LUBI-LUBI

(Ficus pseudopalma)

INDIGENOUS VEGETABLES OF THE PHILIPPINES

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LUBI-LUBI

Ficus pseudopalma Blanco

English names:
Philippine fig,
Dracaena fig,
Palm-leaf fig

Philippine local names:
Lubi-lubi (Bicolano); *Mili-bili* (Bicol subdialect - Rinkonada, Gubatnon); *Niyog-niyogan, Niog-niogan* (Tagalog); *Labnog, Labnok* (Visayan)

THE COCONUT PALM'S MINI-ME

Lubi-lubi is a shrub or small tree that resembles a coconut (palm) tree; hence, the species name "pseudopalma" or "fake palm". The local names extend this analogy since "coconut" is *niyog* or *niog* in Tagalog and *lubi* in Bicolano and Visayan, including Waray, Cebuano and Hiligaynon. Thus, the local names *niyog-niyogan* and *lubi-lubi* hint at this similarity.

Like the coconut palm, Lubi-lubi has a single stem but is capable of producing multiple shoots when cut or damaged. The leaves have a very small stalk and are arranged in a rosette at the tip of its only stem to form a crowded canopy. From a distance, Lubi-lubi would look like a small coconut tree.

While used primarily as a vegetable in the Philippines, Lubi-lubi is prized by plant collectors and gardeners in other countries as an ornamental plant.

Its leaves look like boat paddles because they are wider towards the tips and taper towards the base. They have jagged or coarsely toothed edges and a smooth, shiny upper surface but paler underneath. Young leaves are pinkish in color and turn green to dark green as they grow older. Lubi-lubi's urn-shaped inflorescence – called the syconium – is actually an enlarged stem that protects hundreds to thousands of male and female flowers in the inner wall. It also serves as a nursery to its agaonid wasp (Hymenoptera: Chalcoidea: Agaonidae). These fig wasps, in turn, help the Lubi-lubi develop the seeds needed to propagate itself by pollinating its flowers.

DON'T BE CONFUSED

These plants share the common names *lubi-lubi or niyog-niyogan/ niyug-niyugan/niog-niogan,* but each is a different plant:

Ficus pseudopalma

***Combretum indicum** (formerly **Quisqualis indica**), a medicinal plant

***Solanum americanum** (also identified as **Solanum nigrum**), a vegetable known as *amti* or *unti* in Northern Luzon

A TALE AS OLD AS TIME: THE FIG AND ITS WASP'S GREAT LOVE STORY

Fig species, including Lubi-lubi, has one of the most extreme obligate nursery mutualisms of all plants. Each one is pollinated by only one or two very specific agaonid wasps, while this wasp can only breed and lay eggs inside the fig fruits of the *Ficus* species associated with it.

Inside the fig of Lubi-lubi are thousands of unisexual flowers – either male or female – that later develop into fruits enclosed inside the fig. This is why the fig is actually a multiple fruit. During the reproductive stage, the female fig wasp enters the fig through a protected opening at the top of the fig called an "ostiole". As expected, this opening can only be accessed by females of its associated wasp and only during the time when its flowers are receptive. Once inside, the female fig wasps lay eggs on the short-styled female flowers (and form galls) and pollinate the long-styled female flowers before they die. While fig wasp larvae develop inside the galls, Lubi-lubi's seeds develop in the pollinated flowers. The male fig wasps that hatch stay inside the fig all their lives.

From inside the fig, wingless male fig wasps emerge first and mate with the females still inside the galls. Then, the males bore exit tunnels out of the fig for the winged females. As the female fig wasps emerge, they collect pollen from the male flowers and fly off in search of Lubi-lubi figs with receptive female flowers. Thus, this intimate relationship has allowed the fig and its wasp to evolve together, and ensure each other's survival.

So, there are no figs without their wasps, and there are no wasps without their figs; and they have remained faithful to each other for at least 75 million years, since the time when dinosaurs roamed the earth.

CULTURAL AFFINITY OF BICOLANOS TO LUBI-LUBI

It is only in the Bicol Region, particularly in Camarines Sur, that farmers grow Lubi-lubi with rice as a cash crop. Harvested leaves – preferably the younger leaves or tops – are sold in sari-sari stores or peddled house-to-house. The bulk of this harvest is supplied to local restaurants where orders/reservations for Lubi-lubi dishes are regularly received.

Faith healers and herbologists from certain areas have also been using Lubi-lubi in their practice of folk medicine. According to folklore, extract (sabaw) from boiled Lubi-lubi leaves can be used to treat hypertension, diabetes, kidney stones and high cholesterol; and scientific research has been proving that at least some of these claims are true.

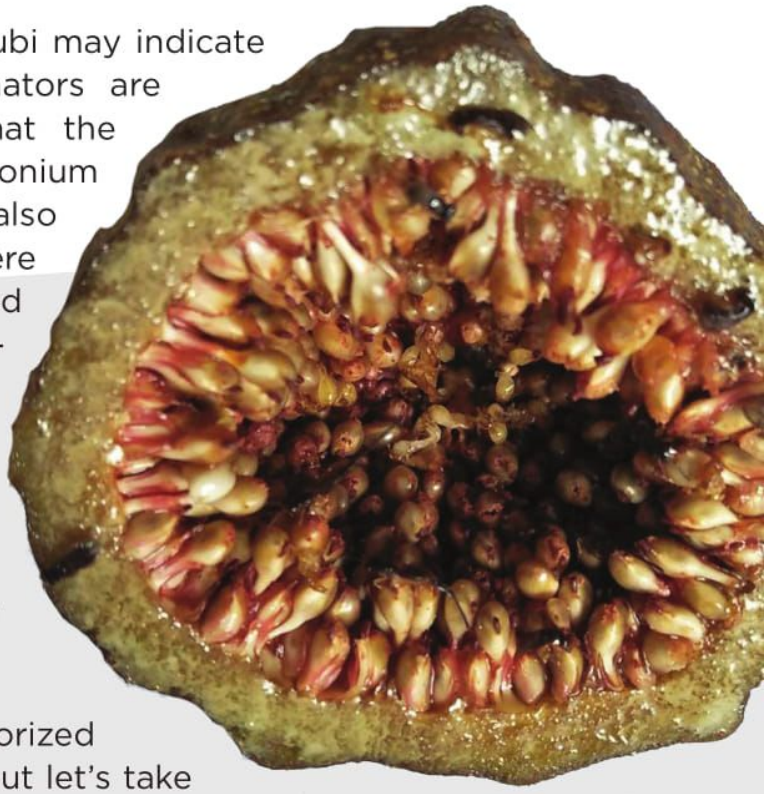
Studies have also indicated that Lubi-lubi has hypoglycemic, antioxidant and antibacterial properties. It also suppresses the increase of blood glucose levels after meals – good news for diabetics. Last but not least, consumption of Lubi-lubi leaves has no known adverse side effects, so you can eat them to your heart's content.

There is a folk song that goes, "*Enero, Pebrero, Marso, Abril, Mayo; Hunyo, Hulyo, Agosto; Setyembre, Oktubre; Nobyembre, Disyembre, Lubi-lubi*", and ends on an extended high note. Perhaps, the song can also be an ode to Lubi-lubi, which can be enjoyed any time of the year, the whole year round.

WHERE TO FIND LUBI-LUBI PLANTS

Lubi-lubi, which is also called Philippine Fig, is endemic to the Bicol Region where natural populations are commonly found in secondary succession forests, home backyards and agricultural areas. However, their occurrence in the same environments has also been reported in nearby provinces like Quezon and Laguna, as well as in faraway Capiz and Iloilo but populations there appear to be limited.

HELPING OUT THE FIG WASPS - CONSERVATION THROUGH USE



The limited population of Lubi-lubi may indicate two possibilities – that pollinators are not working efficiently, or that the environment is not favorable for syconium (fig/fruit) development. It is also possible that outside of Bicol where the plant is more widely propagated and used, the low density of Lubi-lubi plants may have contributed to the inefficiency of pollinators. The female wasps have a limited time to fly out to other plants, to lay eggs and pollinate fig flowers, and might not find Lubi-lubi if the plants are few and far apart.

Conservation experts have categorized Lubi-lubi as a vulnerable species, but let's take a cue from the Bicol Region. Let's help ourselves to Lubi-lubi dishes and concoctions, have more Lubi-lubi plants, and help the fig wasps get to the next Lubi-lubi to pollinate.

Lubi-lubi usually grows from seeds. However, new Lubi-lubi plants can also be produced using cuttings or through air layering (marcotting).

SOME HARVESTING TIPS

The entire apex consisting of the first to the fourth nodes is harvested. However, selective picking of young reddish leaves is recommended to avoid too much damage to the plant and for faster regeneration. Also, do not climb the shrub nor bend the stem to avoid damage.

Cutting the shoot will encourage lateral branching. These lateral branches take long to mature.

It is also important to avoid contact with the milky sap or latex, as it may cause skin allergy and eye irritation. In addition, check for the presence of ants, bees, wasps and other stinging insects. Sometimes, too, a bird has made its nest in its canopy.

BICOL LUBI-LUBI FOODFEST

Ginataan is also called *hinatukan* and *ginat-an*, or cooked in coconut milk. To cook *ginataan* na Lubi-lubi, simply combine garlic, onion, ginger, chili pepper, and *tinapa* (dried/smoked fish), pork, shrimp or crab meat with coconut milk and bring to a boil. When ingredients are tender, add the chopped or shredded young Lubi-lubi leaves. Do not cover the cooking pan and do not stir. Notice that the leaves will slowly sink and the color will turn darker. Add pure coconut milk and simmer until it becomes oily.

Hinalbusang mili-bili sa hatok (coconut cream) with dried *tawilis*

In-ensalada or sinapaw is prepared by simply putting the Lubi-lubi leaves on top of steaming rice, and removing them when the color changes. It is served with chopped tomatoes, garlic, onions and chili, drizzled with a mixture of lemon, lime (*dayap/dalayap*) or *calamansi* juice and salt.

Bini-berdura refers to Lubi-lubi's use as a substitute for cabbage or *pechay* in fish/pork/beef *nilaga* (stew).

Tinotorta or pinirito sa bonay is an omelette with chopped Lubi-lubi leaves sautéed in garlic, onions and tomatoes. The eggs (*bonay* in Bicolano) are added later, when the color of the sautéed ingredients start to change. Flavor with lemon/lime/*calamansi* juice and salt.

Ginat-an na mili-bili with *ulang* (fresh water shrimps)

AWAY FROM BICOL

In Capiz and Iloilo, Lubi-lubi preparations have also been reported. It is eaten with *dayok/ bagoong* (fermented fish entrails/fish), or included as one of the leafy vegetables in the *laswa* vegetable soup, or mixed with meat or as a leafy garnish for sautéed mungbean (*ginisang munggo*). In these provinces, Lubi-lubi is called *labnog/labnok* or *niyog-niyog*.

DID YOU KNOW?

10 GRAMS OF BOILED LUBI-LUBI LEAVES PROVIDE:

94.9	**g**	**water**	**24**	**mg**	**phosphorus**
19	**kcal**	**energy**	**0.4**	**mg**	**iron**
1.2	**g**	**protein**	**1765**	**micrograms**	**betacarotene**
0.2	**g**	**fat**	**0.02**	**mg**	**thiamin**
3.2	**g**	**carbohydrate**	**0.10**	**mg**	**riboflavin**
0.6	**g**	**dietary fiber**	**0.4**	**mg**	**niacin**
58	**mg**	**calcium**	**10**	**mg**	**ascorbic acid**

Source: Food and Nutrition Research Institute (FNRI). The Philippine Food Composition Tables 1997. p.40. Department of Science and Technology.

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These small pamphlets are intended to spark renewed interest in the conservation, use, production and promotion of Philippine indigenous vegetables that have always been part of Filipino food culture and are key to household food and nutrition security.