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### THE BARK TREE OF BORNEO, *Artocarpus elasticus*

Hanne Christensen

#### INTRODUCTION

When visiting any of the indigenous communities in Sarawak, one cannot avoid observing their multiple and important uses of bark. Bark is widely used for straps, mats, and walls, and for lining things, as well as for tying or stringing objects together. Formerly, it was also important for making clothes. There are several species of trees that yield bark of good quality for many uses, but the most superior bark is obtained from the inner bark of *Artocarpus elasticus* Reinw. ex Bl. This forest tree has always been of great importance to the indigenous peoples of Borneo. Its usefulness is not only limited to its bark. Other parts of the tree have various traditional uses, too. This tree is also well-known and valued by people outside Borneo, and the tree is therefore known by many vernacular names. Table 1 lists a great variety of names that this species is known to be called, but as there are many more indigenous groups living in Borneo than presented in Table 1, the number of vernacular names for this species is probably much higher.

*Artocarpus elasticus* is extensively used, not only because of the superior quality of the bark fibre, but also because the tree species is widely distributed. It is commonly found in evergreen forests of Burma, Thailand, the Philippines, Peninsular Malaysia, Borneo, Sumatra, and Java (Forest Department and Ministry of Primary Industries Malaysia, 1995; PROSEA, 1995; Primack, 1983). In Borneo, *Artocarpus elasticus* is common in both secondary forest and in mature mixed dipterocarp forest in the lowlands and in the submontane areas up to an altitude of 1500 m.



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## THE TREE

The *Artocarpus elasticus* tree belongs to the mulberry family (Moraceae). It is a medium-sized tree that rarely grows more than 45 metres tall. Large tree individuals may develop buttresses. The outer bark is greyish brown to dark brown, pockmarked to slightly flaky. All parts of the tree contain copious white, sticky latex. Twigs, stipules and leaves are all covered by stiff, light brown hairs. The leaves in young trees are lobed, whereas the leaves on large trees are mostly entire, see Plate I. The tree has separate male and female flowers. The ripe fruits are cylindrical, 11.5 x 5.5 cm, yellowish brown, shaggy woolly with soft, recurved spines. The fruits have a rancid smell when they are ripe (Forest Department, 1995; Kochummen & Go., 2000; Primack, 1983; PROSEA, 1994).

## THE BARK

Burkill (1966) writes: "The bark is invaluable for clothing to the jungle tribes of Malaya ... The jungle tribes pound the bark, washing out the fragments freed in pounding, until only the fibre is left as a coarse blanket. With this they make their loin-cloth."

In the olden days, when commercial yarns were not available, the most basic material for clothing among the indigenous peoples in Borneo was bark cloth. Several species of trees yield bark which may be used for cloth, i.e., *Antiaris toxicaria*, the famous dart poison tree, see Plate II, yields a bark cloth that is beautiful and almost white in colour (Ong, 1991; Primack, 1983), and the bark of another famous groups of trees, the *gaharu* trees, *Aquilaria* spp. may also be processed into cloth (Burkill, 1966; Christensen, 2000). But the most widely used tree species was no doubt *Artocarpus elasticus*, due to its good quality and to its common occurrence in the forests. All sorts of clothing items were produced from the inner bark. Pearce *et al.* (1985) writes that the Iban use the inner bark "for loincloths (*sirat*), coats (*kelambi*) and blankets (*pua*) ... The loin-cloth is a narrow strip, which may be up to 6 m long. A woven blanket

may be 2 x 3 m, while a coat is shorter. Formerly, such items were used daily and also during religious functions. The blankets were used to wrap the abdomen of a mother who had just given birth. Nowadays these items are no longer used." Munan (1989) also writes that bark cloth was used for skirts, stout war coats, and rough wear, and for padding woven or beaded garments. Although bark cloth is thick and fairly warm, and is firm enough to give its wearer some protection against blows and thorn scratches, its disadvantage is that it tends to tear lengthwise. To prevent such damage, as well as to beautify the garments, bark clothes used to be artistically darned all over at right angles to the direction of the natural fibre, and care was taken to edge arm and neck openings with imported cloth. Sather (2002) mentions that the Iban (and probably other indigenous groups) also used the bark cloth for swings, or *tali wa*. These were used by mothers and grandmothers in the Saribas to swing their children. There are some lullaby song traditions specifically associated with these swings.

To produce a quality piece of bark cloth requires good skill and patience. The outer bark is peeled off from a suitable tree that has been felled. Next, the inner bark is stripped off in sheets as large as possible. These are softened by being soaked in clean water. Then they are stretched and dried. After this, the sheet of inner bark is widened through repeated beatings with a wooden beater while rolling it up first on one side, then on the other. Then the bark is soaked in clean water again and the process is repeated as many times as needed for the bark cloth to obtain the desired quality.

Munan (2003) mentions that a Bidayuh friend makes basket straps from bark where she uses a rubber mangle instead of the rather slower beating process. The quality of the product is quite satisfactory, when new it has the 'waffle' patterns of the mangle bits on it!

Besides clothing, another valuable use of the bark was and still is as rope, strings, threads, and straps for innumerable purposes. Strips of bark, pounded to fibre and then twisted into strings, have always been important in the interior communities where these bark

strings serve many various purposes, e.g., for use in fish traps, fishing-nets, and fishing lines, and for stitching, typing, and fastening all sorts of materials. The bark fibre is still the most used material for pack straps and basket straps in many interior communities.

Nieuwenhuis (1907) mentions that some Kenyah in the Apo Kayan used a warp of bark fibre and a weft of either *tengan* (*Gnetum* sp.?) or cotton to weave; this was only done by people too far from sources of commercial textiles in c. 1890-1900.

The Malay people traditionally used to line their rice bins with bark from *Artocarpus elasticus* (Burkill, 1966). And big pieces of bark may also be used as house walls (Burkill, 1966). A special type of heavy rattan mat is woven with strips of inner bark from *Artocarpus elasticus* used as warp straps. The Iban name for this mat is *tikai bidai* (Richards, 1981; Dunsmore, 1991) or *tikai idas* (Sather, 2002) and the Bidayuh name is *kasah* (Patricia Nayoi, 2002). The Iban traditionally use a wide piece of processed bark as the backstrap, or *tempuat*, in *ikat* backstrap loom weaving (Sutlive & Sutlive, 2001), see Plate III. Munan (1989) writes that even mosquito "nets" were made from the inner bark, but to be effective as mosquito nets, *tekalung* curtains would have been very hot, but they must have provided a little privacy.

Traditionally, the bark has always served as a medium for painting. The clothes made from the inner bark were often painted with various beautiful motifs. During the last twenty years or so bark painting has gradually become a medium in its own right for expressing artistic talents. The most famous painter was Tusau Padan (Society Atelier Sarawak, 1997), but more recently other Sarawakian artists, such as Ramsay Ong, have also picked up the challenge of working with bark cloth materials, and using it as a canvas for their beautiful artwork.

Besides the use of bark as canvas for artistic paintings, many other modern uses of the *Artocarpus elasticus* bark have developed