

Voices from the forest

A Fresh Forest Feast





Voices from the Forest

Non-Timber Forest Products - Exchange Programme (NTFP-EP) Asia is a collaborative network of over 100 civil society organizations (CSOs) and community-based organizations (CBOs) whose mission is to catalyze the empowerment of forest-dependent communities in Asia towards the sustainable management of forested landscapes & ecosystems.

Voices from the Forest is the official newsletter of NTFP-EP. It is released biannually and contains regional and country forests and peoples updates from the NTFP-EP network.

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EDITOR'S NOTES



Cover photo (by Jo Ivan Llaneta):

Freshly tossed ferns, honey, tomatoes, onions and salted eggs to whet your appetite.

During the Islamic Holy Fasting month of Ramadhan, we have chosen a topic which may seem ill-timed to some, but not really as we explain away. We see Muslims fasting in prayer, giving up worldly matters and sustaining hunger as a sign of worship from sunrise to sunset during the fasting month.

The lack and absence of forest food or wild food within traditional, forest-based communities, is often a reality faced involuntarily all year round.

During the wild foods regional meeting in January 2017 (page 12), there was a discussion about forest conversion to monoculture plantations. These conversions have led to the unavailability of nutritious and culturally significant food sources like the bamboo shoots in Indonesia and the *pyap* (leafy vegetable) in Cambodia. Government regulations have also denied villagers from the Nilgiris in Tamil Nadu, India from the collection of tubers and greens.

The article Regrowing Wild Foods (page 16), shares with us the influences of fast food and lifestyles on the eating preferences and importance of forest foods in indigenous diets. Despite this, however, the Penan in Malaysia, the Raglai in Vietnam, and the Binjhal Kondhs in India are protecting, planting and processing forest foods to make them more available and edible.

The International Slow Food movement is also promoting local and healthy sustainable food through a fun event in the Nilgiris chapter (page 9) where excess market produce is made into a sumptuous “disco soup” instead of being thrown away and contributing to the 1.3 billion tons of food in garbage globally.

Tanya Conlu takes up our favorite topic of bees and honey (page 4) stressing the multiple benefits of wild honey though this good source of energy and antioxidants also faces challenges through fluctuation in weather patterns affecting production, among other constraints.

So hope you enjoy this gastronomic journey. For those populations depending on wild foods, challenges lie ahead, but networks, festivals and movements are motivating the young to bring wild foods back in our forests and back on our plates.

ABOUT THIS ISSUE

The 32nd issue of Voices from the Forest is a special one as it focuses solely on FOOD. There is a resounding need for a deeper appreciation and understanding of wild food and its innate links to forest management and the indigenous way of life. This special feature on indigenous food and health was a recommendation from the regional meeting held at the Keystone Campus in Tamil Nadu to strengthen the NTFP-EP network's commitment to a holistic perspective on the issue of forest-based communities through wild foods.

AMBER LIQUID THAT'S GOOD AS GOLD

by Tanya Conlu

No bees, no trees

Heard the expression, “busy as a bee”? Without the tireless work of bees, many of our trees and crops will become extinct. Bees are an important part of the forest ecosystem because they are pollinators. Of over 20,000 species of bees, only a few make honey. Honeybees are known to forage as far as 10km away from their hive, some even as far as 20km!

Not all honey is the same

Wild forest honey from Asia mostly comes from the honeybee *Apis dorsata*. This honey is not harvested from bee boxes but painstakingly gathered by indigenous peoples from tall trees and high cliffs deep in the forest. Each area and each harvesting season will yield a different consistency and flavor, depending on the climate and the flowers that bloom within the forest. Wild honey is multifloral, meaning a single hive will have nectar sources from many species of flowers.

Wild honey is multifloral, meaning a single hive will have nectar sources from different species of flowers.



*Bees are an important part of the forest ecosystem because they pollinate plants and trees. Of over 20,000 species of bees, only a few make honey. In Asia, some honeybee species are *Apis dorsata*, *A. cerana*, *A. florea*, and *Tetragunola biroi*. Honeybees are known to forage as far as 10km away from their hive, some even as far as 20km.*

Wild is the best

Honey is almost a complete food, with nutrients, vitamins, minerals and flavonoids that are all beneficial to us. Studies by Dr. Nor Hayati Othman has shown that wild multi-floral honey from Malaysia known as Tualang honey has potential therapeutic effect on breast and cervical cancer. Honey is also an immunity booster, with antibacterial, antioxidant, antidiabetic and anti-inflammatory properties. It reduces cholesterol and heals wounds and sore throat. Wild honey is free of pesticides and can be used as a healthy, natural sweetener. However, when subjected to heat beyond 30 degrees Celsius, honey loses its beneficial properties.

No honey, no money

Honey has been traditionally harvested for food and medicine for countless generations, and is a time-honored tradition among indigenous peoples. Different rituals and beliefs among many cultures revolve around bees and honey.

Converting this traditional practice into a commercial activity enables communities not only to get cash income, but also gives them motivation to conserve the forest in its entirety, as honey cannot be produced in an unhealthy forest.

Community-based NTFP enterprises (CBNEs) based on honey not only bring income but also boost community cohesiveness. Honey harvesters form enterprise groups that develop and monitor



their own harvesting and processing practices. Cultural practices are retained, but some steps are innovated so that honey quality is higher. Federations of enterprises per area or per country have developed standards on fair pricing, community benefit sharing, sustainable harvesting and ecologically friendly practices in production. This enables them to come up with common brands and raise market prices.

Towards a honey collective mark

Unfortunately, honey from *A. dorsata* does not pass EU standards for honey, because it is wild honey with inconsistent properties. The EU bases their standards on *A. mellifera*, the European honeybee, which is farmed and controlled in hive boxes. This started a movement within NTFP-EP to promote *A. dorsata* and have an exchange of best practices in harvesting and conservation of Asian wild honey. In 2007, the first Asian honey conference called Madhu Duniya was organized for partners throughout the region.

A decade and three conferences later, NTFP-EP partners working on honey decided to come up



with the Forest Harvest collective mark to promote Asian wild honey sustainably produced by indigenous communities. This brand will guarantee that honey products coming from the network are sustainable, of good quality, and comes with a traceable forest source. Check out Forest Harvest on [<http://ntfp.org/2017/01/foresthharvest/>].

Challenges

Not all that is touched by honey turns to gold. The industry has its own share of problems, from harvesting all the way to marketing. Across the region, challenges include:

- Lack of supply to meet an ever-increasing demand
- Fluctuations in harvest
- Non-compliance to harvest protocols, such as collection of honey before maturity
- Shifts in livelihood of honey harvesters
- Adulteration of honey sold in the markets
- Competition, particularly from farmed honey

Denise Matias is a researcher who worked with indigenous honey gatherers in Palawan, Philippines, specifically the Tagbanua. From her studies, she identified that the earliest record of this community as honey and beeswax gatherers came from Manuel Hugo Venturrello in 1907. After more than a century, the Tagbanua retain this practice, however honey gathering is being threatened by increasing temperatures. In 2016, extreme heat caused nectar sources to dry up, leaving the wild honey bees without their carbohydrate supply and leaving the Tagbanua with little honey to gather. Increasing the area of nectar sources and planting flowering trees could be potential interventions, and monitoring could establish the usefulness of such efforts.





Deforestation, storms and floods, and extremely hot weather result in less flowers to supply nectar. Worse is when honeybees are killed, displaced or do not reproduce due to these changes. This spells a dry season for honey harvesters, who will have very little or no honey for the year, and a resulting diminished income. When there is little honey, harvesters often set aside their subsistence needs, preferring to sell rather than consume the small amount of honey that they can gather. It is also important to leave some for the bees to make it through another season.

Bees are crucial in keeping the forest and the lives of the people who depend on it for subsistence and livelihoods. So next time you take honey, appreciate the hard-working bees and do what you can to save the biodiversity of forests.





DISCO SOUP FOR THE SOUL

by Earl Diaz, with contributions from Aritra Bose



We've heard all sorts of campaign gimmicks, but this will surely make you hungry.

What started out as a “protest soup” feeding about 8,000 people in Schnippeldisko in Berlin, Germany as a campaign against extreme food wastage has now been transformed into a global event.

This year, the Slow Food Youth Network organized the first of its kind soup protest: the Global Disco Soup Day.

A significant portion of populations in the world suffers from hunger and malnutrition. However, about one third of the food we cook is being thrown away, amounting to around 1.3 billion tons of food in the garbage every year.

With the enormous amount of perfectly usable food supply being thrown away, be it vegetables left to spoil or food discarded both by restaurants and consumers, the Global Disco Soup Day aims to change how we perceive leftovers – that all the waste is perfectly edible, even if it requires a bit more effort.

Joining the movement is as easy as 1-2-3. Get in touch with suppliers who could donate some food instead of throwing it away, find a place with tables, tools, and a kitchen, and lastly, play some really good music, and voila, get the disco soup groove going!

As part of the Slow Food Nilgiris Convivium, Last Forest, through its organic restaurant–Place to Bee, celebrated the world disco soup day in Ooty, Tamil Nadu, India. Aritra Bose, Place to Bee manager, toured curious foodies around the restaurant during the Global Disco Soup Day celebrations.

Farmers from different villages set up booths to sell organic produce. In return, they donated leftovers to Place to Bee to turn into their Disco Soup. The leftover spinach, zucchini, carrots, and broccoli made a funky concoction of soup that jives with the live music that went with it.

The event was well received as many people dined, sang, and danced not just to the beat of the live music, but also to the beat of the advocacy!





MORE THAN JUST MILK TEA

by Crissy Guerrero and Merry Tobing

For mall goers, *sagu* are those sticky white balls found in their milk tea. But to the people of Sungai Tohor, Riau, Indonesia, *sagu* means much much more.

Sagu has been planted by the people of Sungai Tohor since the 1700s upon the arrival of the Bugis during the time of the Sultanate of Siak Sri Inderapura.

The local people have since used local wisdom to plant and sustain their *sagu* palms which is different from the mono-culture plantations found nearby. Alongside the *sagu*, large trees are also planted. These trees not only help store water, but also help stimulate the growth of *sagu*. Mono-culture plantations nearby are short and stunted because, according to the local farmers, they do not benefit from the diversity of other plants.

In 2014, only the village of Sungai Tohor was safe as the rest of the island of Meranti raged with forest fires. The plantations outside the village were vulnerable to fire as the canals they used had dried up. The local farmers of Sungai Tohor used *tebat-tebat*, plastic fabric partitions, in the canals

near and within their village. These canals were remnants of a previous pulp and paper concession in the area. The "*tebat-tebat*" filled with leaves and branches kept the canals wet thus avoiding fire.

Sagu is very important for the people of Sungai Tohor. It provides income for at least 500 families in that village and the neighboring village. *Sagu* provides work, not only for the men who harvest the *sagu* pith but also to the women who then make flour, noodles, sugar and other products made from *sagu*. Sungai Tohor alone is able to produce 700-800 tons of *sagu* per month.

What is sagu? Why is it important?

Metroxylon sagu or *sagu* palm has been harvested for food for millennia. Starch is extracted from the *sagu* palm by crushing the trunk pith into fine fragments and then kneading them in water to extract starch. Along with banana, breadfruit, and taro, *sagu* starch is one of the oldest known staple foods in the world. The main countries where it can be found are Indonesia, Malaysia, Philippines, Thailand, Papua New Guinea, and the Solomon Islands. Its high starch productivity

HIS NAME IS MUZEIR

Pak Muzeir is 53 years, he is a farmer in Sungai Tohor village who has been farming *sagu* since he was 18 years old. He says that *sagu* seedlings should be maintained until they are about 3 years old to avoid disturbance caused by animals such as monkeys and pigs. *Sagu* plants are normally harvested after 10 years. When the harvest time comes, Pak Muzeir will fell a *sagu* tree trunk and cut it into 7-10 parts, with a length of each approximately 42 inches per section. This section is called *tual*. Pak Muzeir delivers *tuals* to the nearest *sagu* mill by making a *tual sagu* path using *sagu* leaves.

One *tual* is valued at Rp 45,000 or about USD 3.5. In one day Pak Muzeir is able to produce 20 *tuals* from his forest gardens. One *tual* can produce 40 kg wet *sagu* at the *sagu* mill. According to him also after this year's Eid there will be the formation of *sagu* farmer groups in the village of Sungai Tohor. He thinks this will benefit the farmers with a unified group to access capital, advocate favorable policies from government and negotiate *sagu* prices.

has been recently attracting interest for possible industrial applications. Some Japanese researchers believe that *sagu* is one of the crops that can help solve the anticipated issues of the 21st century, particularly food crises resulting from population growth.

Statistics from the last decade have Indonesia accounting for 51.3% of the total hectareage of *sagu* palms in the world (more than 2 million has in total) with more than 90% of all *sagu* plants in Indonesia found in Papua and West Papua (Prawatya Istalaksana, 2005). *Papeda* or *bubur sagu*, a sticky congee type meal is a staple food of indigenous people in Maluku and Papua. Apart from being a good source of carbohydrates, *sagu* is also known to be a food with low glycemic index and thus is appropriate for diabetics.

Sagu palm is also important because it can be grown on land that is unsuitable for other grains. The habitat of *sagu* is lowland swamps in Southeast Asia and its optimum cultivation condition is wetland. This makes it very important and suitable for peat swamps and make it a sustainable livelihood option, as opposed to mono-culture plantations which need soil drainage and land clearing often involving burning.

For the people of Sungai Tohor, *sagu* has saved the local community from hunger during Dutch

colonization, during the Japanese occupation, and in other recent times of crises.

Challenges

Sagu lags behind other starch crops in production and sales. The reasons can be because of its long maturity time (8-10 years), poor access to cultivation areas, lack of efficient process from cultivation to starch extraction, and also lack of information on the value added products that can be produced from this palm. The spread of mono-culture plantations also threatens the traditional model of *sagu* planting practiced by the people of Sungai Tohor. Infestation during the harvest of trees from tree plantations affects the *sagu* as well. The low price for *sagu* in the market is also a prevailing issue.

For this reason, NTFP-EP is conducting a value chain study to analyze the many possible products that can be made from *sagu*. This is to increase incomes to *sagu* farmers and expand markets, thus providing further incentives to *sagu* farmers to maintain their diverse *sagu* forest farms.

So the next time you order a pearl milk tea, think of the people of Sungai Tohor. Their "sticky" struggle turned success is an example of the importance of non-timber forest products (NTFPs) that have a benign impact on the environment, while supporting local economies.

COMING HOME TO THE FORESTS FOR FOOD

by Earl Paulo Diaz, with contributions from Madhu Ramnath, Dominic Langat, Tanya Conlu, and Oktari Sulastri

Nyalang Kalang, 53 years old, is a Penan born in the Apoh area. His interest in plants and other forest resources stems from his genuine passion to share this valuable knowledge to the Penan youth. He uses medicinal plants on insect bites and some minor ailments and regularly goes to the forest to gather edible plants and fruits for snacks.

It is indeed common for villagers to be able to point out hundreds of species of plants and animals that are available in their forest backyard for food. But unlike Nyalang, many community members admit to using only a handful of these in their daily recipes. They have grown accustomed to mostly unhealthy diets of non-indigenous communities, and slowly, wild foods are fading into the background.

This decline in wild foods consumption has resulted in undernourishment for many communities. Cutting the forest to grow more rice or other crops provides more calories at the expense of losing fruits, vegetables, and other animal-sourced foods, which are more needed in terms of nutrition: protein, vitamins, and other important nutrients other than carbohydrates.

The beginnings of this nutritional dilemma can be traced back to the shift from the nomadic to a more settled lifestyle of ancient peoples, when food consumption patterns changed as human settlements learned to cultivate. The planting of cash crops that demand sunlight such as rice, maize, wheat, and potato has altered landscapes and changed behaviors towards hunting and gathering.

Fast forward to today, with the pace of life quickening by the minute, we've been so busy that we want things quick and easy. Fast food has become staple as it's convenient and tasty, no thanks to artificial flavors and preservatives. This has led to an unconscious movement towards being sick. Obesity and related illnesses have become one of the top reasons for mortality especially among urban populations.



How then do we proceed? The answer may be in taking it slow and coming home, back to our forests.

In January 2017, NTFP-EP staff and partners gathered at the Keystone Campus in Tamil Nadu, India, for a three-day exchange on their forest foods initiatives in Cambodia, India, Indonesia, Malaysia, the Philippines, and Vietnam. The meeting aimed to provide a holistic understanding about the importance of wild foods in indigenous cultures and livelihoods.

The participants visited the Bhangalapadugai community and their processing center for products like honey, beeswax, amla, coffee, and millet. They have successfully provided livelihoods to 328 farmers and forest gatherers. The participants took a walk in the village area to learn about their agricultural practices and some lessons in ethics and practicalities in documenting wild foods.

Like other communities, the Bhangalapadugai villagers encounter barriers to wild foods consumption. Being farmers whose main source of livelihood is agriculture, excessive rain and elephant damages are constant challenges. This is compounded by government regulations on hunting, which prevent them from doing so in the forests.

This is not uncommon in many of the communities in all the



In the Philippines, a workshop on wild foods gathered participants coming from six indigenous communities throughout the country. They brought samples of their wild foods and shared their significance to their diets and culture, and how these foods are prepared.

The participants expressed that while they know these wild foods are nutritious, they cannot really explain how, and would like to have studies done on toxicity and nutritional values of their foods. They also wanted studies on how to ensure that their food resources will not be depleted. They wanted to promote festivals as a way to raise awareness on forest foods and their benefits to forest dependent communities.

countries where the participants work. In the meeting, they shared how oil palm and rubber plantations remain the biggest threats in many communities in Indonesia and Cambodia respectively. The prohibitions in harvesting traditional ingredients such as *lemea* (bamboo shoot) in Rajang and *pyap* in Mondulkiri have made it illegal and unsafe for communities to harvest them. These threats posed by non-sustainable industries and legal barriers in forest tenure and access rights pose two-fold existential dangers: the unjust displacement of many peoples and the nutritional gap that widens with the unavailability of areas to hunt and harvest the foods that nourish them.

To rejuvenate interest in wild foods, the NTFP-EP network committed to creating a healthy space for wild foods to flourish, not just for communities displaced from the forests but also those who are unaware of what they are missing in terms of nutritional and health benefits. Keystone Foundation started with a festive showcase of wild foods and indigenous dishes through a Wild Foods Festival. The festival was held during the regional meeting and it pooled hundreds of wild foods and over 50 different dishes prepared by the Irula, Kurumba, Toda and Kota communities of the Nilgiris. Booths for tasting were set-up and community representatives proudly described and explained the foods and dishes they were serving to the intrigued and well-fed visitors.



“The beginnings of this nutritional dilemma can be traced back to the shift from the nomadic to a more settled lifestyle of ancient peoples, when food consumption patterns changed as human settlements learned to cultivate.”

INSIGHTS FROM THE TRIP

"Cold air welcomed my arrival in Kotagiri, India. I was glad to attend the Regional Meeting of the NTFP-EP and have the opportunity to present about the role and participation of Rejang women in the management of natural resources. I shared that Rejang women make key decisions on types of plants to be planted, including taking care, harvesting and managing these plants in their pelak or backyard forests. The pelak is where plants are grown for family needs. They also tend to the crops grown in their garden forests, but after harvest season when food supply becomes inadequate they go into the community forests to pick or harvest bamboo shoots, kincung flowers, river slug, snails, fruits, and other forest foods.

We had the chance to visit the Bhangalapadugai village where I was informed that women there go into the forest only twice a year, unlike Rejang women who can enter the forest anytime. They also collect or harvest various commodities from the forest for their household needs and for their source of income. I wish I had more time to get to know deeper the role of women in managing their gardens in Bhangalapadugai. Nevertheless, I got very important lessons from the community visit. They showed us the processing center of their products, and how they cooperated with each other. I learned that women in India have initiatives to form groups and build businesses to add value to forest and plantation commodities, something which is not done by Rejang women. I was encouraged to see when I return the potential of Rejang women to build joint ventures of their own."

Oktari "Tari" Sulastri is a woman leader from Bengkulu, Indonesia and the Deputy Director for Women in her organization Advokasi dan Edukasi. Her participation in the Regional Meeting on Wild Foods was supported through the Global Alliance for Green and Gender Action (GAGGA) – Pastor Delbert Rice Small Grants Fund (PDRSGF) grant.

Another joyful event held within the meeting was an awarding ceremony for Jannakiamma, an organic farmer and practitioner of traditional medicine, who was given the Paul K. Feyerabend award for her exemplary efforts at motivating her community, Vallaricombai, to revive their traditional systems of governance and pride in their culture.

Throughout the three days, the youth from Jharkhand gave entertaining and lively performances which showed their way of life through dances and death-defying stunts. As in the other countries, the youth are taking great strides in acknowledging the importance of indigenous foods that are part of their unique culture and identity. This restores hope as the indigenous youth have the potential to bridge not only the nutritional but also the cultural gap amidst the unwitting pressures of modernization. This is the hope of Nyalang, as he works on documenting their wild foods species so that the youth can use it for reference lest the knowledge be lost forever.

The push for the revival of wild foods calls on indigenous communities to eat meals that remind them of home, and this home is the forest. As they share this bounty, more people become aware of wild foods and will be moved to protect the forests from where they come.

SPIRITED AWAY

by Earl Paulo Diaz with contributions from Madhu Ramnath and Luu Hong Truong

Nowadays you hardly need a reason to come out for a drink, but there used to be a hundred and one medicinal purposes for a strong glass of liquor, ranging anywhere from minor ailments to your daily glass of nutrients. Fortunately, some indigenous communities have passed on their knowledge—and thanks to generations of experience and scientific research—we can all enjoy these traditional alcoholic beverages, with some therapeutic benefits to boot. Cheers!



Mel or Mahua

Prepared from the dried flowers of *Madhuca longifolia*, this deceptively sweet-smelling alcohol is a classic among communities in central India. *Ranu* tablets and juice of *Buchanania lanzan* or sprenge leaves are added to aid in the fermentation process. A cloth closes the pot tightly for 3-5 days or until it becomes aromatic. It is then kept on the stove for distillation. Two pots are placed on top of the heated bottom pot, with the topmost one filled with cold water while the middle pot is used to collect the cooled vapor from the bottom pot. The collected vapor is then stored as *mahua*.



Nipa Lambanog

This is a distilled liquor derived from the inflorescence of the palm tree *Nypa fruticens*. This mangrove palm is cut off and the sweet palm juice is collected in a clay jar and fermented for 3-5 days. This liquid becomes acidic and then distilled to become *nipa lambanog*, a popular alcoholic drink in the southern Tagalog region of the Philippines where the nipa palm is abundant. Although the process is the same, the *nipa lambanog* should not be confused with the common *lambanog* found in markets which is derived from the coconut tree.

Lipote wine

From the same area in the Philippines, the Agta communities also produce a wine made from the fruit of *lipote*, or *Syzygium polycephaloides*. The fruit can be eaten raw or cooked and can be used in the treatment of common minor diseases. This fruit can also be used to flavor nipa lambanog to counter the very strong taste of the alcohol.



Pipe wine

The Chau Ro communities of Vietnam have their pipe wine for special occasions. This wine uses leaves and roots from 78 plant species found in the Chau Ro forests and fermented inside traditional clay jars and drunk from bamboo pipes. The Chau Ro drink this wine on important occasions such as the Tet festival, weddings, and other festivities.

FOOD FOR THOUGHT

by Angelo Esperanzate with contributions from Yun Lorang, Madhu Ramnath, Anang Setiawan, Jovale Vincent Tongco, Dominic Langat, and Trinh Thi My Dung



We all want good food; that craving is universal. But the advent of infusing manufactured food with nature's goodness clouds food consumers from using fresh ingredients from the forests that are beyond organic. Understanding the important qualities of all these natural gastronomic gifts can link us back to the vital role of forests in our lives. Here are a few of them from around the region.

Cambodia: Pyap

The king of all soup is made bitter. And the bitter tastes so good.

Best tasting during the dry season, these bitter leaves are eaten by the Bunong people of Mondulkiri. Almost 80% of the population is still dependent on this wild food that they turn into soups or fried cuisine.

Pyap leaves are used variably in a number of dishes: the *somlor hor*, a sweet and sour soup, the *prong*, a dish that mixes the leaves with chili and meats, and *pipuk* that is mixed with rice powder.

Women harvest the leaves for a multitude of purposes other than food.



India: Mananjil

The family that fishes together, gets the best eel.

Some heavy with black spots, some less so, these *mananjil* or eels are one of the wild foods found in freshwater streams and rivulets that sustain the communities in the Nilambur area in Kerala. The two types of eel, chera and mujj, live in clear water rock holes and are caught using bamboo traps.

Even though some women do not want to feed them to their family due to the resemblance to snakes, fishing is still considered a fun activity for children and the community.



COOKING IN BAMBOO

The bamboo, where simplicity is the ultimate sophistication.

The Punan cook their food in bamboo poles, reflecting a modest tradition of culinary arts. From wild boar to rice, the simplicity of boiling and adding salt encompasses most of how they cook. Their tradition has perfected the craft enough that they could tell that the food is cooked just by the aroma.

With the onset of industrialization and the resettlement of the Dayak Punan, their way of life has been threatened tremendously. Their nutritional needs, particularly protein, has gone to a critical shift as the availability of wild boar and deer decreased. Their tradition of cooking with bamboo is also affected as forests are turned into oil palm plantations.

With bees disappearing, flowers not blooming, and rivers becoming polluted, the new reality of the Punan in Adiu village has set in.



Indonesia: Lekoi

Something small that goes a long way.

Lekoi is an important seasoning for the Dayak Punan in Adiu, Malinau. A traditional flavor, this liana could be found in the lowlands of Borneo, where other indigenous communities also use it. It is preserved by having the leaves cleaned, mashed or sliced into smaller pieces, dried, and stored.

Only 3-4 small pieces of its leaves are used to flavor dishes, to enhance the taste of fish or vegetables. It could be processed differently to produce a sweet taste for most vegetables and to eliminate bitter tastes for others.

Malaysia: Pelutan

A sweet and tangy duet, all in one fruit.

Pelutan is a large climber common in all forest types in Sarawak. Its large fruits, about 10cm in diameter, becomes orange or red when ripe and is eaten by the Penan. The fruit has a thin rind like a melon and has a sweet taste. Each plant can yield up to a hundred fruits twice a year.

It also produces a sticky sap the Penan use to mend torn cloth.



Philippines: Pako

A fresh fern feast for the Filipino folk.

Young shoots of the *pako* or fiddlehead fern are eaten fresh or cooked lightly and served with coconut milk or stir fried with other vegetables and seafood or meat. Best served as a salad, this fern is a good source of nutrition, particularly flavonoids that help against heart problems and cancer. It is high in fiber and protein and has antimicrobial, anthelmintic, and antidiarrheal activities. Fresh or boiled, it has high antioxidative and antibacterial properties.

Eaten where it is found in many parts of southern and southeastern Asia, this fern is a highly-sought vegetable for traditional dishes in the Philippines.



Vietnam: Dang Sam

The root of all nutritional goodness.

This tuber known as *dang sam* or bastard ginseng growing along streams and forest edges in higher elevations has many uses as a tonic. It is used to address digestive and respiratory disorders, anorexia, diarrhoea, thirst, and fatigue, among others. It's roots contain glucose, glucosid scutellarin, and alkaloids. It is dried and used in a special herbal *dang sam* chicken soup by the communities in Lam Dong province.

With its edible fruits and medicinal roots, the *dang sam* is a special herb that is coveted by all.



REGROWING WILD FOODS

by Tanya Conlu, with contributions from Trinh Thi My Dung, Dominic Langat, Amar Kumar Gouda and Krishna Srinivasan



With our instant lifestyles and the ever-growing genetically modified food industry, many of us can hardly recognize the food we eat from the plant or animal it came from anymore. But for some communities throughout the world who are dependent on forests, hunting and gathering wild foods is still a way of life. Billions of people depend on food from forests to increase the nutritional diversity of their diets. Getting and processing wild foods are linked to cultural identity and require traditional knowledge passed on from generations.

Before some indigenous children – not to mention children and even adults in urban areas – even learn about these wild foods, however, they are already fast disappearing. This is a shame, not only for cultures that are lost, but also because wild foods are full of nutrients, micronutrients and vitamins often not found in domesticated and manufactured foods.

Across the region, efforts have been made to restore wild foods. Some remarkable initiatives include the Penan planting sago in their forests, the Raglai changing their ways to protect their velvet tamarind trees, and the Binjhal Kondhs processing a wild tuber deemed poisonous and inedible.

UVUT *Eugeissona utilis*

Uvut, or sago, is the most important food for the Penan of Sarawak, Malaysia, who harvest its pith for starch. This armed palm is common along riverbanks as well as on slopes. The shoots are eaten as vegetable, while the pith is harvested when the palm is mature.

Rapid deforestation in Sarawak has meant loss of food resources for the Penan. Processing is also becoming a problem as clean water is needed but streams are getting dirty or drying up. The youth no longer know how to process sago as they seldom go to the forest. As sago is very important to these nomadic and semi-nomadic communities, NTFP-EP has been supporting their sago planting efforts in over 200 hectares in 7 communities for almost a decade. Sago is planted near settlements, in degraded lands, and along boundaries to secure their territories, deterring logging companies from encroaching on their land. Rehabilitation efforts ensure a constant supply of their staple food. Nursery establishment and planting activities have also ignited the youth's interest in participating in conservation initiatives in their communities, and have formed a youth association to preserve their sustainable agriculture practices.

SAGO PREPARATION

Starch is extracted from the malleable center of the trunk and is processed into dry blocks. Before eating, this is turned into paste by diluting it in cold water, then turned into a gummy substance with hot water.



XOAY *Dialium cochinchinense*

Velvet tamarind, or *xoay* to the Raglai of Xom Den Village in Ninh Thuan, Vietnam, is eaten fresh, processed into a snack, and used as medicine. It can also be turned into a drink. It is rich in minerals, sugars, and tartaric, citric, malic and ascorbic acids. The velvet tamarind tree used to be abundant in southern Vietnam, but due to the commercialization of its fruit which is a popular snack, some harvesters have started cutting down big branches of the tree or even cutting down small trees to get to the fruits. This unsustainable way of harvesting, compounded by habitat loss through forest fires, has led to the decline of the velvet tamarind, which has become a threatened species.

Even if harvesting is only a few months in a year, the Raglai community in Nui Chua National Park earns a high income from velvet tamarind, with a kilo of the snack selling for US\$10. With its economic value, and as the tree is one of few species that can thrive in the arid environment, the community started valuing and protecting velvet tamarind. They imposed sustainable harvesting techniques and wanted to regenerate the trees. The village elders favored the initiative as it is a native natural tree familiar to them and suitable to their land, and replanting it will help with biodiversity restoration. The community had limited farming techniques but their partnership with the park in co-managing the forest enabled them to access help from park technicians who worked with them to germinate seeds harvested from the forest. A nursery was developed and over 6,000 seedlings were planted in the upland areas during the last rainy season. This unique collaboration between park staff and community members have led the way for the velvet tamarind to recover.

VELVET TAMARIND CANDY PREPARATION

The fruit is peeled and mixed with sugar, dry chili powder and salt. A chopstick or spoon is used for mixing. When stored in bottles, the candy can be stored up to a month.



KULIHA KANDA *Dioscorea hispida*

The Binjhal Kondhs of Karlabahali village in Odisha, India derive their livelihood from agriculture. However, as there is no irrigation facility and the area has reeled under years of drought, only a few crops can be sustained for their subsistence. Consequently the community still depends on wild foods from the forest, including fruits, mushroom, leafy vegetables and tubers. These wild foods constitute a significant part of their food and nutritional security which is not fulfilled by government rice subsidies. The continued consumption of wild foods protects the diversity of their natural forests and sustains their traditional knowledge systems.

Kuliha tubers or *kanda* are among these wild foods harvested by the Binjhal Kondhs, though it is poisonous and can only be eaten after diligent processing. *Kuliha kanda* has a slightly sweet taste and can only be harvested when it ripens in October to November. The soil is dug 1-2 feet deep and about 5-7 kg of the tuber can be collected from one stem. The remaining part is covered with soil so that it can germinate again.

One of the community members, Judhistir Puta, had the idea of processing *kuliha kanda* into papadi or chips because he wanted to bring back their traditional food habits. He laments that the rice subsidy has made them, especially the children, forget the taste and smell of the forest foods of their ancestors, which are a mix of many different types of nutritious food. His wife Balamati has been doing the *papadi* and chips preparation, and now the community is involved in making and selling her product with the brand Balamati Papadi. Even the youth, who have shunned forest foods, are enjoying the taste of these products from the poisonous tuber!

Recognition of the Binjhal Kondhs' community rights over forest produce has strengthened the revival process of indigenous knowledge and cultural systems on food, while innovative people like Judhistir ensure that traditional food will persist with the youth.



PAPADI PREPARATION

The harvested tuber is boiled then when it has cooled down, it is cut thinly, bound in a cloth and sunk in cold water for 12 hours. Next it is dried under the sun for 6-8 hours. It is then prepared as crispy papadi by frying with hot sand. Salt and pepper may be added to taste. The papadi does not lose its crispiness when packaged.

FEATURED PUBLICATIONS AND VIDEOS



BOOK

A PICTORIAL GUIDE OF SOME USEFUL PLANTS OF SARAWAK, MALAYSIA

As the world changes and the forest becomes smaller, the Penan are forced to leave the forest for better homes, work, and education. The last groups to settle are the Ba Puak and Ba Marong who still hunt and gather and are still very much dependent on their forests. But its deteriorating state has resulted in scarcity of food. Manufactured food has also found its way to the villages. The names and uses of wild food species are fading away, especially among the youth. Village chief Sagung Raja worried that the Penan will soon lose their culture and dialect, because even if the children consume wild food prepared by their parents, they don't bother to ask the name of the food served to them. Trainings and workshops did not seem enough to transfer this vast body of knowledge, so the idea of this book was born.

This pictorial guide written in Penan and English was developed with community elders, and spans two years of collection and documentation of wild food species found in two areas in the Apoh Tutoh region. Composed of 47 edible and 20 medicinal species, it is a collaborative effort among the Penan, NTFP-EP Malaysia, India, and the regional office. Distribution started in January 2017 much to the happiness of the Penan who realized that documentation of their wild foods is one way to ensure that their knowledge is passed on to their children.



FILM

LOSE LAND, LOSE IDENTITY

For many communities, the forest sustains their livelihoods and food security. This film tackles the dwindling forest food resources of Cambodian indigenous communities due to land tenure issues.



FILM

INDIGENOUS YOUTH FESTIVAL DOCUMENTARY

The recently concluded Indigenous Youth Festival in the Philippines highlighted the role of communication in the youth's advocacy in preserving their culture and identity. This documentary is an output of one of the workshop groups in the festival.