov>pmc>4483666

Durst, P. (2014). Promotion and under-utilized indigenous food resources for food security and nutrition in asia and the pacific. www.fao>publications >card

Firdous, H. (2016). Benefits of Yam (Ratalu) and its side effects. https;// www.lybrate .com>topic

Gayao, B. (2018). Indigenous knowledge and household security: The role of root tuber crops among indigenous peoples in northern Philippines. https://www..wageningenacademic.com/doi/abs/10.3920/978-90-8686-864-33

Guerrero, L. (2009). Consumer-driven definition of traditional food products and innovation in traditional foods. A qualitative cross-cultural study. Appetite, 52(2), 345–354.

Kalaba, F. (2009). The contribution of indigenous fruit trees in sustaining rural livelihoods and conservation of natural resources. https://pdfs.semanticsscholarorg.

Li, Z. (2018). Healthy efficacy of nostoc commune vaucher. https://www.ncbi.nlm.nih.gov.pmc

Marrero, A., & Mattei, J. (2022). Reclaiming traditional, plant-based, climate-resilient food systems in small islands. *The Lancet Planetary Health*, *6*(2), 171-179. https://doi.org/10.1016/S2542-5196(21)00322-3

Mbhenyane, X. (2013). The consumption of indigenous fruits and vegetables and health risk in rural subjects of the Limpopo province, South Africa. https:// www.ajol.info> article> view

Manghirang, R. (2017). Kapas-Kapas and indigenous vegetable. https:// www.agriculture.com.ph>kapas-kapas

Nashriyah, M. (2012). Ethnobotany and distribution of dioscorea hispida dennst in Besut, Marang, and Setiu Districts of Terengganu, Peninsula, Malaysia. https:// www. semanticsscholar.org> Ethnobotany-and-Distribution

Okwu, J. (2006). Evaluation of the Photo nutrients, minerals, and vitamins contents of some varieties of Yam. https://wwwscielo br/scielo.php?script=sci artext &pid_SO102 0536201100010003

Paredes, N. (2015). Phytochemical, Nutritive, Cytotoxin and antibacterial analysis of Tabtaba Species (Nostoc Nickia) of Ligas Baay Abra, Philippines. https:// www.researchgate.net>3003

Philippine Star (2015). Common weed a potential antioxidant, say UP researches.

Rafanan, C. & Romo, N. (2022). Disaster risk reduction and management of a coastal grade school: A case analysis. *Asian Journal of Education and Human Development (AJEHD)*, *2*(1), 95-107. https://ajehd.unp.edu.ph/index.php/ajehd/article/view/31

Rotor, A. (2014). Papait is the most bitter vegetable. avrotor2.blogspot.com.2014/vx

Rinkesh, R. (2017). 13 impressive health benefits of yams to improve your digestive health. https://www.conserve-energy-future-future.com

Shively, P. (2019) Six Reasons to Protect Eelgrass. https://www.pewtrusts.org

Siquerra, M. (2011). Yam: A neglected and underutilized Crop in Brazil. https://www.scielo.br>scielo

DeWaal, C. S., Okoruwa, A., Yalch, T., & McClafferty, B. (2022). Regional Codex Guidelines and Their Potential to Impact Food Safety in Traditional Food Markets. *Journal of Food Protection*, *85*(8), 1148-1156. https://doi.org/10.4315/JFP-22-052ISSN 0362-028X.

Stuart, G. (2016). Sarsalida. https://www.start change.org>SARSALIDA

Stuart, G. (2018). Karot. https://www.stuart change.org> Nami

Taylor, R. (2019) Eelgrass. https://www.sciencedirect.com/topics/agricultural-and – biological https://www. pewtrusts.org.

Zhang, W. (2007) Migration suppression of small cell lung cancer by Polysaccharides from Nostoc Commune Vaucher. https://www.researchgate.net>3057

Zulueta, D. (2016). The flavors of Ilocos Sur. https://businessmirror.com.ph>2016