BIRDWOOD'S MUCUNA

KFBG
Kadoorie Farm & Botanic Garden
嘉道理農場暨植物園

Scientific name	*Mucuna birdwoodiana*
Family	Fabaceae (bean family)
Habit	Climbing on trees or shrubs
Distribution	Hong Kong and South China

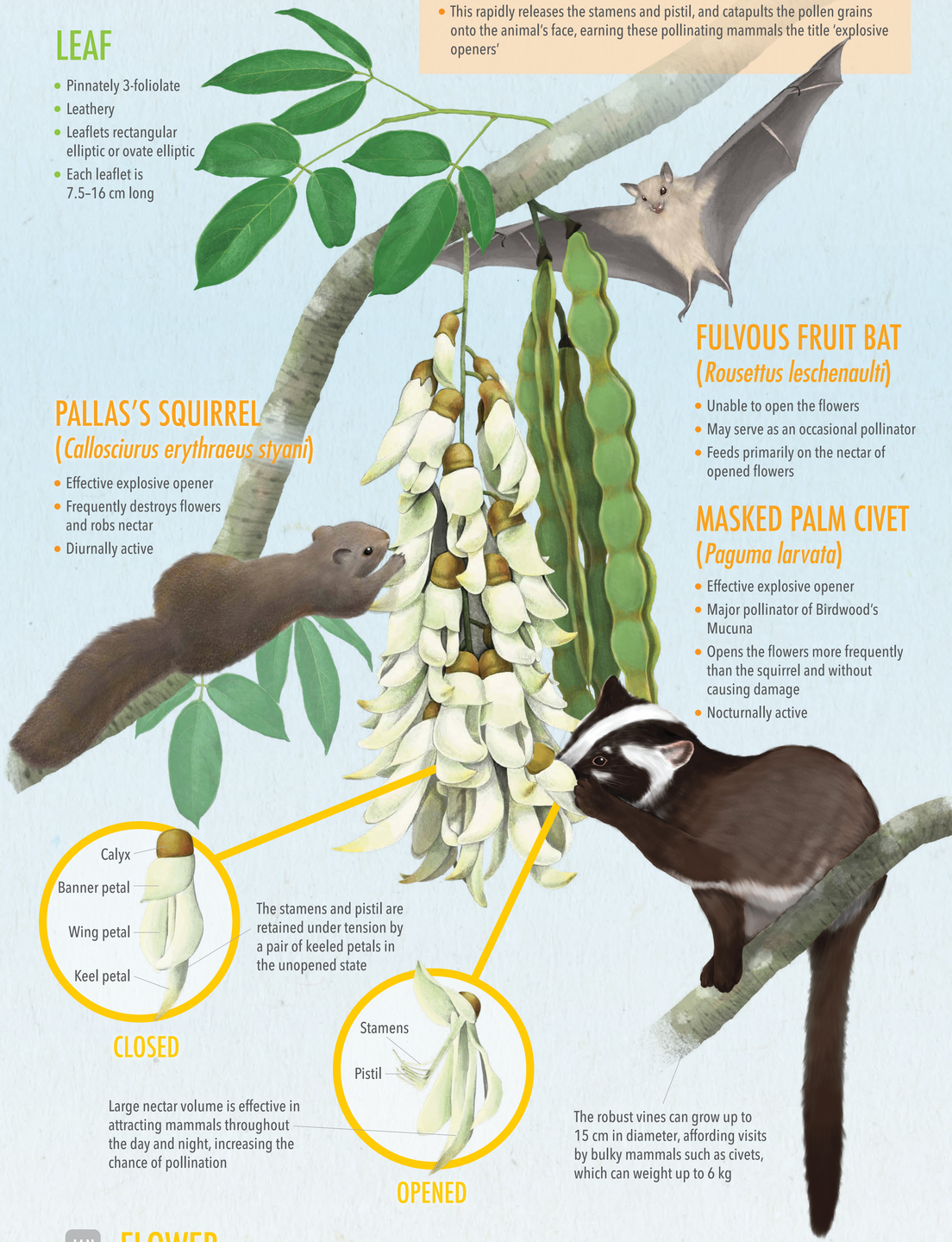
Native | Evergreen

Relationships with its Neighbours

- While most plants rely on insects for pollination, Birdwood's Mucuna depends on mammals
- Fruit bats, squirrels and civets visit the flowers, but only the latter two are effective pollinators
- Upon visiting a flower, these mammals press down on the wing petals with their forelimbs and push the banner petals upward, so that they can insert their snouts through the gap
- This rapidly releases the stamens and pistil, and catapults the pollen grains onto the animal's face, earning these pollinating mammals the title 'explosive openers'

LEAF

- Pinnately 3-foliolate
- Leathery
- Leaflets rectangular elliptic or ovate elliptic
- Each leaflet is 7.5–16 cm long



FULVOUS FRUIT BAT (*Rousettus leschenaulti*)

- Unable to open the flowers
- May serve as an occasional pollinator
- Feeds primarily on the nectar of opened flowers

PALLAS'S SQUIRREL (*Callosciurus erythraeus styani*)

- Effective explosive opener
- Frequently destroys flowers and robs nectar
- Diurnally active

MASKED PALM CIVET (*Paguma larvata*)

- Effective explosive opener
- Major pollinator of Birdwood's Mucuna
- Opens the flowers more frequently than the squirrel and without causing damage
- Nocturnally active

The stamens and pistil are retained under tension by a pair of keeled petals in the unopened state

CLOSED

Large nectar volume is effective in attracting mammals throughout the day and night, increasing the chance of pollination

OPENED

The robust vines can grow up to 15 cm in diameter, affording visits by bulky mammals such as civets, which can weight up to 6 kg

FLOWERING: JAN FEB MAR APR MAY JUN JUL

FLOWER

- Long inflorescences up to 20–40 cm long, each with 12–40 flowers
- Each flower is 7.5–9 cm tall
- The arrangement of the different types of petals lends the flowers the appearance of a butterfly
- The species' Chinese name, which translates as 'rice bird flower', is a reference to the critically endangered yellow-breasted bunting, owing to the colour and shape of the flowers

FRUITING: AUG SEP OCT NOV DEC

FRUIT

- A woody, leathery legume up to 30–45 cm long
- Covered in fine, reddish-brown irritant hairs
- Each pod contains 5–15 purple-black seeds, each one measuring about 2.8 cm in length

All Organisms are Interconnected

- Nearly 90% of flowering plants are pollinated by animals, with each species exhibiting adaptive features to fit its pollinator's needs
- Any ecological interaction between two species is termed a SYMBIOSIS
- The intimate and mutually beneficial relationship between *M. birdwoodiana* and its mammal pollinators is called a MUTUALISM

WHERE CAN YOU FIND IT IN KFBG?

A giant Birdwood's Mucuna is located behind the Art House in the Lower Area

REFERENCE

Kobayashi, S., Gale, S.W., Denda, T., Izawa, M. (2019). Civet pollination in *Mucuna birdwoodiana* (Fabaceae: Papilionoideae). *Plant Ecology* 220: 457–466.

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