



# Q'eqchi'

(K'ekchi')

"Palm-thatched"  
H o u s e s

Alta Verapaz and Izabal, Guatemala

Text and photographs by Nicholas Hellmuth





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El Estor, Izabal, May 2014

## Palm thatch for houses of the Yucatec Maya of Mexico and Q'eqchi' Mayan people of Guatemala

The architecture of the Maya is something I have been interested in since my first trip to Chiapas (at age 16). By 17 or 18 I was already at Bonampak and by 19 had been in Copan Ruinas, Honduras. Today (since 2013) the museum of Copan Ruinas features my photographs together with their exhibits (photographs taken within the recent decade).

Coming from a family of architects (father, grandfather, great uncle, and two brothers), I was gently encouraged to study architecture. So as a dutiful son I enrolled in architectural sciences, the name of the architectural major at Harvard in the 1960's. But then I was offered a position at the Tikal archaeological project of the University Museum, University of Pennsylvania, and during 12 months field work at Tikal became more deeply interested in the architecture of the Maya. By that age, 19, I had already visited the major Puuc ruins of Mexico, Palenque and Bonampak, and Copan, and had been at Tikal already twice. So when I returned to Harvard I switched my major to art and architectural history.





El Estor, Izabal, May 2014

Although I am interested in temple pyramid architecture, palaces, roof combs, and especially in ball court architecture (for the rubber ball games), I am also interested in thatch-roofed buildings: both temples and domestic structures (houses for example).

In the 1970's I have studied wattle-and-daub, but this form of construction is found a tad more in El Peten and not often in Alta Verapaz.

Since tin roofs are increasingly popular, it will be only a few more years before scholars will not be able to see many thatch roofs under construction in the Lowland Maya regions of Guatemala. Already 90% of the walls of new houses are made of horizontal wooden planks instead of traditional Q'eqchi' Mayan materials (poles or potentially wattle-and-daub). And of course more and more houses are made of ugly concrete block, so year by year there are fewer examples of Mayan houses to study.

Thus I felt it useful to take snapshots of roof construction when driving through Alta Verapaz. Unfortunately the camera had a glitch this day, so white areas "glow" incorrectly.



Junco  
*Carludovica palmata*, k'ala

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Here is the actual junco palm-like tree, *Carludovica palmata*, directly across the Rio Icbolay from the town where some house roofs were with junco. Ilena Garcia, in-house botanist at FLAAR, indicates that this tree is also locally known in Guatemala as Calá. She and her family are from Coban, Alta Verapaz, so she knows a lot of the local terms.

Most of the house roofs we study are Q'eqchi' houses that we see as we are driving down dirt roads throughout Alta Verapaz, Guatemala.



**Many species of palms used for thatch besides just guano and corozo palm**

After seeing local Mayan houses along the dirt roads through the mountains and jungles of Alta Verapaz for several years, I gradually began to learn that there were other thatching materials besides guano palm or corozol palm. Guano is used mostly in El Peten and Yucatan Peninsula; only rarely do you find a roof of guano palm in Alta Verapaz. Ethnobotanist Dr Javier Caballero, UNAM, has written extensively on guano palm in Yucatan. It would be helpful if research this well documented could be done for each of the alternative thatching plants in Guatemala, Honduras, and Belize.

I hope that the photos we are publishing will raise interest among students to do a good thesis or dissertation on the other thatching plants.



Icbolay, Alta Verapaz, June 2014







Icbolay, Alta Verapaz, june 2014





Corozo  
*Acrocomia aculeata*

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Chisec, Alta Verapaz, june 2014



# Corozo

*Acrocomia aculeata*

Lachua, Alta Verapaz, march 2014







# Corozo

*Acrocomia aculeata*

Icbolay, Alta Verapaz, june 2014





thatched roof



*Acrocomia aculeata*, Corozo

*Acrocomia aculeata*, Corozo



Junco, calá



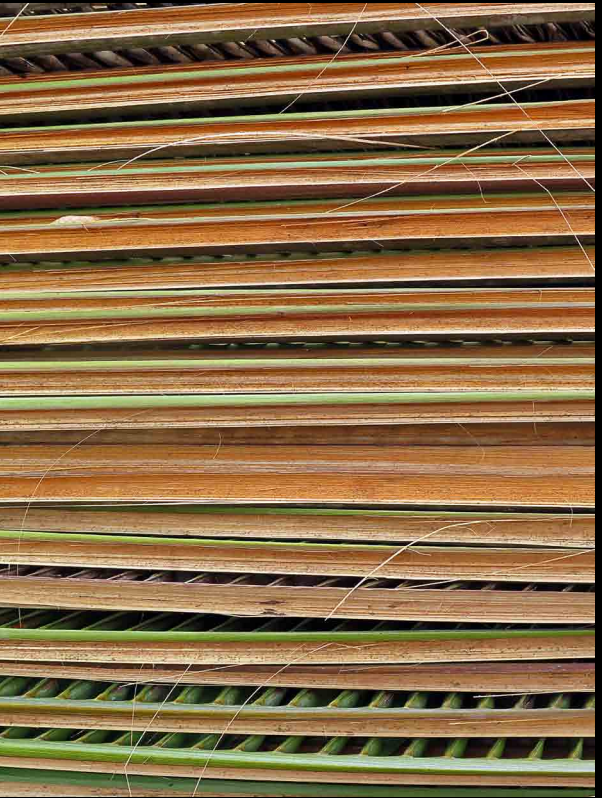
Junco, calá



*Acrocomia aculeata*, Corozo



*Acrocomia aculeata*, Corozo



*Acrocomia aculeata*, Corozo



# Corozo

*Acrocomia aculeata*



Cahabón, Alta Verapaz, april 2014





Cahabón, Alta Verapaz, april 2014







Telemán, Alta verapaz, May 2014



La Tinta, Alta Verapaz, march 2014



La Tinta, Alta Verapaz, march 2014





# Corozo

*Acrocomia aculeata*

La Ceiba, Peten, march 2014



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La Tinta, Alta Verapaz, march 2014





Corozo  
*Acrocomia aculeata*

La Tinta, Alta Verapaz, march 2014



# Corozo

*Acrocomia aculeata*



Polochic, Alta Verapaz, april 2014







**Other kinds of plants are actually used for thatch  
Besides just palm fronds (grass for example)**

Over the years we have made friends with local Q'eqchi' Mayan people in various aldeas, communities, and villages. Don Chus (about 30 minutes from La Chua research and park, north-western Alta Verapaz) was able to identify the grass-like plant that I had noticed being used as thatch. He even took us out to a field where we could see the actual grass-like plant (this field belonged to him and associates; we prefer to do our photography on property owned by people we know and who know us).

The photographs in this PDF were gathered to send to Dr Hasso Hohmann, who is knowledgeable about Maya architecture in general, and especially the architecture of Copan.

# Aq

*Panicum sp, Lancentillo*



Q'eqchi' house with roof of ak', a zacate (grass-like plant), found on one of the dirt roads from Senahu down to the Polochic area of Izabal.





Aq  
*Panicum sp*, Lancentillo





Aq  
*Panicum sp*, Lancentillo





La Tinta, Alta Verapaz, march 2014



This house near La Tinta we need to return to it and ask the owner what palm tree he used for thatch.





#### Introductory Bibliography on Maya House Architecture Including books on palm trees for thatch roofs

The following bibliography is on palm trees of the Maya area in general and a bit on palm thatched roofs. This is an introductory bibliography, meaning that it is intended to get you started. If you need a bibliography for a dissertation you can find that by spending several weeks in a major library and Googling pertinent keywords.

We will have separate bibliographies on the grass(es) used as thatch as time allows (sadly we have no funding for a formal project, so we do our best to do the bibliographic research at night and on weekends (and when I am in airports around the world as I fly to lecture or attend digital technology expos).

#### ABRAMS, Elliot

1994 How the Maya Built Their World: Energetics and Ancient Architecture. University of Texas Press, Austin.

#### BALICK, M. J. (Ed.),

1988 The Palm-Tree of Life: Biology, Utilization and Conservation.  
Advanced in Economic Botany, vol. 6. New York Botanical Garden, New York. 282 pages.

#### BALICK, M. J. and H. S. BECK

1990 Useful Palms of the World: A Synoptic Bibliography. Columbia University Press, New York, 724 pages.

#### CABALLERO, Javier

1992 The Maya Homegardens of the Yucatan Peninsula: Past, Present and Future. Etnoecologica 1, 35–54.

#### CABALLERO, Javier

1993 El caso del uso y manejo de la palma de guano (*Sabal* spp.) entre los mayas de Yucatán. En: Leff, E.y J. Carabias (eds). Cultura y Manejo Sustentable de los Recursos Naturales. Mexico. CII-UNAM y Grupo Editorial Miguel Angel Porrua, Mexico. 203-248 pages.

#### CABALLERO, Javier

1994 Use and Management of Sabal Palms among the Maya of Yucatan. Ph.D., University of California, Berkeley, USA, 186 pages.

#### CABALLERO Nieto, Javier

2000 Sostenibilidad del uso y manejo tradicional de la palma de guano (*Sabal* spp, Arecaceae) en el área maya de Yucatán. Universidad Nacional Autónoma de México. Instituto de Biología. Informe final SNIB-CONABIO proyecto No. M111. México D. F.

#### CABALLERO, Javier, PULIDO, María Teresa and Andrea MARTINEZ-Ballesté

2004 El uso de la palma de guano (*Sabal* spp.) en la industria turística de Quintana Roo, México. Capitulo 19, pp. 359-379.

Available on-line: [www.uv.mx/ethnobotany/caballero\\_files/Caballero%20etal2004%20CIFOR.pdf](http://www.uv.mx/ethnobotany/caballero_files/Caballero%20etal2004%20CIFOR.pdf)

Another source says pages 365-386 but perhaps that is another edition. Here is that listing:

El Uso de la Palma de Guano (*Sabal* yapa Wright ex Becc) en la Industria Turística de Quintana Roo, México. In: Alexiades, M. N. and Shanley, P. (Eds.), Productos Forestales, Medios de Subsistencia y Conservación. Estudios de Caso Sobre Sistemas de Manejo de Productos Forestales No Maderables, CIFOR, Desa Putera, pp. 365–386.

#### DIETZ, Albert, KOTH, Marcia and Juli, SILVA

1965 Housing in Latin America. Continental media & Beyond. Ocala, FL, U.S.A. 259 pages.

#### GAMA, V.

2001 Demanda y Disponibilidad de la Palma de Guano (*Sabal* spp., Arecaceae) En Tres Comunidades de la Peninsula de Yucatan. B.Sc. thesis, Universidad Nacional Autonoma de México, México, 134 pages.

#### HODEL, D. R.

1992 Chamaedorea Palms: The Species and Their Cultivation. Allen Press, Lawrence, Kansas, 338 pages.

#### LUNDELL, Cyrus L.

1938 Plants probably utilized by the Old Empire Maya of Peten and adjacent Lowlands. Papers of the Michigan Academy of Sciences, Arts, and Letters; vol. 24, pp: 37-56. University of Michigan, Ann Arbor.

#### LUNDELL, Cyrus L.

1966 The Genus parathesis of the Myrsinaceae. Texas research foundation, Renner, Texas. Missouri Botanical Garden Library.



**MARTINEZ-Balleste, Andrea**

2006 Dinámica Poblacional y Sostenibilidad de las Formas Tradicionales de Manejo de la Palma de Guano (Sabal spp. Arecaceae) en el Area Maya de la Península de Yucatán. Ph.D., Universidad Nacional Autónoma de México, México D.F, 94 pages.

**MARTINEZ-Ballesté, Andrea, Martorell, Carlos and J. CABALLERO Nieto**

2008 The effect of Maya traditional harvesting on the leaf production, and demographic parameters of Sabal palm in the Yucatan Peninsula, Mexico. Forest Ecology and Management. Elsevier.

They list, among others, xa’an palm (*Sabal yapa* and *Sabal mexicana*)

**MOYA Rubio, Victor Jose**

1988 La vivienda indígena de México y el mundo. UNAM. México.

**PULIDO Silva, Maria Teresa and J. CABALLERO Nieto**

2008 La palma de guano en la Peninsula de Yucatan. Uso y manejo de recursos naturales. 157-160 pages.

**QUERO, H.**

1992 Las Palmas Silvestres de la Península de Yucatán. Institutode Biología, Universidad Nacional Autonomia de México, México, 63 pages.

**REDFIELD, Robert and Alfonso VILLA Rojas**

1934 Chan Kom, a Maya Village. Carnegie Inst. Washington, Publ. No. 448.

**SEMARNAT**

Plan de manejo tipo para palma chit (*Thrinax radiata*). SEMARNAT  
[www.semarnat.gob.mx/archivosanteriores/temas/gestionambiental/vidasilvestre/Documents/Planes%20de%20Manejo/PMT-Thrinax%20radiata%2011%20enero%202013.pdf](http://www.semarnat.gob.mx/archivosanteriores/temas/gestionambiental/vidasilvestre/Documents/Planes%20de%20Manejo/PMT-Thrinax%20radiata%2011%20enero%202013.pdf)

**THOMPSON, J. Eric S.**

1930 Ethnology of the Mayas of Southern and Central British Honduras. Field Museum of Natural Histor, Anthropological Series, Vol. XVII, No. 2, Pub. 274.

Plate X, page 91, shows a complete diagram of the pole structure of a Maya house. But there is no information on the names of the different parts of this house. Nonetheless, it is a good drawing.

Plate IX shows photographs of two sides of a finished house.

Plate I shows two photographs from a high point looking down on the whole village, showing about 20+ thatch roofed houses. Very remarkable view, probably unique for showing so many.

**WILSON, Michael Robert**

1972 A Highland Maya People and their Habitat: The Natural History, Demography and Economy of the K’ekchi’. PhD dissertation. Department of Geography and the Graduate School of the University of Oregon.

**ZONA, S.**

1990 A monograph of Sabal (Araceae: Coryphoideae). Aliso 12(4): 583-666.

**A few sample web sites with snapshots of Maya houses**

[www.csms.ca/hut.htm](http://www.csms.ca/hut.htm)

6 nice snapshots of Maya houses: Peten and Yucatan, but all palm-thatched; no grass.

[www.csms.ca/index.htm](http://www.csms.ca/index.htm) is The Canadian Society for Mesoamerican Studies

contact is Dr H. Stanley Loten, Secretary and Treasurer: [sloten@sympatico.ca](mailto:sloten@sympatico.ca), Dr Louise I. Paradis: President; Dr James C. Langley: Vice President

[www.csupomona.edu/~lugo/MAYA/index-2.html](http://www.csupomona.edu/~lugo/MAYA/index-2.html)

A nice drawing of a structure of a Maya house, inside and outside, with Yucatan Maya words for each part.

First posted June 4, 2014.



Lundell (exclusively El Peten)	Wilson PhD, one area of Alta Verapaz	Don Chus, one of our plant scouts.
	Arecaceae ----- <b>c'imim</b> ; Sp. <i>capuca</i>	
	<b>tun k'im</b> ; 'lying-down straw'; poor thatch <i>Dichromena radicans</i>	
	<b>boloc</b> ; sedge; Pokomchi' thatch	
	Juncaceae <i>Juncus effusus</i> var. <i>solutus</i>	
	<i>Juncus effusus</i> var. <i>solutus</i> Fern.& Wiegand  <b>š-say amoÖ</b> (1); ' <b>say</b> of [frog]'; for (2) see Cyperaceae; other rushes included?  <i>J. marginatus</i> var. <i>setosus</i> Coville	
	<b>tam; tam</b>  Juncaceae: <i>Juncus marginatus</i> var. <i>setosus</i> bundled for thatch	
	<b>Pac'ac'</b> ; forage, thatch grass <i>Avena sativa</i> L.	
<i>Imperata contracta</i> (HBK.) Hitchc. <b>Ac.</b>	<b>aq / Öakak?</b> ; roofing thatch <i>Panicum</i> sp.?	Lancentillo, This column will be filled out shortly, especially ac.
	Poaceae: <i>Muhlenbergia macroura</i> bundled for roofing thatch	
	<b>šalab a:qam</b>  'fork of agouti'  Palmae: <i>Chamaedorea</i> sp.; leaf for thatch; lowland var. cf. <b>k'ib</b>	Pacaya
<i>Sabal mayarum</i> Bartlett. Botán, <b>huano</b> .		
<i>Orbigya cohune</i> (Mart.) Dahlgren. Tutz, corozo, cohune.		
<i>Scheelea lundellii</i> Kantutz, <b>corozo</b> .		
		Tanil
		Campanac
		Carludovica palmata, k'ala, junco

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### "Palm-thatched"

#### H O U S E S

We appreciate the hospitality of botanists at UNAM campus outside Mexico City.

We were attending a major international digital printing exposition in the city center during August 2014, but each morning we went to visit appropriate Maya-related research centers: one morning to Museo Nacional de Antropología, and one morning to UNAM; and one morning in the Centro Histórico to find as many books on Mesoamerica flora, fauna, and archaeology as it was realistic to fly back to our research center.

At UNAM we met first with Dr Gerardo Adolfo Salazar Chavez, who introduced us to Dr David S. Gernandt. They in turn kindly took us to a nearby building to introduce us to Dr Javier Caballero.

Dr Robert Bye was away doing field research so it was not possible to visit with him.

It is appreciated that the biologists here at UNAM allowed us to visit, unannounced (since we never knew how long it would take to get to the campus or find their building on what is probably the largest university campus in the world).





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