

**A Field Guide to  
Plants of MacRitchie  
Palms (Genus A – Z)**

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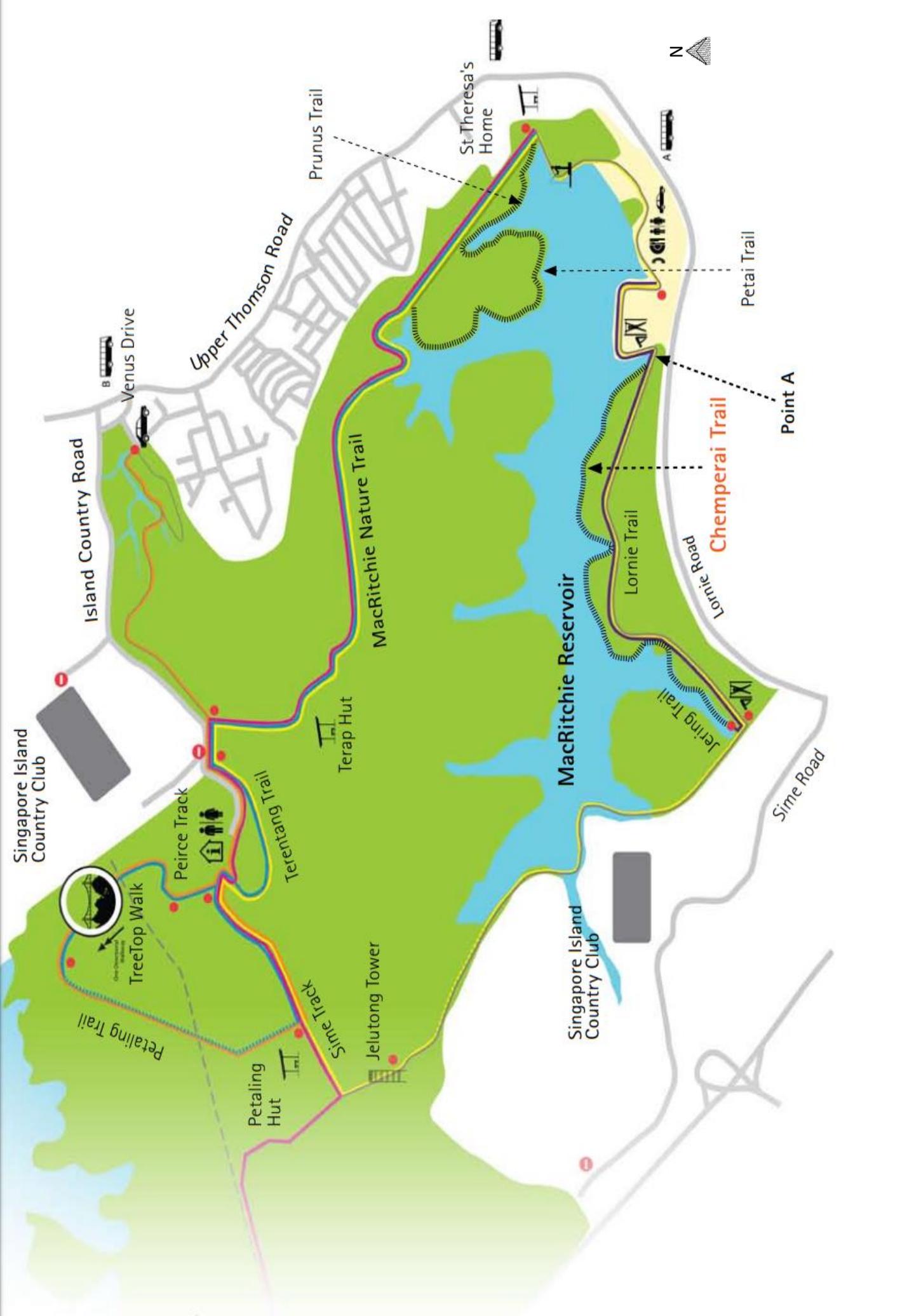
# MacRitchie Reservoir Park



Completed in 1867, MacRitchie Reservoir Park was Singapore's first reservoir to supply water for the growing population of the British trading port. Originally named 'Impounding Reservoir', the reservoir was renamed after James MacRitchie in 1922, the Municipal Engineer of Singapore from 1883 to 1895, to commemorate his achievement of repairing the water supply and expanding the reservoir.

MacRitchie Reservoir Park was opened in 1967, now, it is a 12-hectare nature park, rich in biodiversity, and a very popular destination for nature and sports enthusiasts for activities like jogging, taichi, canoeing, instagramming, and even wedding photography.

There are 12 trails spread throughout the park. Each has their own unique flora and fauna waiting for the curious eyes to discover. Most of the trails are either on unpaved road, covered with leaf litter or wooden boardwalks winding beneath the canopy.



### **Lornie Trail (2 km)**

Mostly flat and easy to walk. This trail runs on the southwestern side of the park, shaded by tall trees and connects to Jering Trail and Chemperai Trail.

### **Jering Trail (1.3 km)**

Flat and easy to walk. It is a wooden boardwalk overlooking the reservoir on one side and the forest of the other side. This trail connects to Lornie Trail and Chemperai Trail.

### **Chemperai Trail (1.5 km)**

Flat and easy to walk. It is a wooden boardwalk which brings you close to the water, where you can get a panoramic view of the reservoir. It is slightly winding and connects to Lornie Trail.

### **Prunus Trail (0.8 km)**

Flat and easy to walk. This is a short trail on the southeastern side of the reservoir, and connects to Petai Trail and MacRitchie Nature Trail.

### **Petai Trail (1.7km)**

Gentle steps and easy to walk. This trail is slightly winding, and comprises of wooden boardwalk and several gentle steps.

### **MacRitchie Nature Trail (4 km)**

Mostly flat and easy to walk. This is the longest trail in the park. Shaded by magnificent trees, this trail connects to Prunus Trail and Petai Trail in the south, and Terentang Trail in the north.

### **Terentang Trail (1 km)**

Mostly flat and easy to walk. This trail is a scenic forest walk, lined with Terentang trees, where the large leaves fall and produce beautiful characteristic leaf litter.

### **Peirce Track (0.8 km)**

Moderate incline and without steps. This is a one way trail, starting from the Ranger's Station and leading up to the Treetop Walk.

### **Treetop Walk (0.6 km)**

Gentle steps and easy to walk. This is the highest trail in the park, and comprises of a 250m long suspension bridge, overlooking the canopy. It is a one way trail, starting from Peirce Track and ending at Petaling Trail. Please refer to park website for the opening hours.

### **Petaling Trail (1.2 km)**

Moderate to steep steps. This one way trail starts from the Treetop Walk and ends at Sime Track. Lush trees lined the trail on both side, and birds can be heard chirping within the greenery.

### **Sime Track (1.2km)**

Flat and easy to walk. This trail is lined with tall shrubs, forming a green tunnel with pockets of sun rays. This trail connects MacRitchie Reservoir Park to Bukit Timah Nature Reserves.

### **Golf Link (2.5km)**

Flat and easy to walk. This trail traverses the Singapore Island Country Club golf course with a scenic view of forest, reservoir and grassland.



Family Arecaceae  
*Calamus erinaceus*  
Hedgehog Rattan  
Vulnerable

Climbing, cluster-forming palm with stems up to 15 m long. Occurs in mangrove or coastal forests. About 70 greyish green, linear leaflets (up to 40 cm long and 2 cm wide) hang down from the rachis. Leaflets are coated in a grey wax that becomes yellow as the plant matures. Leaf sheath is heavily armed with dark brown to black spines. The wiry, stem-like structure known as a cirrus is 2 m long and helps the palm climb.

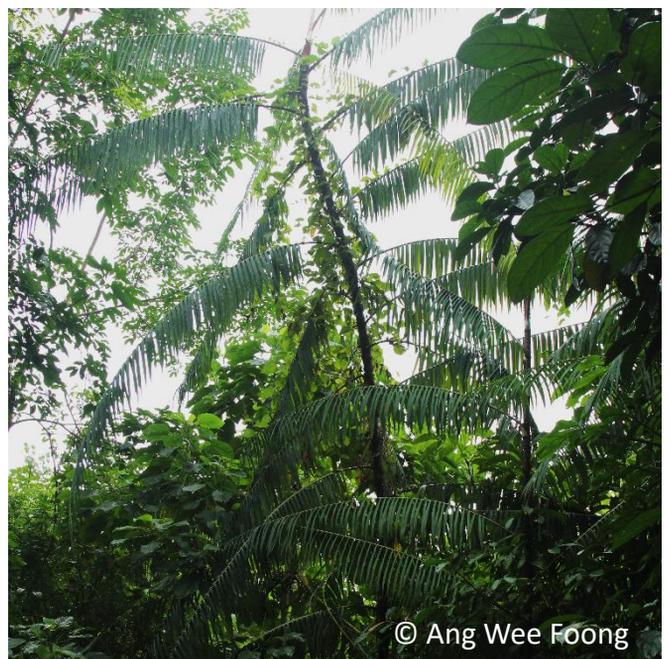
This palm is the only rattan species found in Singapore's mangrove forests. It often coexists with Nibung (*Oncosperma tigillarum*) and Nipah (*Nypa fruticans*).



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Family Arecaceae  
*Caryota mitis*  
Clustered Fishtail Palm  
Common

Clump-forming, spineless palm up to 6 m tall. The 2-6 m long bi-pinnate fronds are composed of fishtail-shaped leaflets. The inflorescence (0.3-0.6 m long) is composed of yellow flowers and is borne in the leaf axil. Red, round fruit (1.3 cm wide) contains stinging crystals. The stem dies after bearing fruit but is quickly replaced by basal suckers. In Singapore, it is common in secondary forest and back mangroves.

Tribal peoples collected fluffy material from the leaves and sheathes to start a fire. The nectar from the inflorescence is used to make an alcoholic beverage known as toddy. The stem pith contains edible starch.



Leaflet

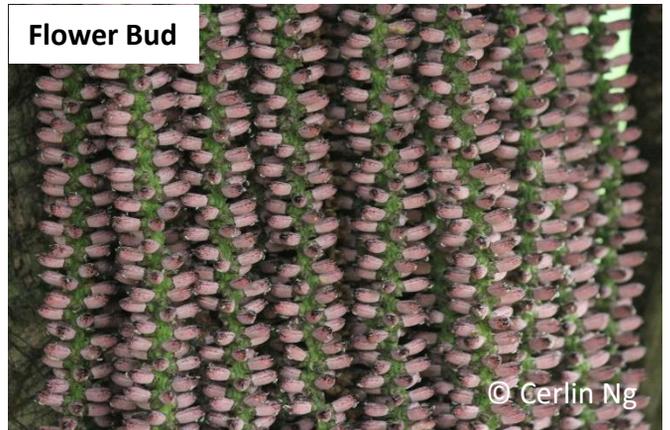


New Frond



© Cerlin Ng

Flower Bud



© Cerlin Ng

Flower



Fruit



© Cerlin Ng



Family Arecaceae

*Cyrtostachys renda*

Sealing Wax Palm, Lipstick Palm

Critically endangered

Clump-forming palm up to 12 m tall found in freshwater swamps, peat swamps and lowland rainforest. Black, ellipsoid fruit (1 cm long, 0.5 cm wide) is relished by birds. Thought to be nationally extinct, but rediscovered in 2014.

This palm is widely used as a landscaping plant in Singapore and admired for its bright red to orange-red crownshaft and leaf stalks. It is also part of the logo for the Singapore Botanic Gardens.



© Zaki Jamil

**Fron**



**Flower**



© Zaki Jamil

**Inflorescence**



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**Stem**



**Fruit**





Family Arecaceae  
*Daemonorops angustifolia*  
Water Rattan Palm  
Vulnerable

Climbing, cluster-forming palm up to 30 m tall composed of spiny, unbranched stems which bleed white latex sap when cut. Leaves (1.8-2.4 m long) are composed of narrow, lanceolate leaflets (0.3 m long). The leaf tip bears a thin, wiry, spiny structure known as a cirrus (0.9 m long) which helps the palm climb. Stem width varies from 2.5-4 cm wide with larger stems having leaf sheaths with brown-black spines and dark brown hairs. Occurs near streams, rivers, clearings and swamp margins.

The stems are harvested from the wild to make low quality furniture.



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Stem



© Yeoh Yi Shuen

Fruit



© Yeoh Yi Shuen

Infructescence



© Yeoh Yi Shuen

Fron



© Yeoh Yi Shuen

Leaflet



© Yeoh Yi Shuen



Family Arecaceae  
*Daemonorops grandis*  
Giant Devil Palm  
Endangered

Climbing, cluster-forming palm up to 20 m tall. The feather-shaped leaf (up to 3.5 m long) terminates in a 1.75 m long, wiry cirrus which is used for climbing. Light green to light brown stem sheath and boat-shaped floral bract are armed with black spines and brown hairs. Fruit occurs in a cluster of round, shortly beaked, yellow-brown, scaly fruit (up to 2.5 cm wide).

The stem is considered low quality for construction purposes. The leaves are used to thatch roofs. Aborigines in Peninsular Malaysia use the large leaves to make baskets, winnowing trays and fishing rods.

Fruit



Stem



Fruit



© Yeoh Yi Shuen

Rachis



© Yeoh Yi Shuen



Family Arecaceae

*Daemonorops sabut*

Critically endangered

Cluster-forming, climbing palm up to 40 m. The leaflets are arranged in irregularly-sized groups along the leaf stalk. The inflorescence hangs down up to 0.6 m long and bears bracts which are densely covered in thin, black spines. Fruit is yellow-brown, scaly and egg-shaped with a short beak (1.6 cm long, 1.2 cm wide).

Interlocking, black spines are arranged in whorls on the leaf sheath and stem. There is a symbiotic relationship between this species and ants—ants find shelter between the interlocking spines and help to defend the palm and provide nutrients in their waste products. The stems are used to make baskets and the resin is used medicinally.



© Ang Wee Foong



**Frond**

© Ang Wee Foong



© Ang Wee Foong



**Stem**

© Ang Wee Foong



Family Arecaceae  
*Elaeis guineensis*  
African Oil Palm  
Exotic

Solitary palm up to 12-18 m tall. Leaves (4.5 m long) are composed of drooping leaflets (0.9 m long) and armed with spines along the petiole. The inflorescence (0.3 m long) is composed of whitish male and female flowers which are borne on the same tree. Black, glossy fruit is egg-shaped to oblong (3.5 cm long, 2 cm wide).

Oil extracted from the fruit pulp and seed is used in a diverse assortment of food, skin care, cosmetics and detergent / soap products. It is also an important lubricant for manufacturing processes. This exotic species was once grown in a plantation on the land now occupied by MacRitichie Reservoir Park.



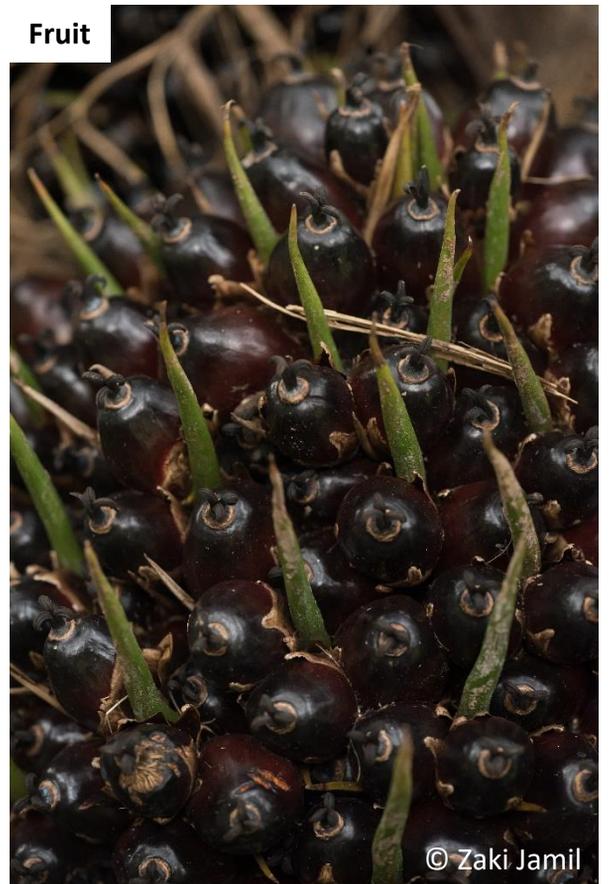
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**Infructescence**



© Zaki Jamil

**Fruit**



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Family Arecaceae  
*Licuala ferruginea*  
Fan Palm  
Endangered

Solitary palm up to 4 m tall. Circular fan leaf (1 m wide) is deeply divided into 3-12 wedge-shaped segments arranged in a spoke wheel pattern. The stem is underground with only leaves held aboveground by spiny, 1.3 m long leaf stalks. Young foliage, floral bracts and inflorescence stalk are covered in brown to dark brown scales or hairs. Pink flowers covered in orange-brown hairs later are pollinated to produce orange-red to bright red, egg-shaped fruit (0.6 cm long).



**Fron**



**Infructescence**





Family *Arecaceae*  
*Licuala spinosa*  
Mangrove Fan Palm  
Vulnerable

Clump-forming palm up to 6 m tall. Fan-shaped leaves (0.6 m wide) are deeply divided into 10-15 wedge-shaped, square-ended, pleated segments. The inflorescence is composed of clusters of yellowish white flowers which produce bright red, egg-shaped fruit (1 cm long). Occurs on the landward side of mangroves and along the coast.

Often used in tropical landscapes, but care should be taken of the leaf stalk which is heavily armed with short, black spines. The leaves are used to thatch roofs.

Infructescence



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Fruit



Frond



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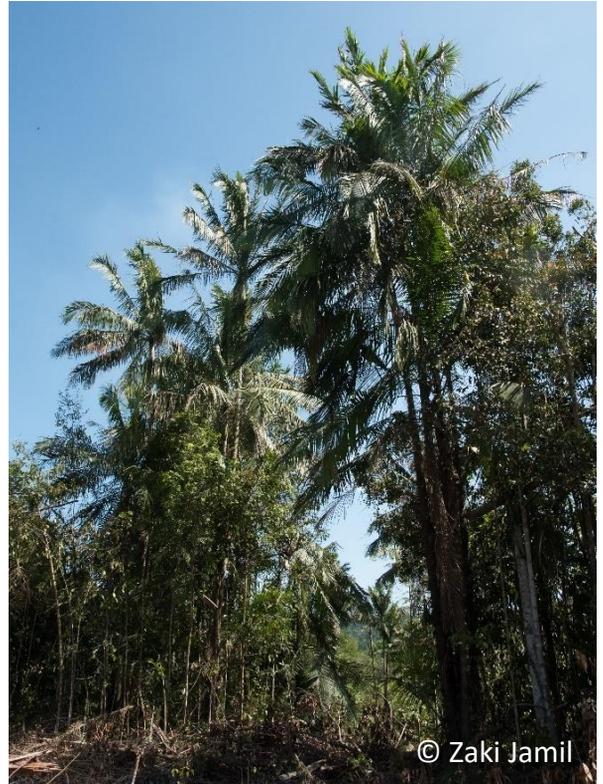
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Family Arecaceae  
*Oncosperma horridum*  
Bayas  
Vulnerable

This palm species forms small clumps of about 4-6 stems which are covered in black spines. Occurs on slopes at 500-1000 m above sea level. The inflorescence is located below the crownshaft and composed of male and female flowers. Round, purplish black fruit is 2-2.5 cm wide.

The trunk produces a hard wood which is useful for construction.



© Zaki Jamil

Flower



Fruit



© Zaki Jamil



Family Arecaceae  
*Plectocomia elongata*  
Rotan Mantang  
Vulnerable

Climbing palm with stems up to 46 m long and 20 cm wide. Gigantic leaves are 5.4 m long with 0.6 m long, dark green, drooping leaflets. A 2.4 m long, wiry stem-like cirrus hanging from the end of the leaf allows the palm to climb.

Occurs in mountainous rainforest up to 1980 m above sea level and often found in disturbed areas near forest edges. The stems are typically not used for construction, because they shrink when dried.

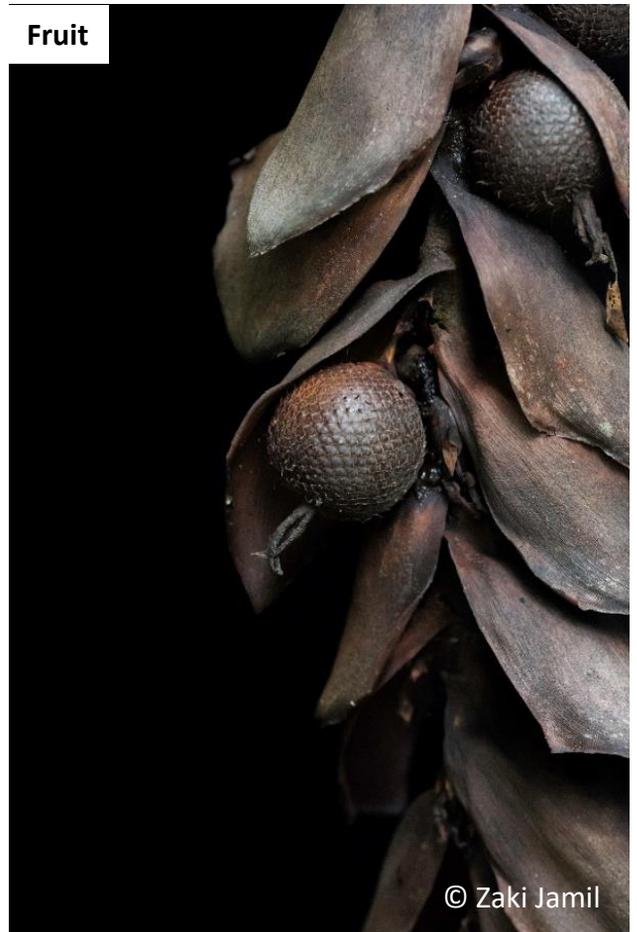


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Seedling



Fruit



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Family Arecaceae

*Rhopaloblaste singaporensis*

Kerinting, Singapore Walking-Stick Palm

Critically Endangered

Clump-forming palm up to 3 m tall forms small clumps of 2-3 narrow stems (up to 2.5 cm wide). The leaves (up to 1.6 m long) are composed of 35-45 cm long leaflets. Bright orange to red fruit (1.4 cm long) occurs in clusters.

The stems are dried and lacquered to make attractive walking sticks. This species grows well in containers and needs shelter.



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Fron



© Zaki Jamil

Flower



Fruit



Infructescence



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