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for Biodiversity

Slow Food stands at the crossroads of ecology and gastronomy, ethics and pleasure. It opposes the standardization of taste and culture, and the unrestrained power of the food industry and factory farming. Our association believes in the concept of neo-gastronomy - recognition of the strong connections between plate, planet, people and culture.

One of the 3 strategic objectives of Slow Food agreed from the Slow Food International Congress, held in October 2012, in Turin, Italy, was the relaunch of the project The Ark of Taste project, seeking 10.000 Ark of Taste products from around the world.

The 10,000 Ark of Taste project, represents the relaunch of the projects for protecting biodiversity (the Ark, but also the Presidia and Earth Markets) and the desire to expand the commitment to these projects to the entire association network, via extensive training activities and awareness-raising. We cannot talk about access to good, clean and fair food for everyone if, in the meantime, humanity is losing its heritage of fruit and vegetable varieties, native livestock breeds and traditional food products. Biodiversity is our insurance for the future, because it allows plants and animals to adapt to climate change, unpredictable events, parasite attacks and diseases. Native plant and animal varieties are often hardier and require fewer external inputs, like water, fertilizers and pesticides for plants and veterinary care and feed supplements for animals. This allows communities to apply sustainable and clean agricultural techniques.

The 36 Ark of Taste products from the Philippines are that have been approved as at 1 April 2016 are as follows:

Batanes Island

Tubho

Tubho is the traditional tea of the Ivatan people in Batanes, the northernmost island province of the Philippines, which is also the smallest province, both in terms of population and land area. The province is hilly and mountainous with the islands sparsely populated and subject to frequent typhoons. The province comprises ten islands that are located in the Luzon Strait between the Babuyan Islands (belonging to Cagayan Province) and Taiwan. The three largest islands, Batan, Itbayat, and Sabtang, are the only inhabited islands. The tubho plant grows wild in the Batanes landscape and is part of the local food custom of the local people. Not much literature is written about this plant and only the dried product, as tea can be found for widespread sale. The tubho leaves are harvested from the plant when it is mature and already dried. Local people say that this is done so the tea does not taste bitter. To make a cup, they simply snap off a dried leafy stem and boil it until the water turns brown. It tastes very mild and is usually served by the locals with brown sugar. As an endemic plant harvested from mountainous areas, there are no known commercial plantings of tubho. Although some dried plants are sold as tea, this is only in small quantities as part of the pasalubong or souvenir products for tourists, and therefore is mainly sold in tourist destination area of the island group. Tubho is a traditional tea that can be found only in the northernmost part of the Philippines. Unlike its other Asian counterparts, Filipinos are not traditionally tea drinkers a part from in this area. Nowadays, the popularity of teas among younger generations in urban areas of the Philippines is due to the franchised commercial milk tea products that hail from other countries. The level of awareness about the benefits and value of traditional products like tubho as tea is very low, and tourism efforts in the Philippines are usually linked only to sites or places of interest and not



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really about the culture that is linked to traditional food.

Cebu

Budbud Kabog/Binka Dawa

Budbud kabog or binka dawa are the local words for suman, the Filipino word for a type of native cake. Kabog milled is used to make the cakes, which are the color of a bat (the literal meaning of kabog). The ingredients used to produce budbud kabog are produced locally in Cebu, in the centrally located Visayas Islands in the Philippines where the delicacy originated. Budbud kabog has a distinct texture and flavor, different from the usual rice native cakes that are commonly found in the Philippines. To make the cakes, fresh kabog millet should be rinsed in two to three changes of fresh water, then drained. Coconut milk should be added to a pan and boiled until slightly reduced. The kabog is added to the coconut meat and constantly stirred for 30-35 minutes. About 20 minutes into the cooking time, sugar is added to taste. The variation called binka dawa, produced with coconut wine instead of coconut milk has a smoother texture than those called budbud kabog, which are grainier. Budbud kabog is mainly made in the central northern areas of Cebu, while binka dawa is more often found in the southwestern areas. The cakes are wrapped with native banana leaves and paired with tablea, a traditional thick chocolate drink. Kabog millet is a native cereal of the Philippines and its use long pre-dates Spanish colonization. Local folklore has it that the grain was discovered by a farmer who found it in a bat cave. He cooked the millet, but his recipe was bland. After trying again after pounding the millet and adding sugar, he found a recipe that became the base of budbud kabog. Residents of the city of Catmon say that the delicacy was first sold at a tollbooth at Naghalin Bridge. Today, the production of the kabog grain is dwindling. Catmonanons celebrate the Budbud Kabog Festival every February 10. Because it is made from the only millet variety in the Philippines, a decline in the availability of the primary ingredients threatens transformed products like budbud kabog. These days, it is usually only found for sale during certain days during the year, but is highly sought by tourists who have tasted this aromatic product.

Kabog Millet

Paniki Kabog is the name in Cebuano dialect for what is called paniki in the rest of the Philippines. It is sometimes referred to as dawa, meaning "bird seeds." It is a small-seeded cereal plant known as millet in other countries. Kabog is an ecotype of *Panicum miliaceum*, and comes in darker and lighter brown varieties. It is cultivated in Cebu, one of the central Visayas Islands of the Philippines, from locally acquired seeds. It has a short growing season under dry, high temperature conditions. Kabog millet is used to make budbud kabog, a term for a black suman or cake. Kabog was a native cereal staple food of Cebuanos long before the Spanish colonizers came into the Philippines, and it is the only known millet existing in the Philippines. In Cebu, this millet grew wild and in abundance in the mountains of Catmon. Residents later cultivated the plant when they realized that its grains could be utilized for food. Kabog gets its name for the local word for "bat," for its dark brown color and a local legend. Folklore has it that a farmer once discovered millet grass scattered on a cave floor. The cave bats (kabog in the native tongue) used the millet as food. Thinking that the grass seeds could not be poison, he cooked them but found his recipe to be coarse and bland in taste. He then experimented by pounding the millet seeds before cooking, and added sugar, creating a delicious dish. Locals celebrate the Budbud Kabog Festival every February 10. Some



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Cebuanos have plantations of Kabog in some parts of the province, notably the north central area which includes the towns of Catmon, Borbon and Tabogon, and the southwestern town of Balamban. It is usually not sold in its raw form on the market, and when it is only in small quantities. It is more often found in its cooked form as budbud or suman. Overall, though, the production of the kabog is dwindling. It is not promoted as a profitable crop, and the government encourages the planting of higher yielding varieties, disregarding traditional, historical crops like kabog.

Kunsilba (Banana Brittle)

Kunsilba is a native delicacy from the island of Cebu in the Philippines made from the locally grown cardaba banana variety. Semi-ripe bananas are used both for flavor and ease of preparation, because the fully ripe fruits are too soft and slightly sour tasting. The bananas are peeled and sliced thinly and vertically (5-6 slices per fruit). They are then dried in the sun for about 8 hours. The dried slices are strung along a coconut leaf rib and tied together to form a ring of dried banana. This is then dipped into a caramel prepared from muscovado sugar before being hung to drain away the excess caramel. For mobile sales, the banana pieces are covered with banana leaves and placed in woven baskets. For bulk sales, they are stored in tin cans. Kunsilba production was long associated with sugar production, and was often made where there was a sugar cane mill. While the sugar cane juice boiled for the preparation for muscovado sugar, the banana pieces would be dipped into the juice. Before the tourism industry moved into the area, vendors along public beaches would sell local delicacies like kunsilba, which was especially loved among children for its sweet flavor and crunchy texture. Today, however, it is rarely if ever seen. This is partly due to the gradual closure of sugar mills in the area (especially the one in Talisay, in central eastern Cebu), and partially due to the arrival of newer, similar sweets that are faster to prepare. Pinasugbo, for example, is made of banana pieces fried in oil and dipped in caramel sold wrapped in paper in a nearby area of the Philippines.

Landang (Native Tapioca)

Landang is a processed tapioca product made from native palm flour. The flour used is derived from the inner part of the trunk of the buli or buri palm tree (*Corypha elata*). The consistency is lumpy and uneven, with a chewy and slippery feeling and bland taste. Landang has the smell of mildly fermented grain and is off-white in color. The production process is done by hand and requires several skilled people 5-7 days to complete it. One tree will produce about five sacks of finished flour. First, a buli palm of about 50 years of age is carefully selected and cut. Then, the trunk is bisected vertically to expose the core. This part is cut into slabs of about 23 cm x 30 cm in size, which are then sun-dried, a process that takes 2-3 days. Once dry, the slabs are pounded and pulverized with a wooden mortar and pestle. The pulverized flour is sieved and any fibrous matter is separated out for further pounding. The flour can be packaged and sold at this stage, or producers will continue on to the next step: the soaking of the flour. Flour is placed into a rectangular wooden container (the unawan) and soaked in water for 8 hours, to clean the flour. Dirt and sediment is drained away and soaking continues until the flour is white or light tan in color. The lighter the color, the fewer impurities. The water that is drained away is usually given to livestock. The soaked flour is then dried in the sun and sieved again. Then, it is roasted in an oil-coated pan, stirring for about an hour and a half until the flour forms small lumps, and completing the production process for making landang. Properly roasted landang can be stored in a clean, dry place for later use. Binignit is one traditional dish made using landang and coconut milk cooked with sweet potatoes, bananas, sabá, sticky rice and jackfruit. Binignit is traditionally prepared as a Lenten dish. Kinugay is a simple stew of landang,



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coconut milk and muscovado. The flour can also be mixed with corn grits and steamed to produce the snacks puto buli or buddod. It is believed that landang was created as a wartime food, with hunger driving civilians to explore the food potential of the buli palm. Landang production often involves the extended family, with each member having a different role, and cooking together with landang once it is complete. Landang can also be sold on the market, and is often found in Carbon, the largest market in Cebu. Production takes place throughout northern Cebu, and there is even a town called “Sitio Landang” where the production thrives and equipment is shared communally. Today, however, landang production is threatened with cutting of buli forests for development of subdivisions and malls. Other parts of the tree are used as well, for building and craft materials, and all are at risk of being lost. The palms are not cultivated, but harvested from the wild. Furthermore, the trees take decades to grow before being able to be used for landang. In addition, younger generations are seeking work in cities, moving away and leaving fewer people to continue landang production.

Tinigib Visayan White Corn/Mais Bisaya, Cebu White Corn

Corn is an important food crop in the Philippines, a staple food of 20% of the Filipino population, primarily in the regions of the Visayas and Mindanao. White corn is used as substitute for rice in times of hardship (while yellow corn is mainly produced for livestock feed). In Cebu, aside from being a staple food, the Native Visayan White corn is also used as ingredient in cooking – mostly for desserts and specialty foods, such as maja blanca, a corn and coconut milk pudding, and pintos, a milk and young white corn pudding wrapped in cornhusk. It can also be roasted to produce a corn drink resembling coffee in flavor called kapeng mais. A tea may also be made from the corn silk.

The Visayan White corn is a healthier staple than rice because of its low glycemic index. It is slower to digest, resulting in a gradual release of glucose into the bloodstreams, thus lessening the risks of diabetes, which is a major cause of death in the Philippines. It is sold in markets both as ears of corn and milled as corn grits. It is believed that an increase in white corn consumption could help reduce the Philippines’ dependence on rice imports.

Filipino farmers have traditionally planted open pollinated varieties (OPV) of white corn that allowed them to save seeds from their harvest for the next planting season. This also made it possible for farmers to exchange seeds and breed varieties that are better adapted to the environment. These are not possible with hybrid or genetically modified (GM) seeds where farmers need to sell the entire harvest and buy new seeds that will be used for planting in the next cropping season. Despite this, more farmers are switching to GM yellow corn crops for promises of higher financial returns. Additionally, due to migration out of the White corn growing areas in Cebu and financial struggles of farmers, production of Native Visayan White corn is decreasing.

Luzon

Ayusip

Ayusip is the name of a wild berry that grows in the mountainous, upland areas of Benguet province, in the Cordillera Region of the northern Philippines. The fruit grows on a low shrub that grows up to 120 cm tall



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and has white flowers. The ayusip fruit is 1.5 cm in diameter and green at first, ripening into a dark or black color. It tastes sour when unripe and sweet when mature. While it can bear fruit all year round, its main fruit-bearing season is from August to November. Ayusip grows wild and has not successfully been domesticated or cultivated. Ayusip is usually harvested and transformed into jam that is sold in limited quantities. More often the jams are kept for personal or family consumption by those that harvest the fruit from the wild. It is estimated that a few hundred kilograms of the fruit are harvested annually. Because the fruit is not cultivated, recent developments in the area threaten the natural habitat. Many sites in Benguet Province are being developed as mining sites, and others are being terraced for vegetable production. If the mountain habitat is lost, ayusip may be lost as well.

Baya Rice Wine

Baya, a rice wine made in the Ifugao province of the northern Philippines, is made from an indigenous variety of glutinous rice fermented using a native woody herb called onwad as a yeast agent. Traditionally, extracting the wine is surprisingly fast – the liquid drains over one to two days from a rice basket into an ancient jug. Notable is the aromatic fragrance given off by the fermenting rice, with notes of preserved pineapple and cognac. The biggest surprise is the flavor: the first impression is of a sweet wine, but its lasting character is like a heartwarming, high quality cognac. Baya is a sacred drink, a medium to reach the blessing of the “Skyworld,” as known to the indigenous Ifugao tribe. It is generally believed to date back as far as 2000 years, based on the age of the highland rice terraces. A shaman, or in local parlance, mumbaki, chants prayers using the baya as offering to the pagan gods for bountiful harvest and protection of the crops and fields. Certain rice terraces are specifically set aside for grown the glutinous variety for rice winemaking. Today, the ancient technique and pure baya winemaking is a vanishing practice. Drinks called baya are sold commercially for tourists, but they are not the pure spirit. Its commercialization threatens not only the growing environment (planting varieties in excess of land capacity), but also the original culture from which it was born. Pure baya is as much a part of the traditional Ifugao society as the poetry chanted by the high priest in the native language.

Chong-ak rice/Kalinga Tinawon

The Chong-ak variety (species: *Oryza sativa*, subspecies: tropical japonica, also known as javanica) in the local Kalinga language is called ‘Unoy’ or ‘Uloy’, the broad linguistic term for this type of medium grain staple rice. In the province of Ifugao (local languages Ifugao and regional language Ilokano) the broad linguistic term for the subspecies tropical japonica is ‘Tinawon’, meaning ‘once a year’. The specific variety of this nomination is called ‘chong-ak’ in the Kalinga language of the municipality of Pasil, Kalinga. Pasil and the adjacent valleys located in the municipality of Lubuagan are the main production areas for the exported rice, but this variety is found throughout the three-province project area. The local name varies among the isolated villages, as the dialects between mountain villages are quite different and the languages of the different ethno-linguist groups (Kalingas, Ifugaos, Bontoc and Kankanay) are completely separate. The plump, rust red, seed-coated variety is known in nearby municipalities as: ‘dumalingan’ in the municipality of Tanudan, Kalinga; ‘chumalingan’ in the municipality of Lubuagan, Kalinga; ‘phaflar’ in the municipality of Mayoyao, Ifugao; ‘chum-e’ in municipality of Asipulo, Ifugao; and ‘gomiki’ or ‘ginulot’ in Sadanga, Mount Province. It is a slow-growing staple variety that requires a 5-6 month growth period from transplanting to harvest. It is planted from December through February and harvested from the middle of June through August, depending on the elevation. The variety grows best in irrigated terraces at elevations



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between 500 and 1500 meters above sea level. The plant is tall (120cm-150cm), cold tolerant, non-shattering, aromatic, but low tillering (4-6 tillers/hill). It is a traditional native variety that has never undergone improvement in a formal breeding program or at research institutes. The indigenous women of the area are the primary holders of the traditional knowledge on seed selection and conservation of the best planting seeds. Chong-ak is described as a true medium-sized grain with a rust red seed coat. Research on tropical japonica/javanica rice by the International Rice Research Institute (IRRI) states that this subspecies has been found in only three places in the world: remote areas of Indonesia, the rice terraces of the Philippines, and in the mountainous areas of Madagascar. Until recently, these treasured aromatic varieties were rarely sold into the commercial market. Chong-ak has historically been grown in the high-elevation, irrigated rice terraces of Northern Luzon's (Philippines) Central Cordillera Mountains, specifically in the municipalities of Pasil and Lubuagan, in the Province of Kalinga, but locally adapted similar varieties are grown in the adjacent mountain valleys of Mountain Province and Ifugao Province. The rice remains the preferred staple variety of indigenous people in the areas where it is grown. The Chong-ak variety is intimately connected to the indigenous Taguibong people of Kalinga and their cultural practices. Chong-ak would be served during weddings and family reunions, especially during the Pusipus celebration, the gathering of relatives before a sick or elderly family member dies. Bundles of Chong-ak palay (unthreshed rice on its panicle sheath) are displayed at the feet of the dead to symbolize his or her wealth in rice fields and harvest.

Cordillera Native Black Pig/Alingo, Besaang, Buttong

The Cordillera Native Black pig is black in color and usually weighs an average of 85 kg. It has small ears and lean meat with a thin layer of fat. The pigs are raised in a semi-wild system. Instead of keeping it in pigpen, the native pig is free roam around within a fenced area. The pigs are fed twice a day with chopped camote and gabi leaves mixed with rice bran. The breed is said to be resistant to foot and mouth disease, or at least to suffer lesser effects than other breeds. The Native Black pig is usually slaughtered during the *ca?ao*, a celebration in which animals are offered in thanksgiving, usually for success economically. Locals say that this breed is tastier than commercially imported breeds. Meat from the pig is usually preserved in one of three ways: by smoking, by sun drying or by salting and being stored for months in an earthen jar. Elderly residents note the breed as being raised by their ancestors, and it was said to be present at the first celebration of *Adivay*, a part of the *Panagbenga* (Flower Festival) that displays cultural heritage and products. *Adivay* is an Iloilo term meaning "coming together" and during the festival the pigs are offered to the spirits of the ancestors and native gods. The breed holds a special place in the towns of Kibungan, Bakun, Mankayan, Kabayan and Kapangan in the province of Benguet in Northern Luzon in the Philippines. The black pig cannot be depicted in local art because it is considered sacred. The Ifugao people give individual pigs names based on gender, age, and number of times they have given birth. In Mt. Province the native pig is called *alingo* while the Kankanaeys call it *besaang*. It is called *buttong* in Ibaloi. Normal 0 14 false false false IT JA X-NONE Native Black pigs are considered more difficult to raise and take longer to reach slaughter weight than imported, commercial breeds that also have a higher percentage of fat. In 2001 it was believed that only 4% of the pigs raised in the area were the Native Black breed. Furthermore, the traditional practice of the *ca?aos* slaughter is also fading, meaning there is less demand for this breed.



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Imbuucan Rice/Imbu-an, hinglu

Also known as Imbu-an or Tinglu 'Tinawon', coming from the regional language Ilokano and literally meaning 'once a year', is the broad linguistic term and common name used for this medium grain staple rice. The specific variety of this nomination is called 'Imbuucan' in the Tawili language of the municipalities of Banaue and Hingyon, Ifugao Province. The municipality of Hingyon and the adjacent valleys that are located in the municipality of Banaue are the main production areas for the exported rice. The municipality of Hingyon was divided off from the municipality of Banaue in 1982, but historically, the people are of the same ethno-linguistic group. Based on morphology, 'imbuucan' belongs to the rice genus and species *Oryza sativa*, subspecies tropical japonica (also known as javanica.) It is a slow growing staple variety that requires a 6-month growth period from transplanting to harvest. It is planted from December through February and harvested from the middle of June through August, depending on the elevation. The variety grows best in irrigated terraces and at an elevations of 700 meters above sea level. The plant is tall (115cm or 45 inches), cold tolerant, relatively non-shattering, very aromatic, and with medium tillering (10 tillers/hill). Like the other Tinawon varieties, rats are attracted to the very aromatic Tinawon plant in the field. A single planting of Tinawon, or planting ahead or behind others in the community, will attract rats to that field. Because of this, all Tinawon must be planted in a synchronized method within the area. The average length of the panicle is 41 cm (16 inches). It has an awn and the average number of grains per panicle is 172. The leaves are dark green and straight, pointing upwards. During the ripening stage, the terrace area planted with Imbuucan will have a reddish cast because of the peculiar red stripe of this grain that is not present in other Tinawon varieties grown in this area. Imbuucan is a traditional native variety that has never undergone improvement in a formal breeding program or at research institutes. The indigenous women of the area are the primary holders of the traditional knowledge on seed selection and conservation of the best planting seeds. Research on tropical japonica/javanica rice by the International Rice Research Institute (IRRI) states that this subspecies has been found in only three places in the world: remote areas of Indonesia, the rice terraces of the Philippines, and in the mountainous areas of Madagascar. Until recently, these treasured aromatic varieties were rarely sold into the commercial market.

Inartem Balayang (Pickled Wild Banana)

Inartem balayang is the local term for a pickle made of the wild banana, or balayang, (*Musa acuminata* errans), the wild ancestor of many commonly dessert bananas. This variety grows spontaneously and creates a fruit that contains a lot of large seeds, similar in size to the size of okra seeds. To make this fruit palatable, the local Ilocano people began to soak the unripe bananas in brine, rinsed repeatedly to remove the sap. It is then pickled in a mixture of sukanang iloco (local vinegar made with sugarcane and samak leaves), a bit of salt and, occasionally, a bit of sugar. After a week or longer, the fruit softens considerably, but not completely. It then can be used as a side dish for heavy pork dishes common in Paoay, Laoag, and other places in the Ilocos Norte area. It is also eaten as an afternoon snack or as a snack while drinking. Inartem balayang is found in small local markets and shops, but is becoming more rare. This is because the wild bananas are becoming increasingly difficult to source and culturally this food is being replaced by imported convenience foods.



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Ingapur/Ifugao Diket/Kotinaw/Ngoparan

Ifugao Diket, Kotinaw, NgoporanIngudpur (*Oryza sativa tropical japonica*) is also called Ifugao diket in the regional Ilokano language (dicket means “sticky”) and by other names in neighboring areas. It is one of the rarest sticky rice varieties in the province of Ifugao, on the island of Luzon in the northern Philippines. This type of sticky or glutinous rice is a medium sized grain grown in small terraced paddies in Cordillera, thriving at an elevation of 700 meters above sea level. The plants grow 125 cm tall and the rice has unique bi-colored bran, a mixture of black and brown, covering a milky white grain. While Ingudpur looks similar to other traditional varieties, it has distinctive characteristics during its flowering stage. It produces the strongest aroma, and so birds flock to this variety. Farmers must watch their crops closely during this period if they wish to have any rice leftover to harvest. It is also considered among the stickiest of rice varieties. The grain gives an excellent mix of sweet and bitter flavors. Ingudpur is grown in small quantities by families and is prepared in traditional recipes (often in desserts) on special occasions like birthdays, weddings and burials. For this reason, production quantities are small: about 25-50 kg per family, or 1-2 rice paddies out of an average of 15-20. The indigenous women of the area are the primary holders of the traditional knowledge on seed selection and conservation of the best planting seeds. The rice is hand-planted from December to February and hand-harvested from June to August. Traditionally it is hand-processed with a large mortar and pestle. It has never undergone improvement in a formal breeding program. Sticky rice with strong color pigmentations such as with this variety are a good source for making rice wine or tapuy (also called tapey or bayah). Tapuy rice wine is considered a ceremonial wine served during special occasions (such as weddings) and large celebrations such as a bountiful harvest festival. According to local lore, this rice wine originated in Batad, Ifugao, Philippines, but native wines from fermented rice are also produced throughout the Cordillera region. Traditional sticky rice varieties are rarely available in the market, due to their use as a special occasion food rather than an every day food. This particular variety is also considered a risky crop, since its strong perfume can attract pests to the rice paddy. However, an effort has been made to increase and continue the production of this variety because of market opportunities, both of the raw rice and tapuy.

Jeykot Sticky Rice

In the Kalinga dialect, red sticky rice is known by a common name, and the spellings vary according to different dialects: jeykot or chaycot in Pasil, jekot in Lubuagan. This generic term refers to a medium grain glutinous variety belonging to the rice species *Oryza sativa japonica*. This plump red variety has a salmon colored bran on top of a milky white grain. It is the preferred sticky rice grown in the municipalities of Lubuagan and Pasil, Kalinga, Philippines. The plant has varieties that are both with and without awns. Awns are the beard-like bristly appendage on the end of the compound flowers. Lachok refers to the brown khaki hull variety with short awns. Jumalling refers to the light brown hull with 2 – 3 black stripes and no awns. Jeykot sticky rice is a slow-growing glutinous rice that requires at least a 4 – 6 month growth period from transplanting to harvest, depending on elevation. It is planted from December to February and harvested from the middle of June through August. The variety grows best in irrigated terraces and at an elevation of 700 meters above sea level. It requires 6 – 8 hours of sunlight per day for proper growth. The plant is tall in height (130 – 150 cm), cold tolerant, drought resistant, relatively non-shattering and aromatic. It produces about 130 grains of rice in each compound flower. Like the other native aromatic rice varieties, birds are attracted to the plant in the field, and planting should be synchronized with other aromatic varieties to minimize losses. The story of jeykot sticky rice says that a long time ago, there was a great flood. To avoid the rising waters, a family climbed to the top of Mt. Awidon, where they set up a



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bonfire. One night, a stranger floated by, riding in an earthen jar covered with cooked rice. They welcomed the stranger and asked where he had come from. He indicated that he had traveled from another mountaintop, using the sticky rice to seal the jar so it would not sink. The stranger gave rice seeds to the family to thank them for their hospitality. Then, the stranger disappeared. The family realized it was Kabunyan, or the Father who created the Universe. They called the rice “jeykot,” meaning “wonderful sticky rice” in reference to this gift from their god. Jeykot sticky rice is a traditional, native variety that has never undergone improvement in a formal breeding program or at research institutes. The indigenous women of the area are the primary holders of the traditional knowledge on seed selection and conservation of the best planting seeds. Jeykot sticky rice is used in a wide variety of recipes, both sweet and savory. It is often used in dishes mixed with coconut or coconut milk. It is also used in making rice wine. Today it is estimated that there are about 200 acres dedicated to traditional rice production in Lubuagan and Pasil, with just a few hectares dedicated to jeykot. About 15 metric tons have been produced by less than 100 farmers. In 2013, 600 kg of this variety was sold through a cooperative on the local market. It is mainly grown for personal or local consumption, with some rice reserved especially for making rice wine. Today, production of rice in elevated terraces is not considered economically feasible, and younger generations are leaving the area in search of other work, abandoning the terraces of the Cordillera and native varieties like Jeykot.

Kapeng Barako (Barako Coffee)

Barako coffee (*Coffea liberica*) takes its name from the Tagalog word for “wild boar” (barako), who are fond of dining on the plant’s leaves and berries. This coffee variety is grown at elevations of about 300 meters above sea level, and the self-pollinating trees grow up to 20 meters tall. They also produce larger cherries than those found on *Coffea arabica* trees. The shape of the coffee beans is not symmetrical, which is unique among the four commercial species (Arabica, Robusta, Excelsa and Liberica). One side is lower than the other side, creating a distinctive ‘point’ or hook at the bottom. The furrow in the middle is generally jagged rather than straight as in other coffee species. Barako coffee has strong taste and flavor with a distinctively pungent aroma. It can be drunk black or sweetened with sugar or honey. It can be drunk alone or blended with other coffee varieties. Barako coffee was first planted in Batangas, Luzon, Philippines by Spanish friars in the 18th century. The variety spread all over Batangas and was exported to the United States in the 1800s. At one point in the 19th century, the Philippines was the 4th largest coffee producing country in the world. In the province of Batangas, the coffee is used as an alternative to soup (sabaw) as part of a local rice dish. It is usually used when eating local dried fish from the lake of Taal, Tapa or any dry or fried dish. Barako coffee is slowly disappearing from farms and also from the market. Much of it is consumed locally and not exported. It is not a common coffee variety, accounting today for less than 1% of commercial coffee grown. Because the plant is larger than other coffee varieties, it requires more land to produce the same amount of coffee. Therefore, many farmers have switched to planting Robusta (*Coffea canephora*), which is also more common and better known by international coffee drinkers, to fulfill the demands of international commercial coffee processors.

Kiniing

Kiniing is a cured pork product made from meat obtained from locally raised native black pigs. To prepare the product, the lean parts of the meat are thinly sliced while guava leaves are first boiled in salted water. This decoction is removed from the fire, the guava leaves are removed, and the water is transferred into a container where the meat can be soaked for a few minutes. The use of guava leaves acts not only to scent



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the soaking water, but also creates a smell that drives away flies or other insects that might destroy the meat. It also helps to harden the meat. Next, the meat is smoked over pinewood to help preserve it and add flavor. For tastier kiniing, the meat is hung in the suuban, the top of the clay stove used for daily cooking, for a month or two. If the meat is hung longer than that, even up to a year, it becomes harder in consistency and the product will take longer to cook than those smoked for only two months. Once removed from the suuban, the kiniing is kept in a traditional basket called buatala or saket. The basket, woven from wild bamboo, is hung in another part of the house. The smoked meat can be stored for approximately one month. Interviews with locals note that this tradition dates back to before the 1940s. It was originally used to preserve wild game that had been hunted. It is a practice found throughout the Cordillera area of the island of Luzon in the Philippines, and one of the main methods of meat preservation (in addition to sun-drying and rubbing with salt and preserving for months in earthen jars). Kiniing is a seasonal product produced mainly for special occasions. Today, kiniing production is limited due to the small numbers of native black pigs being raised. This is due to their smaller size and slower growing rate compared to commercial big breeds. The finished product is mainly sold just to locals, and is relatively little known by those outside the production area.

Lagundi

Lagundi (scientific name: *Vitex negundo* L.) is an herb traditionally used in folk medicine as well as for food consumption. Because of its phyto-constituent content, there is evidence of many types of treatments involving Lagundi. For example, it has been used in Ayurveda and in Chinese medicine, according to specific areas or communities. For this reason, it has several names; in Batad (Ifugao province of Philippines), a small village of indigenous people in the middle of rice terraces, this plant is called Dabtan and it grows wild in this very biodiverse environment. In Ilokos province some people call it Dangla. In a more urban context, the preservation of traditional plants is carried on by small farmers groups, often supported by the church.

Vitex negundo is a multi-branched shrub up to 5 meters tall or sometimes a small, slender tree with thin, gray bark. Leaves are palmately compound, 3–5 foliate; flowers are bluish-purple, small, in peduncled cymes, forming large, terminal, often compound, pyramidal panicles.

The fruit is a succulent drupe, black when ripe, 5–6 millimeters in diameter and containing four seeds. Seeds are oblong. Four- to six-month-old seedlings are used for transplanting in the field. It can be reproduced readily from shoot cuttings. *Vitex negundo* roots are strong and deep and suckers profusely. It produces root suckers, which can also be utilized as planting material. It is planted between June and September and it takes two years to grow.

It is pungent, bitter, and astringent in taste. It has been used as a hedge, ornamental plant, growth promoter in agriculture, manure, pesticide, medicine, food, food protectant, household pesticide, in reclamation of wasteland and erosion, basketry, witchcraft, totems, water divination, and in the preparation of grain and garlic storage structures.

Vitex negundo has been put to numerous and varied types of uses over history. As a seed, it is occasionally used as a condiment, such as a pepper substitute. When washed to remove the bitterness, it can be ground into a powder and used as a flour. A tea/decoction is made from the roots and leaves. Also, alcoholic



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extracts can be made by this decoction.

Luyang Dilaw/Conig Wild Ginger

This wild ginger, known as luyang dilaw or conig, has a particular fragrant smell and a bitter, slightly acid taste. It grows 30-60 cm tall above ground and has oblong roots or tubers that are lobed. The outer skin of the tuber is yellow and the inner flesh is orange in color. Because of this, conig is often used as a natural food coloring in sinigang or beef curry. The roots can also be processed into a tea that has recently been recognized in treating the cough. Conig ginger grows wild in parts of Benguet province, in the Cordillera Region of the northern Philippines, particularly around the municipalities of Kapangan, Tuba, Sablan and Tublay. It grows well in areas with a warmer climate and a lower altitude. In the past, it was seldom cultivated, especially before its medicinal usage became better known. Today, some harvest this ginger for sale as tea, but in general it is mainly collected by local residents for their personal consumption. Because it is mainly a wild plant, conig is at risk of being lost in its natural habitat as land is uprooted for planting commercially sold crops.

Ominio Rice

The Ominio variety is a medium grain, glutinous variety belonging to the rice genus *Oryza sativa* and to the race tropical japonica, also known as javanica. In the local Finallig language of the municipality of Barlig, Mountain Province, it is called Ominio. This variety is found throughout the province of Mountain Province and in adjacent Ifugao Province. In the municipality of Tadian, it is called 'Balatinao', while in Sadanga it is called 'Kotinao'. In the Cordillera regional language of Ilocano, the broad linguistic term for glutinous/sticky rice is 'diket'. In Mountain Province, 'Chekat' is their broad linguistic term for the glutinous rice. In the Ifugao language, it is 'daya'ot/dayakkot' and in Kalinga it is called 'jekot' or 'chaycot'. This nomination is for the variety of Ominio from the municipality of Barlig, Mountain Province. Ominio rice is a slow-growing, moderately glutinous variety that requires at least a 5-month growth period from transplanting to harvest. It is planted from December through February and harvested from the middle of June through August, depending on the elevation. The variety grows best in irrigated terraces and at an elevation of 700 meters above sea level and it requires 6-8 hours of sunlight per day for proper growth. The plant is medium height (76cm or 30 inches), cold tolerant, relatively non-shattering, with some aroma, and low tillering (4 tillers/hill). Like the other aromatic native varieties, it tends to attract rats in the field. Because of this, all aromatic Tinawon and Diket varieties must be planted with a synchronized method within the area. Its panicle is semi-dropping, generally 15-cm-long (6 inches). It has a short awn and an average number of 120 grains per panicle. Ominio is a traditional native variety that has never undergone improvement in a formal breeding program or at research institutes. The indigenous women of the area are the primary holders of the traditional knowledge on seed selection and conservation of the best planting seeds. Research on tropical japonica/javanica rice by the International Rice Research Institute (IRRI) states that this subspecies has been found in only three places in the world: remote areas of Indonesia, the rice terraces of the Philippines, and in the mountainous areas of Madagascar. Until recently, these treasured aromatic varieties were rarely sold into the commercial market. Ominio has historically been grown in the high-elevation, irrigated rice terraces of Northern Luzon's (Philippines) Central Cordillera Mountains, specifically in the provinces of Mountain Province and Ifugao. Because of its deep purple/black color, the rice is the preferred glutinous variety of the indigenous people in the areas where it is grown. It is used for rice desserts and for making rice wine. The Ominio variety is intimately connected to the indigenous people of Mountain Province and Ifugao and their cultural practices. Specific stories in the mythology of



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the Balangao people of Mountain Province talk about the origin of Ominio.

Red Rice from Kalinga and Ifugao/Ulikan/Mini Angan

Ulikan, as it is called in Kalinga Province, and Mini-angan, as it is called in Ifugao Province, is a native rice variety of the species *Oryza sativa indica*. It is a red colored, non-sticky, aromatic long grain variety. It is high yielding (between 2.2 to 3.8 tons per hectare), with a higher than average number of rice grains per flower cluster with an average of 315. It is non-shattering and resistant to pests and disease. The plant is tall, growing 120 – 140 cm in height, and has a growth cycle of 4 – 7 months from transplant to harvest. The variety is adaptable to both low and high elevations and is known for its low input requirements. It can be grown in both the wet and dry season. The main cropping is in December or January with harvesting in May or June; but a secondary crop can also be planted in July with a harvest in November. The variety has a wonderful earthy aroma when cooking, and a mild eating flavor. The grain is substantial and with a consistency that holds together well when cooked. Red rice from Kalinga and Ifugao is a staple as a plain cooked rice served with dried legumes, mungo beans and wild-gathered river greens. In Kalinga, the red rice is synonymous with the municipalities of Lubuagan and Pasil, in the valley of the Pasil River. The variety has multiplied and has become the source of food for the surrounding communities, as it is often given as gifts to newlywed couples as a sign of prosperity and food security. In the area of Hungduan in Ifugao, the terraces in which the red rice variety grows are part of the cultural living landscape declared a UNESCO World Heritage Site in 1995. The importance of this rice variety is documented in oral stories of the area. In the Pasil area of Kalinga, one legend states that when the great leader Likan of the Taguibong tribes was lost after a hunt, this rice variety grew from his remains. The tribe brought the seeds home, and planted them in remembrance of their leader. It was said that the red color was a sign from Likan that he was happy that his descendants honored him. The name “ulikan” means that Likan will live on, as long as the rice does. In the Lubuagan area of Kalinga, another story tells that this variety has been found growing wild since time immemorial. It was domesticated by the local people who were fascinated by its red grain. According to local legend, the seeds should be planted before the break of dawn, and Kabunyan’s (god of the indigenous peoples) bright daylight turns the grain red. This red rice variety is planted mixed with other traditional varieties over about 200 hectares, though it is not known exactly how much land is dedicated specifically to this variety. It is grown both for personal consumption and sale on the market, and represents an important source of income for growers in these remote villages. In 2013, 7 tons of ulikan in Kalinga and 8 tons of mini-angan in Ifugao were sold on the market. However, younger generations are leaving the area in search of work in other areas, abandoning the high elevation rice terraces, and this unique native variety.

Sinarapan

Sinarapan is scientifically known as *Mistichthys luzonensis*. There is no translation of this name in Filipino, though the word means “tasty” or “delicious.” This species is found only in Lakes Bato and Buhí and other bodies of water in Camarines Sur province, part of the Philippines’ Bicol region. It is believed to be the world’s smallest commercially harvested fish (though not the smallest fish known). The fish has an average length of 12.5 millimeters. Males are smaller than females. Sinarapan were first studied in 1859, but were mistakenly thought to be immature specimens of *Gobius dispar*. They received no further outside attention until United States Army scientists described them as a new species in 1902. Alive, sinarapan are transparent with large black eyes. Preserved specimens are opaque with a few dark spots over their sides, backs and heads. This tiny goby is reported to occur in vast numbers in Lake Buhí, from near the shoreline



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out to where the water is at least 10 to 20 meters deep, and breeds throughout the year. According to the inhabitants of Buhi, the eggs float on the surface of the lake covering large areas, especially during sunny days in March and April. Specimens are collected in the latter part of September and in January during the breeding season. When hatched, the young swim first at the surface but after a short time go to the bottom to live. Sinarapan probably rise to the surface with the diurnal movement of the plankton on which they feed. The unique method used to capture them capitalizes on this knowledge. Catching the sinarapan is an art. Anglers and fishermen first cut and trim a bamboo stalk at least 10 meters long, with the end sharpened and branches removed except three or four of the uppermost twigs. A palm leaf is wrapped around the topmost meter or two. The trap (abung) is then set firmly into the lake bottom with a spur of the palm leaf protruding above the surface. This leaf serves as both a part of the trap and as a way to relocate it. During the day the sinarapan come to rest upon the palm leaf. Mid-afternoon, fishermen go out to the traps to capture the fish using a triangular net, or sarap. The sarap is mounted on a Y-frame of bamboo and with it the abung is swept from the bottom of the palm leaf to the top. Usually from a half-liter to a liter of sinarapan are caught in each trap. The sinarapan cannot be caught along the shore, though they can be readily seen there, because they are protected by dense masses of aquatic plants. From time immemorial sinarapan have been caught in large quantities by the people living near the lake and are regarded as a staple food and delicacy. Locals fry the sinarapan in oil or boil them with vegetables. When more are caught than the local market demands, the surplus is salted or dried in cakes and exported to neighboring towns in Camarines Sur and Albay Provinces. To showcase this local fish, the Sinarapan Festival is celebrated every July 14-15 in the town of San Buenaventura. Today, sinarapan are at risk because Lake Buhi is in a stage of eutrophication, with an increase in nitrogen or phosphorus compounds resulting in excessive plant growth and decay, in turn leading to lack of oxygen and severe reduction in water quality. Further more, the privilege of harvesting this traditional fish is handed out by the municipality to the highest bidders, who receive exclusive fishing rights in their particular leased area of the lake, and the fish are subsequently overfished by these commercial few fishers.

Tawilis

The tawilis (*Sardinella tawilis*) is a freshwater sardine found exclusively in the Philippines. It is unique in that it is the only member of the genus *Sardinella* known to exist entirely in fresh water. It is a small fish, reaching up to 15 cm long and weighing less than 30 g each. Fish have a single, triangular dorsal fin and a forked tail fin. Tawilis feed on plankton near the surface of the water, and roam the lake in large schools. Little is known about their reproduction, but it is known that the Taal population spawns during the months of April to July, when surface temperatures are highest. In addition to raw consumption, tawilis is also processed into various food products. It is one of the many fish species dried, salted, and sold as daing in the country. They are also sold smoked and bottled in oil. Tawilis is considered best served fried or “sinaing style,” by wrapping it in banana leaves and simmering it for a long time with lots of dried and or fresh bilimbi (*Averrhoa bilimbi*) and salt. In literature, the Philippines’ national hero Jose Rizal used three dried tawilis in his novel *Noli Me Tangere* to symbolize the Three Martyred Priests of Bagumbayan (Jose Burgos, Jacinto Zamora and Mariano Gómez). Tawilis is native and unique to Lake Taal (formerly Lake Bombon) on the island of Luzon, a freshwater lake linked to the sea via the Pansipit River that was formed by a series of volcanic eruptions in the 18th century. This species is believed to be one of a few former marine species trapped within the lake that have evolved into purely freshwater species. Despite its threatened status, stocks in Lake Taal have been commercially fished for several decades. The fish is a widely popular food fish in the Philippines, and tons are shipped to most of the major cities in the country.



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Local supermarkets and fish markets. Today it is threatened by over fishing and habitat pollution, in addition to the constant threat of volcanic eruption. The entire species exists in one population, and so local extinction would also mean global extinction. Conservation measures and management of the fishery are needed to allow the population to recover for future generations.

Mindanao

Adlay (Job's Tears)

Adlay (*Coix lacryma-jobi*) also known as Job's tears is a tall grain-bearing plant of the Poaceae family (grass family) native to Southeast Asia. It is grown in South Eastern and Northern Mindanao in higher areas or upland, where rice and corn do not grow well. The plant resembles to corn and sorghum for its leaves and roots, but also for its growth. This plant can grow over 2 metres in height when put in fertile soils, but can survive under any type of climate conditions in tropical countries. The round flowers develop into seeds – which can be violet, yellowish or white – with a hard and shiny shell. Adlay can be harvested 5 to 6 months after planting and is said to help preventing and treating colon, lung, liver and breast cancer. It can also treat allergies and boost the immune system. Local indigenous communities use it as a substitute to corn and rice flour, key ingredient to the preparation of local sweet delicacies such as biko, suman and kutsinta, but it also represents a good source to feed livestock. In addition, adlay is used to prepare food during harvest time for the rituals to thank the communities' Gods. Despite its importance for the local cuisine, adlay is facing extinction as agribusiness are encroaching indigenous agricultural lands to make space for mining.

Yellow Cattle

The yellow cattle are a local breed that were widespread in the Philippines before the Spanish domination of the islands that dates back to the first half of the 16th century. In the previous centuries the Philippines had developed intense relations with China, Japan, and India, and in particular it seems that the "southern yellow cattle" breed arrived on the archipelago. Like all of the cattle breeds in the southern part of Asia, this one is also the fruit of cross breeding between descendants of the *Bos Indicus* (zebu) and *Bos taurus* breeds.

This cattle is small in stature, usually has a yellow or light brown coat and has short horns. The males weigh about 350 kg and have a small hump, while the females weigh a maximum of 230 kg and have no hump.

The breed is incredibly rustic, strong and resistant, and it is known for the ability to prosper in difficult climatic, health and nutritional conditions, which are all frequent in the Mindanao area in particular. Even the grass in the area is not very nutritious and the water is scarce, or at times excessive due to the rain storms; but this breed of cattle does not suffer from these problems. The calves are extremely strong, standing on their own and nursing directly after they are born. This is a docile breed, and as such the breeders do not dehorn them, nor are the males castrated. The animal is used both for the production of dairy products and for its meat. Today they are pasture raised on small family farms that have two or three heads each.



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Due to the tendency to import more productive cattle breeds – at the beginning of the 20th century about 40 new breeds were imported to the Philippines – as well as that of cross-breeding in order to improve the animals' characteristics and thus earn better on the market, this native breed of cattle is at serious risk of extinction today.

Negros Islands and Panay

Batuan

Batuan (*Garcinia morella*) is a typical product common to many local dishes, used for its acidic and sour taste. It is mainly found mainly on the island of Negros, and some in the nearby island of Panay. Batuan is a hard, green fruit with a tomato-like shape. It grows wild in the rainforests of Negros. The unripe fruit is cooked as a souring agent with fish, pork and in soups, such as sinigang and tinola soups. The ripe fruits can be eaten, but are very acidic. The fruits can also be preserved in jams, by drying or by pickling. Batuan fruits can be found at all local markets in Negros, and a few in Panay. However, its natural habitat is being negatively affected by deforestation. Furthermore, use of this typical fruit in home cooking is declining, as cooking and eating habits in the Philippines become “westernized” and move away from traditional dishes.

Batwan

Batwan (*Garcinia binucao*) is a wild tree about 15 – 20 meters tall that grows in the forests of the Islands of Panay and Negros. Batwan bears fruits abundantly during the wet season and mature fruits hang on the main trunk and branches of the tree until harvested. Fruit is collected for both personal use and for sale on the market. A productive tree can give 50 – 100 kg of fruits in 6 months, and there are estimated to be 5000 productive trees on the two islands. There are two kinds of batwan, one with a thin skin and one with a thicken skin and flesh. The round fruits are 4 – 5 cm in diameter and contain 4 – 6 seeds. They are green in color, turning yellow when ripe. Their taste is sour, but not acidic, and not very aromatic. They can also be eaten raw. Batwan is used as a souring agent in soups typical of the area. The soured broth, called sinigang, is not common in other parts of the Philippines. In Ilongo cooking, it is considered the star ingredient in a dish called KBL, for kadyos (pigeon peas), baboy (pork) and langka (green jackfruit). Another common dish is paksiw, cooked with boiled batwan fruits. The fruits can also be preserved with salt and used as an appetizer. There is little documented history on the batwan tree, but it is known to have been used since before World War II. There is even a local riddle related to the species. It goes: “I went to the forest and saw many trees, but one (bat-wan) I like best. Which is it?” Despite this established connection to the local culture, fewer people in the younger generations are using the traditional fruit in home cooking, due to the commercial souring agents now available for purchase in supermarkets.

Kadyos Beans

Kadyos is found locally under many different spellings, including: kadios, kagyos, kagyas, kaldis, kalios, kardis, kidis or tabios. It is also known as the Congo pea or black-eyed pea in English. It is grown on Panay Island in the Philippines, in the provinces of Iloilo, Negros Occidental and Antique. Plants flower after 65-80 days, and after a short time fresh pods can be harvested. The plants reach their maturity for dry harvest after another 50 – 75 days. The legumes are high in vitamins and minerals, and resemble small, black beans



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and have a rich, nutty flavor. Kadyos beans can be harvested dried or as young pods. This variety has long been a popular ingredient in the Ilonggo cuisine of the Visayan people, in particular in the soup known as “KBL” which is a mixture of Kadyos, Baboy (pork) and Langka (jackfruit), and in “KMU,” an Ilonggo dish composed of Kadyos, Manok (chicken), Ubod/Ubod (the core of the trunk of the banana plant). Locally, it is considered a minor crop grown in backyards or on a small amount of farm acreage. It provides additional agricultural functions as livestock feed, suppressing weeds and enriching soil nitrogen. Kadyos can be found in local markets from October to January, when the beans are at their freshest and most tender. Prices rise steeply towards the end of the season. Today however, the future of this crop in the Philippines is at risk, as the stored seeds are at risk of damage from weevils and other insects. Climate change has led to an erratic planting season, and if the seeds are not planted at the appropriate time, the stored seed supply, and, therefore, future crops, are threatened.

Visayan Warty Pig/Visayan Baboy Ihalas

The Visayan warty pig (*Sus cebifrons*) is a breed belonging to the Suidae family. This pig owes its name to three pairs of meaty warts present on the male exemplar’s snout: presumably these serve as a natural defense against rivals’ tusks during fights. The snout has a white strip that goes from the nose to the angles of the mouth: this is one of the principle characteristics that distinguishes the species from others that are found in the Philippines.

Today the Visayan warty pig is restricted to the forested areas of the two main islands of the Visayas archipelago: Panay and Negros. Ever since local cultivators began destroying the forests to make room for their crops (using a technique known as *kaingin*) the pigs can no longer find the traditional foods they have always eaten (roots, tubers and fruits) and they have begun to destroy the crops and farms. This has led the local people to consider the pig a devastating animal and the communities have begun to hunt and eat the animals. This has resulted in a 95% reduction in the number of the species, which today counts a total of about 100 animals. The species is threatened by the cross-breeding with domesticated pigs that have different characteristics than the wild ones. The Visayan warty pig has been declared a species at critic risk of extinction by the International Union for the Conservation of Nature (IUCN).

General

Criolla Cacao

Cacao beans were brought to the Philippines by the Spanish Friars for their private consumption and as a drink to be served to their esteemed and important guests during the 1500s. The Philippines was the first country to receive cacao outside of the New World when the Spanish brought it there from the Soconusco region of Mexico. The cacao cultivated in the Philippines during the first two centuries after its introduction belonged entirely to the Mesoamerican Criollo group. Today, the cultivar can still be found growing wild in some areas. As the seedlings spread, Filipino farmers eventually planted the cacao seeds around the perimeter of their homes as prized possessions, for accessibility and for consumption only of the family. This being said, cacao harvesting and processing became a family tradition and activity. Today, Criollo cacao is used in the Philippines to make chocolate bars called *tablea* and in a traditional hot chocolate drink (*tsokolate*). It can also be processed into cocoa nibs or powder. Criollo cacao is the preferred variety in making the Filipino sticky rice rolls called *budbud* or *suman*, made with red rice mixed



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with chocolate and coconut milk and served with puffed rice and sugar. Tsamporado is a chocolate rice porridge eaten for breakfast with dried salted fish or as an afternoon snack. The Criollo variety is a pure cacao variety, unlike the higher yielding Trinitario cacao that has been planted in much of the area. Criollo beans are smaller, and have historically been grown more for personal use than commercial use. Promotion of hybrids from Brazil and Malaysia like Forastero and Trinitario mean that fewer farmers have continued planting Criollo cacao. Today it is generally only processed separately on order, in relatively small quantities. Lack of information and promotion of Criollo's unique flavor and quality as a special cultivar mean that this variety may be lost to hybridization of the trees and blending of the cacao with other varieties in processed products in the Philippines.

Guso Native Seaweed/Halamang Dagat

Guso is a Bisaya term for a particular type of local seaweed, one of about 500 edible species found in the Philippines, where native seaweeds are commonly consumed. Guso is one of the major products of the waters in the area of Barobo in the area of Surigao del Sur. Seaweeds are farmed by selecting an area in which the desired species are endemic and with a water depth of about half a meter at low tide and at least two meters at high tide, so that seaweeds will not be overexposed to sunlight and air during low tide and will be exposed to enough sunlight penetration during high tide. Seawater temperature should be between 27° and 30°C. Two species of guso are cultured by seaweed growers in the area: *Eucheuma spinosum* and *Eucheuma cottoni*. Both are rich in iodine, calcium, antioxidants, vitamins and a natural fiber called alginate. *Eucheuma spinosum*, or green guso, is usually harvested for local consumption. It has a crunchy texture, but become softer when boiled for a few minutes. It has a naturally salty flavor. *Eucheuma cottoni*, or red guso or giant guso, is the most commonly cultured guso, and grows much faster than green guso. It can be harvested by pruning all of its branches or by harvesting the entire plant and replacing it with fresh cuttings, which is more often preformed before the plant reaches 1 kg in weight (which takes 45-60 days). The harvested seaweeds are stored in bamboo baskets and sold raw or dried for added value. These seaweeds are often prepared lightly boiled and mixed with spices, served as a side dish to other seafood. Seaweed is one of the most important aquaculture commodities in the Philippines. Seaweed farmers usually enjoy a good harvest from January to June, which are considered peak months for seaweed farming. However, changes in the industry have affected the traditional use of guso. In the 1960s an American seaweed processing company producing carrageenan, a seaweed derivative, transferred from Indonesia to the Philippines. Carrageenan is a gelatin-like extract of guso used as thickener, emulsifier, stabilizer or gelling agent in food, beverages, cosmetics and pharmaceuticals. Today, the edible guso can be found in just in wet markets in the Philippines, usually sold on weekends. Much of the quantity harvested, however, is exported either in raw form (fresh or dried seaweeds) or processed form (carrageenan and kelp powder). There are several reasons why guso is at risk of disappearing. Firstly, with exportations, guso is no longer found in local medium and larger sized grocery stores, and remains on the menu mainly in cafeterias as opposed to larger restaurants. Pollution in local waters has not necessarily killed off the seaweeds, but consumers are unlikely to seek guso from polluted waters or continue farming guso in these areas. Natural disasters, like Typhoon Haiyan, also destroyed a large amount of the nation's seaweed producing areas. Finally, illegal and destructive fishing activities (the use of dynamite and cyanide) are damaging seaweed-growing areas.



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Kamias

Averrhoa bilimbi, or bilimbi, is widely called kamias in the Philippines and “cucumber tree” or “tree sorrel” in English. The 5 – 12 m tall tree is native to southeast Asia and was once common in all local household backyards. It is a fruit-bearing tree, and the small (4 cm in length), green, acidic fruits have various culinary uses. Kamias gives a sour flavor to dishes. One typical recipe is *sinigang na salmon sa kamias* (salmon belly in sour soup), which sees the fruits boiled and then crushed to extract the flavor from the pulp. The fruits can also be eaten raw, dipped in rock salt, transformed into juice or relish or pickled. Kamias is also sometimes used as a substitute for tamarind. Sometime the flowers are also preserved in sugar. This species is also considered to have medicinal properties. Leaves of the tree can be used to treat itchy skin, insect or animal bites, swelling and rheumatism. Infusions of the flowers are given to treat coughs. It is considered a fruit that strengthens the immune system thanks to a high quantity of ascorbic acid. Despite these many uses, kamias is not a commercially cultivated fruit can only occasionally be found in local markets. The tree was once quite widespread throughout the Philippines, but now is found mainly in rural areas, and only rarely in household gardens. Many families have enlarged their homes or built new construction on land where the trees once thrived, and the proliferation of processed food means there is less interest in home cultivation in favor of convenience foods. Although kamias was once considered a basic ingredient in most local soups and fish dishes, it has been replaced by instant broth mixes and its uses forgotten by many home cooks.

Katmon

Katmon (*Dillenia philippinensis*) belongs to a family of flowering plants that grown in low to medium altitude forests. The tree is endemic to the Philippines and it can be found on Babuyan Islands, Luzon, Polillo, Mindoro, Masbate, Leyte, Negros Island, Guimaras, Cebu and Basilan.

It grows on an evergreen tree that grows as tall as 15 meters. Its trunk is erect and the bark is smooth with shallow fissures. The leaves are leathery, shiny and oblong in shape, measuring 12 to 25 centimeters long, and coarsely toothed at the edges. Its flowers are white, large, showy, and about 15 centimeters in diameter with reddish pistils and stamens. The edible fruits are round, about six to eight centimeters in diameter, with large fleshy sepals tightly enclosing the true fruit. Its fruit is also known as elephant apple. A red dye is also obtained from the bark of this tree. Katmon fruits are quite fleshy, eaten when green and have a taste similar to green sour apples. The fresh fruit is not especially flavorful, but due to its acidity and juiciness, it is refreshing when eaten. It makes an excellent sauce or jam and is also used for flavoring. For example, it may be added to *pinakbet* (a traditional Philippine vegetable and pork dish) or *sinigang* (traditional Philippine fish, pork or vegetable sour soup) as a souring ingredient. Locals are also known to mix the acidic fruit juice with sugar into a drink taken to treat coughs and fevers, and the young leaves or bark may be pounded into a paste applied to wounds or swellings.

The katmon fruit is not usually found for commercial sale, and is instead harvested for personal use. The trees are propagated by seed, but are currently threatened as they are often cut down for timber. The species is currently considered threatened. If lost, a traditional flavor of the Philippines and an important component of the local culinary tradition will be lost as well.



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Saging Mondo Banana

There are four main types of bananas grown widely in the Philippines: Lacatan, Latundan, Bungulan and the small Saba or Cardaba variety. The saging mondo banana is a variety of Saba or Cardaba banana widely grown on the Visayan Islands, particularly in the province of Cebu. Saging mondo is a dwarf Saba variety. The plants' pseudostems grow just 2.5-3.5 meters tall. Unlike the common Saba bananas with fruits measuring 12-15 cm long and 5 cm in diameter, saging mondo bananas measure 5-8 cm long and 2.5 cm in diameter. The plants also take longer to fruit, 11-12 months versus 5-6 months for other Saba varieties. Also differing from the angular shape of Saba bananas, saging mondo bananas are much rounder. The saging mondo banana has a thick skin that turns yellow when ripe, and a yellow-orange flesh that is solid and chewy in consistency. It is ideal eaten simply boiled, often dipped in salted or fermented fish with a dash of lemon juice. The banana can act as a substitute for corn or rice in other dishes. One local preparation is called minatamis, and involves boiling the peeled bananas and preserving it them in a raw sugar syrup (latik). The fruit can also be made into banana ketchup or be used in a sweet stew called binignit or in halo-halo, a mixture of fruits, yam, tapioca (or landang) and milk or coconut milk. The dark red banana flower (puso sa saging) is also edible, often served simply boiled and seasoned as a side for fish, pork or beef. The waxy banana leaves can also be used to wrap traditional dishes such as bodbod (sticky rice), bibingka (rice cake) and kiseo (white cheese). Saging Mondo is widely grown in the Visayas particularly in the hilly lands of Argao, Dalaguete and Ronda in the south. They grow best in well-drained fertile soils with full sun exposure. They are tolerant of dry soil and colder conditions of temperate climate. They require minimum rainfall and can survive a long dry season. Unlike the larger Saba, which are grown in corporate farms, the Saging Mondo variety are grown in backyard farms because of its limited yield and late maturing; there is no mass production of this variety. Farmers prefer to grow the larger Saba bananas, which give them more, produce (300 fruits per tree versus 60-70 for saging mondo) and can be sold at higher prices because of their size. Additionally, the local marketing system of the community is beset with a lot of problems including high perishability of the fruit, limited size of immediate local market and the manipulation of traders. Furthermore, in 2013 the Philippines experienced a calamity brought about by Typhoon Yolanda, which badly hit the Visayan area and destroyed the agricultural farms and the plantations, including banana trees. Now, farmers would rather replant the variety which will give them bigger produce and shorter waiting time before the harvest. After some time, the saging mondo might just disappear from the farmers' land.

Siling Labuyo

Siling labuyo (a variety of *Capsicum frutescens*) is a small chili pepper cultivar commonly found in the Philippines. Its Tagalog name translates to "wild chili" in English. Locally it is called by many other names, including: chileng bundok, siling palay, pasitis, pasite (Tagalog), katumbal, kitikot, siling kolikot (Visaya), silit-diablo (Ilocano), lada, rimorimo (Bicolano) and paktin (Ifugao). It is a perennial plant, about 1 meter tall, with small, tapered fruits about 2.5 cm long and 0.75 cm at the widest diameter. Most peppers are red, though some cultivars are yellow, purple or black. One of the most common uses of the pepper itself is mixed with vinegar and other spices, such as ginger, onion and garlic, to make a spicy condiment. It can also be used to add a fiery spiciness to all kinds of sauces, vegetables and fish dishes. The leaves of the pepper can also be used in various typical recipes, such as seafood soups and chicken tinola. Siling labuyo has been considered a medicinal herbal plant used to treat arthritis, rheumatism, dyspepsia, flatulence and toothache. The plant is easy to cultivate and grows throughout the Philippines. It can even be cultivated in containers placed in sunny areas. Bicol and Mindanao (belonging to the Luzon Islands in the central



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Philippines) are two areas known for their spicy cuisine, in part due to the use of siling labuyo. The peppers can be purchased locally or cultivated at home, where it is common to have a container of the plant, though this practice is declining some. True siling labuyo peppers are also under threat due to commercially imported peppers from neighboring countries, frequently larger and not as spicy, that are falsely sold as siling labuyo.

Tamilok

Tamilok is often called a woodworm, but technically it is a mollusk that is among a group of saltwater clams without a shell. It has also been called a shipworm or a sea termite, stemming from an old tale that it was an enemy of wood-hulled ships of long ago, as it destroyed wood hulls by boring and eating their way through the wood, any kind of wood actually as long as it is immersed in sea water.

Tamilok is a local food fare in communities around mangrove areas in the Philippines. But it is not a regular on the dinner table since it is quite difficult to get. One has to wade through muddy and slippery river or sea bed amid the mangroves in order to find submerged dead rotting mangrove wood in which the tamilok can be found.

It tastes like oyster, but even better, many attest. It is eaten fresh and raw, dipped in coconut vinegar (sukang tuba) with salt and chili.

While tamilok has long been utilized as food by locals in communities near mangrove forests, of late, it has become quite popular among tourists going to Palawan. Thus, harvesting of this worm is now being done for commercial purposes and the tamilok is now being touted as an "exotic food".

There is valid concern that overharvesting of tamilok for tourism purposes might disturb mangrove ecosystems in the province, particularly in areas frequented by visitors like the Underground River in Sabang, Puerto Princesa City. Thus, there is a need for greater vigilance and advocacy in preserving mangrove areas and other marine resources.

Prepared and eaten as ceviche in local communities, Tamilok is served particularly during gatherings, marriages and celebrations among families and friends. There are now restaurants that try other ways of preparation or cooking like "crispy frying" or as omelette.

Tisa/ Tiessa, Chessa, Canistel

Canistel, eggfruit, or tisa as it is called locally is a seasonal fruit in the Philippines where many other fruits of South American origin can also be found, unlike in other Asian countries where it is a rather rare curiosity. Its scientific name is *Pouteria campechiana*. The tisa tree is erect and generally no more than 8 meters tall, but it may, in favorable situations, reach a height of 27-30 meters. The ripe fruits are shades of yellow with a waxy skin and a pulp that has the consistency of a hardboiled egg yolk. It has a taste slightly reminiscent of sweet potato. Fruits can be highly variable in size and shape, ranging from round to pointed to oval-shaped, and 7.5-12.5 cm long and 5-7.5 cm wide, except in one shrub variety that produces round fruits just 2.5 cm in diameter. Tisa is a seasonal fruit, with availability beginning from October and peaking in December. Tisa is rich in carotene, niacin and vitamin C. It can be eaten as is or with salt and pepper and lime or lemon juice or mayonnaise, either fresh or after a light baking. The pureed flesh may be



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used in custards or added to ice cream. A rich milkshake-like drink is made by combining ripe tisa pulp, milk, sugar, vanilla, nutmeg or other seasoning in a blender. Canistel pulp can be used as a spread on toast, made into marmalade or used in baking. The tisa tree was introduced at low and medium elevations in the Philippines before 1924. Some sources also claim that the Spanish introduced the plant to the Philippines even earlier. Attempts to grow it in nearby Singapore were not successful. Today they are mostly grown in backyards rather than large tisa plantations. It is then sold in relatively small quantities to local fruit stands and in markets. Seldom can it be found in grocery stores even when it is in season. Today, the wood of the tree is valued more than the fruit and used as a building material. The fruit has become increasingly rare in the area, and younger generations are not very familiar with it. Many eat it out of curiosity rather than regularly including it in their diet.

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