

Common PALMS of BELIZE

Samuel Bridgewater (Natural History Museum, London), Nancy C. Garwood (Southern Illinois University, USA) & Steven Brewer (University of North Carolina at Wilmington, USA)

Photos by S.G.M Bridgewater, N.C. Garwood, B. Adams (Belize Botanic Gardens) & D. Harris (Royal Botanic Garden Edinburgh). Produced by S.G.M. Bridgewater, N.C. Garwood, with assistance of R.B. Foster, T.S. Wachter, & The Field Museum, Chicago. Support from the UK Darwin Initiative.

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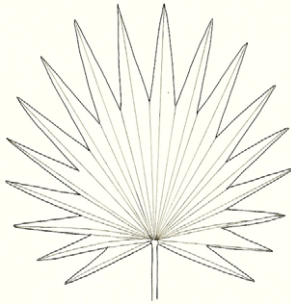
This photoguide covers 25 native species, and 3 cultivated species of palm commonly encountered in Belize. It excludes all *Chamaedorea* species. These are covered separately in **Rapid Color Guide 195** available from the website: [\[www.fmnh.org/plantguides\]](http://www.fmnh.org/plantguides). Useful ID notes and further info. are provided at the end of this guide (Sheet 8). Species are presented in six major morphological groups (A-F).

Steven Brewer's *Field Key to the Palms of Belize* provides a complete technical key to all Belizean palms (41 spp.):

<http://www.plantapalm.com/vpe/palmkey/belizekey/belizekey.htm>

This photoguide is meant as a field companion to that work. Another useful source of information is: Henderson, A. H., G. Galeano & R. Bernal. 1995. *Field Guide to the palms of the Americas*. Princeton University Press.

1
A. PALMS WITH PALMATELY COMPOUND LEAVES



2
Cryosophila stauracantha
(Give-and-take palm)

Habitat: forest
Habit: solitary; tall understory palm.
Stem width: to 10 cm
Distribution: widespread
ID tip: stems covered in long, branched, often downward pointing spines



8 *C. stauracantha* (habit)

9 *C. stauracantha* (stem spines)

10 *C. stauracantha* (lf. insertion, and fruits)

6
Acoelorrhaphe wrightii
(palmetto)

Habitat: abundant palm in pine savanna
Habit: clumping
Stem width: to 15 cm
Distribution: widespread
ID tip: spiny leaf petiole (13); rough stem due to persistent leaf bases (14).



12 *A. wrightii* (habit)

13 *A. wrightii* (spiny petiole/lf.)

14 *A. wrightii* (lf. base)

15 *A. wrightii* (inflorescence/fruits)

16
Schippia concolor
(silver palm)
Endemic species

Habitat: savanna/open forest
Habit: solitary
Stem width: to 10 cm
Distribution: Cayo/south
ID tip: stems grey and smooth; no spines on leaf petiole or stem; fruits white when mature.



17 *S. concolor* (habit)

18 *S. concolor* (lf.)

19 *S. concolor* (split lf. base)

20 *S. concolor* (habit)

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Thrinax radiata (photos 22-25)

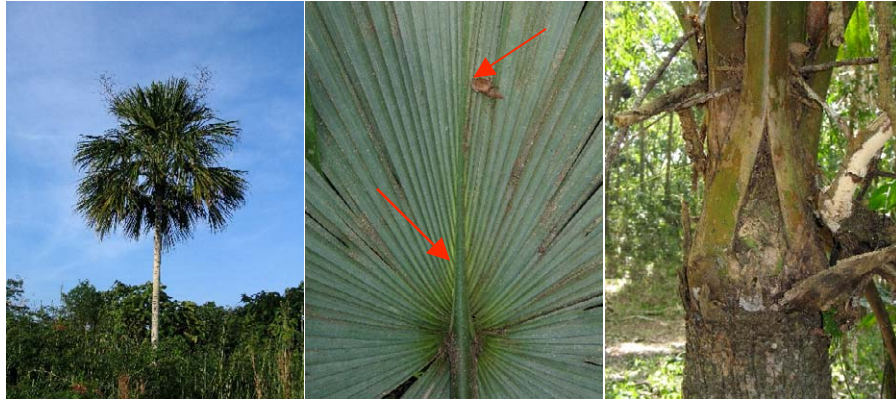
Habitat: Strandline forest close to the sea & on limestone in eastern Corozal and Orange Walk
Habit: solitary
Stem width: to 15 cm
Distribution: widespread near the coast
ID tip: green/white fruits



21 22 *T. radiata* (habit) 23 *T. radiata* (lf.) 24 *T. radiata* (lf. base split) 25 *T. radiata* (fruits & lf.)

Sabal mauritiiformis (Bayleaf/Botán palm) (photos 27-29)

Habitat: inland forest
Habit: solitary
Stem width: to 50cm+
Distribution: widespread; and most abundant palmately-leaved forest palm
ID tip: lvs. lighter on lower surface and with a costa (28 & 35).



27 *S. maurit.* (habit) 28 *S. maurit.* (lf. costa) 29 *S. maurit.* (lf. sheath) 30

Two other species of *Sabal* are reported for Belize. These differ from one another and from the ‘true Bayleaf’ in how the individual leaf segments are fused together. *S. yapa* occurs only in northern Belize, whilst *S. mexicana* is locally common in Cayo District. See sheet 8 for further details on *Sabal* leaf form.

Colpothrinax cookii (photos 32-34)

Habitat: upland hill forest
Habit: solitary
Stem width: to 35 cm
Distribution: widespread in central/southern Belize; only found at higher elevations (above 600m)
ID tip: shorter rachis than *Sabal*.



31 32 *C. cookii* (habitat) 33 *C. cookii* (habitat) 34 *C. cookii* (growth form) 35

A. One species of palmately-leaved palm (*Brahea dulcis*) has not been included in this guide as it is rare and has not yet been seen in the field by the authors. See Brewer (2003) for further details on this species.
B. A leaf costa is an extension of the rachis along which the leaflets are inserted (see 28).

Coccothrinax argentata (photos 37-40)

Habitat: lowland forest
Habit: solitary
Stem width: to 35 cm
Distribution: A rare species restricted to northern Belize.
ID tip: Upper stem covered with a dense network of hessian-like fibres; leaf base not split.



36 37 *C. argentata* (habit) 38 *C. argent.* (stem fibres) 39 *C. argent.* (stem) 40 *C. argent.* (lf. & lf. base)

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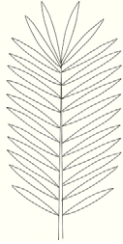
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B. LEAVES

PINNATELY COMPOUND; STEMS AND/OR PETIOLES WITH SPINES



41

Acrocomia aculeata
(photos 47-50)

Habitat: forest
Habit: solitary
Stem width: to 50 cm+
Distribution: widespread
ID tip: large palm with 'plumose' leaves (see 75) and long, non-flattened spines on stem and petioles; old leaves often hanging down stem.

46

Desmoncus orthacanthos
(Basket tie tie)
(photos 52-55)

Habitat: forest
Habit: climbing/vine like
Stem width: to 5cm
Distribution: widespread
ID tip: only climbing spiny palm with conspicuous backward facing 'barbs' on leaf rachis.

51

Bactris major var. *major*
(photos 57-60)

Habitat: open habitats near ground water
Habit: clumped
Stem width: to 7 cm
Distribution: widespread
ID tip: black fruits; long spines on leaf sheath, petiole and rachis.

56

Astrocaryum mexicanum

(photos 43-44)
(Warree cohune)

Habitat: forest understorey
Habit: solitary
Stem width: to 8 cm
Distribution: widespread
ID tip: only palm species whose stem is covered with flattened spines (44)



43 *A. mexicanum* (leaf)



44 *A. mex.* (stem spines)

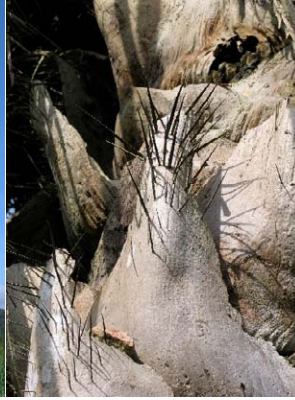


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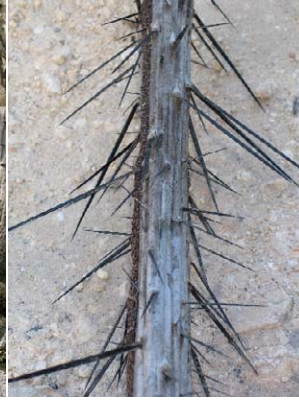
42



47 *A. aculeata* (habit)



48 *A. acul.* (spines/lf. base)



49 *A. acul.* (spines/rachis)



50 *A. aculeata* (fruits)



52 *D. orthacanthos* (habit)



53 *D. orthacanthos* (leaf)



54 *D. orthacanthos* (stem)



55 *D. orthacanthos* (barbs)



57 *B. major* (habit)



58 *B. major* (spines on stem and leaf petioles)



59 *B. major* (spines on leaf rachis; fruits)



60 *B. major* (habit)

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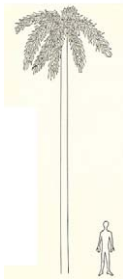
Bactris mexicana
(photos 62-65)

Habitat: wet forest
Habit: clumping
Stem width: to 7 cm
Distribution: widespread
ID tip: similar to *B. major* except with red fruits; stem & leaf rachis covered in dense narrow black spines.



62 *B. mexicana* (leaf) 63 *B. mexicana* (habit) 64 *B. mexicana* (fruit) 65 *B. mexicana* (fruit)

61
C. LARGE (TALLER THAN 5M), UNARMED PALMS WITH PINNATE PLUMOSE LEAVES (see 75) & STOUT, SMOOTH, GREY STEMS



62 *B. mexicana* (leaf)
Roystonea regia
(Royal palm)
(photos 68-70)

Habitat: forest/savanna
Habit: solitary
Stem width: to 50 cm
Distribution: widespread
ID tip: tall emergent palm; conspicuous waxy green leaf sheath.



67 68 *R. regia* (habit) 69 *R. regia* (leaf sheath) 70 *R. regia* (inflorescence)

Gaussia maya
(photos 72-74)

Habitat: forest on limestone; often on hills
Habit: solitary
Stem width: to 40 cm
Distribution: widespread
ID tip: often with swollen base & leaning stem; roots often visible at base of stem



72 *G. maya* (crown) 73 *G. maya* (stem base) 74 *G. maya* (base and leaf) 75

Plumose leaves are leaves where the individual leaflets come out from the main leaf axis in many directions giving a 'hairy caterpillar' look to the leaf. For the difference between plumose and non-plumose leaves, compare photos 68 and 83.

71
Pseudophoenix sargentii
(photos 77-80)

Habitat: forest (often near the sea)
Habit: solitary
Stem width: to 30 cm
Distribution: northern Belize only
ID tip: short conspicuous grey/green waxy leaf sheath; leaflets glaucous, sometimes with brown scales on lower surface.



76 77 *P. sargentii* (habit) 78 *P. sargentii* (shaft) 79 *P. sargentii* (habit) 80 *P. sargentii* (leaf)

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**D. TALL, UNARMED
PALMS WITH
PINNATE 'NON
PLUMOSE' LEAVES
(I.E.
LEAFLETS
IN ONE
PLANE
ONLY) &
SMOOTH
STEMS**



***Euterpe precatoria*
(Mountain cabbage)
(photos 83-85)**
Habitat: forest
Habit: solitary
Stem width: to 25 cm
Distribution: widespread
ID tip: conspicuous crown
shaft; much smaller than
Roystonea; leaflets in one
plane only; often with
conspicuous red roots at
stem base.



82

83 *E. prec.* (habit & shaft)84 *E. precatoria* (stem)85 *E. precatoria* (stem base)

***Cocos nucifera*
(coconut)
(photos 87-90)**

Not native

Habitat: close to
settlements/along coast
Habit: solitary
Stem width: to 50 cm
Distribution: widespread
ID tip: curved, leaning
stem with bulbous base;
presence of coconuts!



86

87 *C. nucifera* (habit)88 *C. nucifera* (coconuts)89 *C. nucifera* (stem base)90 *C. nucifera* (habit)

***Manicaria saccifera*
(photos 92-95)**

Habitat: wet forests
ONLY in southern Belize
(Sarstoon-Temash)
Habit: solitary
Stem width: to 40 cm
Distribution: southern
ID tip: fruits covered with
protrusions; stems covered
with old lf. bases, thus
appearing thicker than they
are.

91

92 *M. saccifera* (habit)93 *M. saccifera* (leaf)94 *M. saccifera* (stem)95 *M. saccifera* (fruits)

***Attalea cohune*
(cohune)
(photos 97-100)**

Habitat: forest; abundant
and widespread palm.
Habit: solitary
Stem width: to 60 cm
Distribution: widespread
ID tip: long graceful
leaves often curved at tip
and sometimes 'folded'.

96

97 *A. cohune* (habit)98 *A. cohune* (stem)99 *A. cohune* (fruits)100 *A. cohune* (habit)

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Adonidia merrillii

(Xmas palm)

(photos 102-105)

Not native

Habitat: cultivated

Habit: solitary

Stem width: to 40 cm

Distribution: widespread around settlements

ID tip: crown shaft (103); red fruits (105); often stumpy form



102 *A. merrillii* (habit)

103 *A. merrillii* (shaft)

104 *A. merrillii* (flowers)

105 *A. merrillii* (fruits)

F. PALMS WITH SLENDER CANE LIKE STEMS OR STEMS APPARENTLY ABSENT; RARELY TALLER THAN 5m



106

Calyptrogyne ghiesbreghtiana

(photos 108-110)

Habitat: forest

Habit: solitary

Stem: stems very short; apparently absent (acaulescent)

Distribution: central/south

ID tip: lack of apparent stem; inflorescence a spike; fruits green maturing black.



107

108 *C. ghiesbr.* (habit)

109 *C. ghiesbr.* (leaf)

110 *C. ghiesbr.* (fruits)

Asterogyne martiana

(photos 112-115)

Habitat: forest

Habit: solitary

Stem: to 5 cm

Distribution: central/south

ID tip: leaves simple with a cleft in the apex i.e. 'fishtail bifid' form; leaves much longer (> 70 cm) than those of similar type in *Chamaedorea*; fruits red.



111

112 *A. martiana* (habit & fr.)

113 *A. martiana* (habit)

114 *A. martiana* (inflor.)

115 *A. martiana* (flowers)

Synechanthus fibrosus

(photos 117-120)

Habitat: forest

Habit: solitary

Stem: to 4 cm

Distribution: central/south

ID tip: leaves clustered at stem apex; more than 10 leaflets per side, arranged in groups of 2-6; fruits maturing yellow orange on wavy stalks.



116

117 *S. fibrosus* (habit)

118 *S. fibrosus* (crown)

119 *S. fibrosus* (leaf)

120 *S. fibrosus* (fruits)

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Geonoma deversa & *G.*

interrupta

(photos 122-125)

Habitat: forest

Habit: solitary or clustered

Stem: to 5 cm

Distribution: widespread.

Geonoma deversa and *G. interrupta* are commonly seen and similar but easily distinguished by the pits on the flowering /fruiting branches (see 119 & 120).



G. deversa: pits in flowering branches, fls. and fruits arranged in groups (whorls) of three.

G. interrupta: pits in flowering branches, fls. and fruits spirally arranged.

121

122 *G. interrupta* (habit)

123 *G. deversa* (leaf)

124 *G. deversa* (fr. branch)

125 *G. interrupta* (fr. branch)

Reinhardtia gracilis

(photos 127-130)

Habitat: forest

Habit: clumping; to 2.5m

Stem width: to 2 cm

Distribution: central/south

ID tip: characteristic

'windows' in the leaves close to the rachis (129); leaves 'toothed' (128); length of lf. blade less than 1m.

126



127 *R. gracilis* (habit)

128 *R. gracilis* (habit)

129 *R. gracilis* ('windows')

130 *R. gracilis* (fruits)

Reinhardtia latisecta

(photos 132-135)

Habitat: forest

Habit: clumping; to 8m

Stem width: to 7 cm

Distribution: central/south

ID tip: leaf windows;

much taller than *R. gracilis*; leaf blade length ca. 1m.

131



132 *R. latisecta* (habit)

133 *R. latisecta* (lf. windows)

134 *R. latisecta* (infr.)

135 *R. latisecta* (fruits)

Chrysalidocarpus

lutescens (photo 137)

Butterfly palm

Not native

Habitat: cultivated

Habit: clumping; to 5m

Stem width: to 15 cm

Distribution: widespread in gardens/grounds

ID tip: often with yellow/greenish leaves which appear folded.



136

137

138

139

140

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This page provides additional information to assist with the naming of Belizean palms. It also provides ID notes for *Sabal* (156-160), and lists a few palm uses. Palms are of great economic and social value providing a source of building materials, food, medicines and craft items.

Most conspicuous species commonly seen from the road:
Acoelorrhaphe wrightii
Sabal mauritiiiformis
Attalea cohune
Cocos nucifera
Roystonea regia
Acrocomia aculeata
Adonidia merrillii (cult.)
Chrysalidocarpus lutescens (cult.)

Savanna species:
Acoelorrhaphe wrightii
Schippa concolor
Roystonea regia
Coastal species:
Thrinax radiata
Cocos nucifera
Inland forest species:
 The remainder

Restricted northern species:
Pseudophoenix argentea
Sabal yapa
Coccothrinax argentata
Restricted southern species:
Manicaria saccifera
Restricted montane species:
Colpothrinax cookii

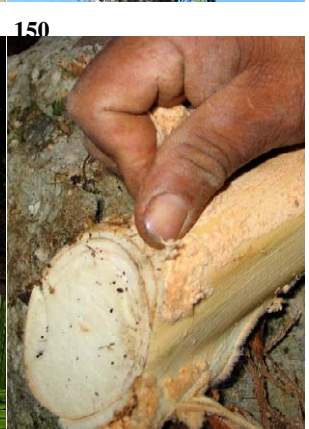
Species with spines:
Desmoncus orthacanthos
Bactris major
B. mexicana
Astrocaryum mexicanum
Acrocomia aculeata
Acoelorrhaphe wrightii
Species with conspicuous crownshaft:
Roystonea regia
Euterpe precatoria
Adonidia merrillii (cult.)



141
142
143
Far Left (146): Quartered *Desmoncus* stems ready for weaving.
Left (147): palm basket maker in Toledo.
Right (149): Palm thatch, *Manicaria* (above) and *Attalea* (below).
Far right (150): *Attalea* palm harvested for thatch

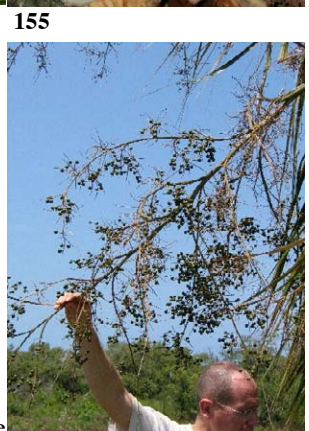
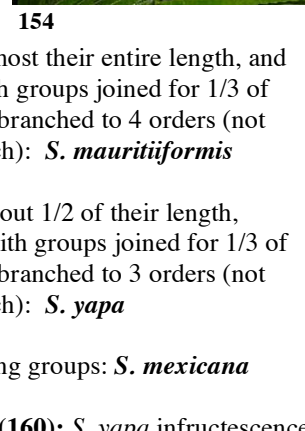


146
147
148
Far left (151): Edible *Astrocaryum* fruit.
Left (152): Broom making with *Cryosophila* leaves.
Right (154): Splitting *Attalea* leaves for thatching.
Far right (155): The edible 'heart' of *Cryosophila*; the 'fluff' around the heart is used to dress wounds.



151
152
153
Sabal: The species most likely to be seen is *S. mauritiiiformis*. The other two species have restricted distributions and vary in the degree to which their leaflets are fused. However, exposure to wind can rip the leaf segments and segment groups and make identification confusing.
Left (156): *S. yapa*

154
155
158
 Lf. segments joined for almost their entire length, and forming groups of 2-3, with groups joined for 1/3 of their length; inflorescence branched to 4 orders (not including main spike branch): *S. mauritiiiformis*
 Lf. segments joined for about 1/2 of their length, usually in groups of 2-3, with groups joined for 1/3 of their length; inflorescence branched to 3 orders (not including main spike branch): *S. yapa*
 Leaf segments NOT forming groups: *S. mexicana*



156

157

158

Right (160): *S. yapa* infruetescence
159

160