



The Sarawak Museum Journal

Vol. LXXI No. 92

December 2013



ISSN: 0375-3050  
E-ISSN: 3036-0188

**Citation:** K.G. Pearce. (2013). Fruit Trees Associated with Settlement Sites in The Upper Kelapang Area, Kelabit Highlands: A Preliminary Study. The Sarawak Museum Journal, LXXI (92) : 271-302

## FRUIT TREES ASSOCIATED WITH SETTLEMENT SITES IN THE UPPER KELAPANG AREA, KELABIT HIGHLANDS: A PRELIMINARY STUDY

K.G. Pearce

### INTRODUCTION

Fruit trees have been an integral part of the life of the Kelabits who have lived for generations in the Upper Kelapang area. A wide variety of wild fruit trees occurs at Pa Dalih, as documented by Christensen (2002). The Cultured Rainforest: Long-term human ecological histories in the highlands of Borneo is a project running from 2007 to 2010 and headed by Professor Graeme Barker of the University of Cambridge. The project aims to investigate long-term and present-day interactions between people and rainforest in the Kelabit Highlands of central Borneo, so as to better understand past and present agricultural and hunter-gatherer lifestyles and landscapes. It has been established that the Kelapang River area consists of a patchwork of sites formerly occupied by the Kelabit (and associated ethnic groups) who moved around the area and established new settlements governed by factors that included availability of land for subsistence agriculture, intertribal warfare, marriage affiliation, population size and superstitions. The study on fruit trees reported here is a component of The Cultured Rainforest project. The objective of the study was to investigate fruit trees as signifiers of social relationships and more specifically to determine the identity and distribution of selected fruit tree entities (and in some cases, who planted them) in the Upper Kelapang area of the Kelabit Highlands in order to establish which were, and are, important to the Kelabit communities who had occupied this area till today.



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## Scope

The study was limited to woody fruit tree species as these can live for decades. Giant herb species that produce edible fruits (bananas, gingers) and non-woody fruit trees like papaya were not included. Species which are considered wild by local informants in the surrounding forests, species associated with settlements and considered to have been planted and species and varieties known to have been introduced from outside the study area were included. Hill sago (*Eugeissona utilis*) and useful bamboo species were recorded at certain sites.

## Sites

The Cultured Rainforest Project has determined the location of major former settlement sites and their presumed occupation sequence. Sites selected for investigation of fruit tree species (Table 1) were limited to Pa Dalih, a Kelabit settlement established in 1972, and former settlement sites that could be visited from Pa Dalih in a day trip on foot or by logging track. Additional records were collected on the way from one settlement site to another (seven sites between settlements) and from five non-settlement sites associated with human activity, such as cemeteries.

**Table 1:** Sites of interest for occurrence of fruit trees, by approx. occupation sequence.

Name	Status
<b>Said to have been inhabited at unknown time in past</b>	
R.M.*Taa Payo	Remains dated 300-500 AD; possibly once a deer enclosure
R.M. Raan Berangan	Former settlement site (post hole 500-y-old)
R.M. Takong Be'ruak	Former settlement site (not visited)
<b>According to oral history</b>	
R.M. Batu Balio	Former settlement site
R.M. Long Terotong	Former settlement site



Table 1 (contd.)

Name	Status
R.M. Long Kersu	Former settlement site
R.M. Raan Teramaan	Former settlement site
R.M. Dakah, Long Kelit	Former settlement site last occupied in 1940
R.M. Long Remenid	Former settlement site
R.M. Bua' Sia'	Former settlement site
R.M. Bua' Laam	Former settlement site
R.M. Rabruh Manok	Former settlement site
R.M. Long Pelamau	Former settlement site last occupied in the '70s
R.M. Batu Patong	Site of abandoned longhouse
Pa Dalih	Current longhouse site
<b>Non-settlement sites</b>	
Paya Belanai	Early cemetery site
Menatoh Pa Di'it	Cemetery site, possibly previously a settlement site
Perupun Pa Buda	Megalith site (a stone mound)
Menatoh Long Kelit	Cemetery site
Dusur Long Di'it	Former padi barn site used in the 1960s

\* R.M. = Rumah Ma'on or old settlement site

## METHODOLOGY

### Field investigations

A reference list of fruit tree taxa observed growing around Pa Dalih village and distinguished locally by a specific local name was developed through observations, information from local informants<sup>1</sup> and through reference to Christensen (2002). A reference collection<sup>2</sup> of herbarium specimens of fruit tree taxa (Appendix 1) was made for later confirmation of identifications except for taxa that could be identified unequivocally by field observations. Fruit trees at the selected sites, chiefly former settlement sites, were located and identified by their local names with the help of Mr Lugun Bala, a local informant,



and recorded and measured (diameter at breast height – dbh). As many individuals as possible at each site were inventoried in this way. Information on the origin of locally recognised kinds of fruit trees (here referred to as ‘entities’, to cover species, subspecies, varieties and cultivars), which kinds are found wild in the local forest and which have been introduced, and from where and which kinds are planted, was sourced through conversations with local informants, who were also asked to provide names of persons who planted some specific fruit trees in particular locations.

### **Identification of fruit tree taxa**

The scientific name (species/subspecies/variety) corresponding to the local name of each fruit tree type recognised locally was determined by reference to named specimens in the collection at the Sarawak Forest Department Herbarium (SAR) and with reference to the literature. Many species, both fruit trees and other trees, were flowering during the fieldwork, facilitating identification. Fruit tree specimens collected by Christensen from Pa Dalih in 1992 and 1993 and deposited at SAR were also examined.

### **Location of individuals of named taxa for future spectral analysis**

Individual fruit trees around Pa Dalih village, representing as many entities as possible, visible on *The Cultured Rainforest Project* Quickbird satellite image, were located on the ground and identified for potential future spectral analysis at the Systems and Application Development Unit<sup>3</sup>, Sarawak Forest Department, for location of as yet unidentified former settlement sites (Appendix 2).

### **Labelling of fruit trees in panoramas**

Individual fruit trees that appeared in panoramas were annotated (botanical name and the name of the person thought to have planted them) with assistance from Mr Lugun Bala.