

Begonia abdullahpieei Kiew



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“Piee’s Begonia”, is named after Abdullah Piee, a forest guide and explorer. *B. abduallahpieei* is pronounced [uhb dull ah pee ī] per the help of a few great ABS contacts.

First published by Ruth Kiew, in her book *Begonias of Peninsular Malaysia*, Natural History Publications, Borneo, 2005

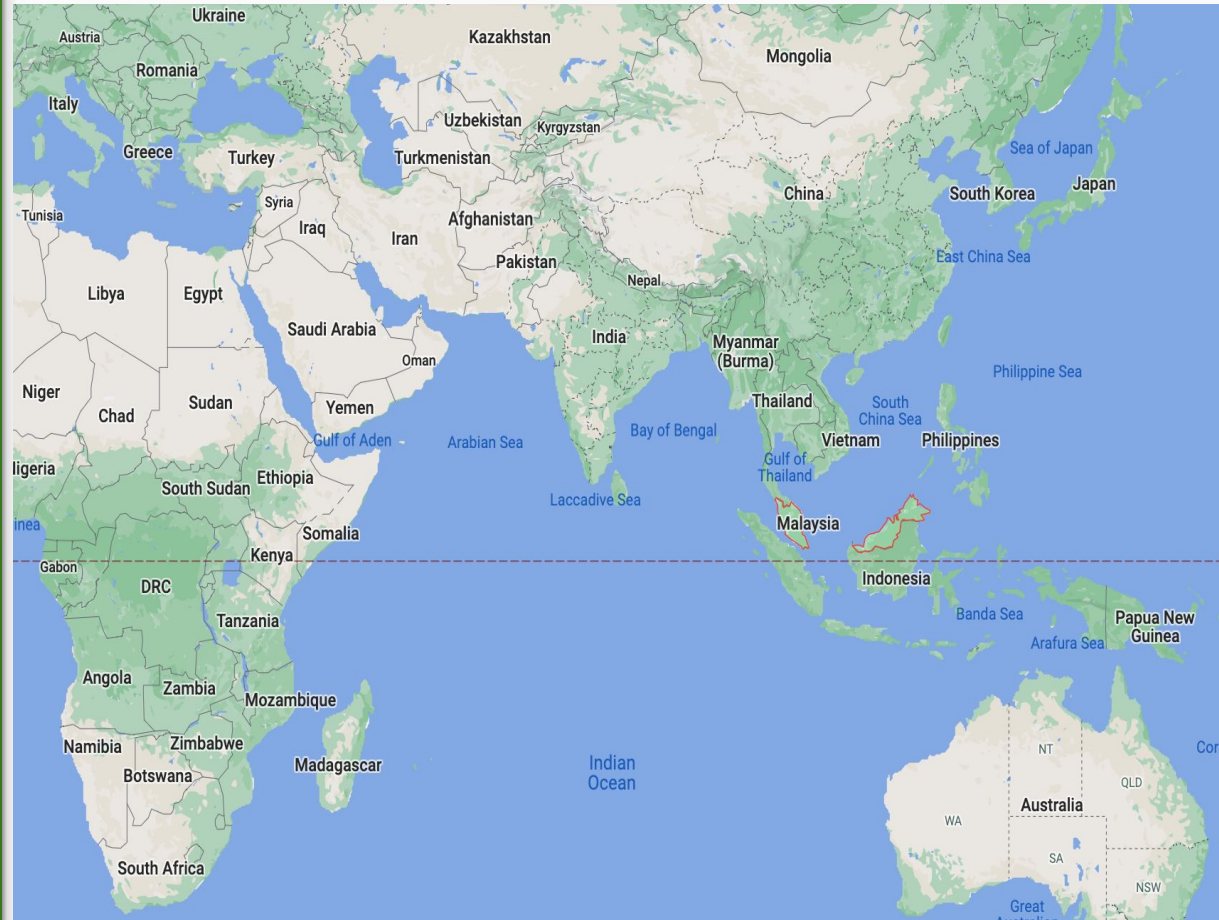
Where this begonia
is from

Malaysia occupies part of
the Malay Peninsula and
the island of Borneo,
divided by South China Sea

Has 29 million people

Malay, Indian & Chinese
both geographic features &
influences

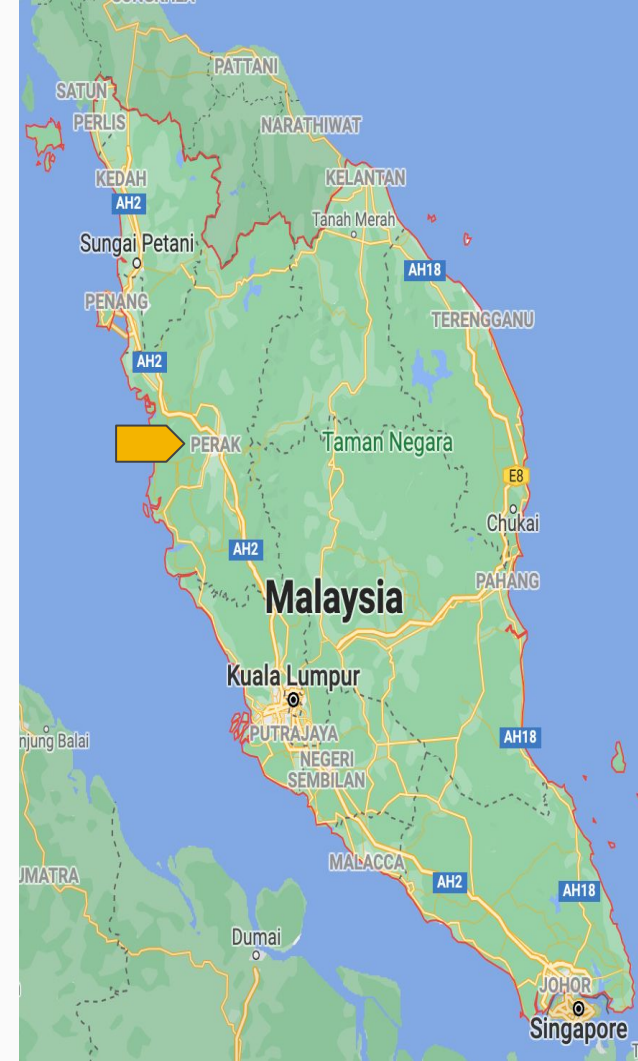
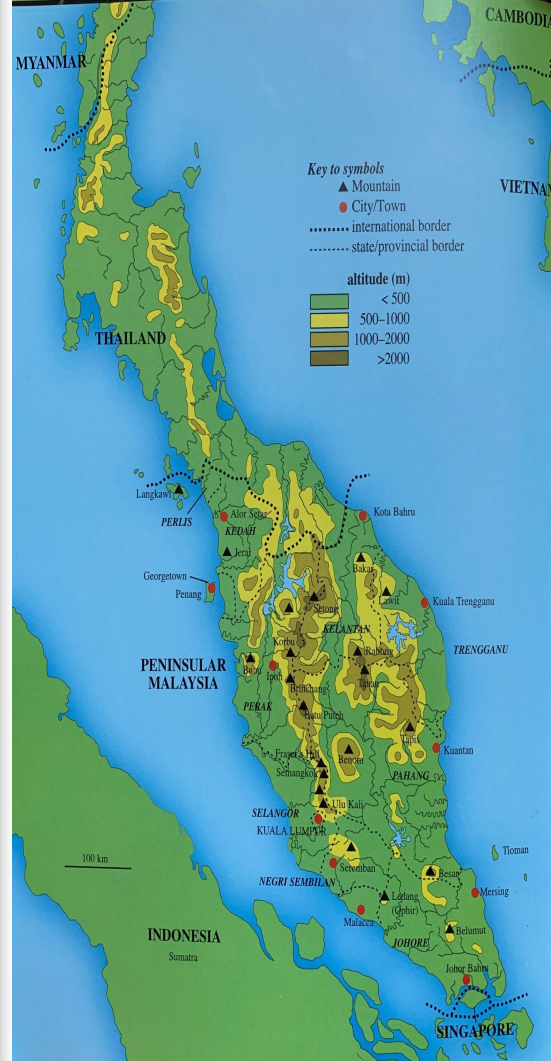
Kuala Lumpur is the capital



Where this begonia is from

58% of Malaysia covered by tropical rainforests, 0.2% of land are limestone cliffs

Peninsular Malaysia is divided by the Titiwangsa Mountain Range on the east. To the west the Bintang Mountains run from south Thailand in the north to south of Perak state.



Where this begonia is from

Forested mountains
dominate much of this state

During the British colonial
period, tin was mined here
until prices plummeted

Many cave temples,
waterfalls, colonial
architecture, attract tourists



Background

Begonia was first seen February 17, 2000, and preserved by Dr. Ruth Kiew.

First published in Dr. Kiew's book *Begonias of Peninsular Malaysia*, 2005, and acknowledged by Mark Hughes, et al., *Asian Begonias 2*, 2018.

Classified as **Critically Endangered** since 2010, as are several begonias of Peninsular Malaysia.



Background

Under IUCN guidelines, of the 54 begonias identified in Kiew's book, 31 are Threatened where 24 are CR- Critically Endangered, 3 are EN- Endangered, and 4 are VU- Vulnerable.

NT- Near Threatened is if not CR, EN or VU, but may qualify in near future: 12, Least Concern 9, with 1 no data, and 1 already EX- extinct (*B. eiromischa*).

Table 1 Summary of the Red List assessment for *Begonia* spp.

	Category	No. taxa (%)	Summary
Threatened	EX	1 (1.9)	31 (57.4)
	CR	24 (44.4)	
	EN	3 (5.6)	
	VU	4 (7.4)	
Not threatened	NT	12 (22.2)	21 (38.8)
	LC	9 (16.7)	
Inadequate data	DD	1 (1.9)	

Chua, Lillian & Kiew, Ruth & Chan, Yoke Mui. (2009). Assessing conservation status of Peninsular Malaysian Begonias (Begoniaceae). Blumea journal of plant taxonomy and plant geography. 54. 10.3767/000651909X474131.

Background

Maps were used to show extent of occurrence of a begonia, both historic and current locations.

These were overlaid with Forest cover maps since this is a good measure of habitat extent and quality.

This begonia's only population (1 on left map) is so limited, any degradation of habitat is a threat.

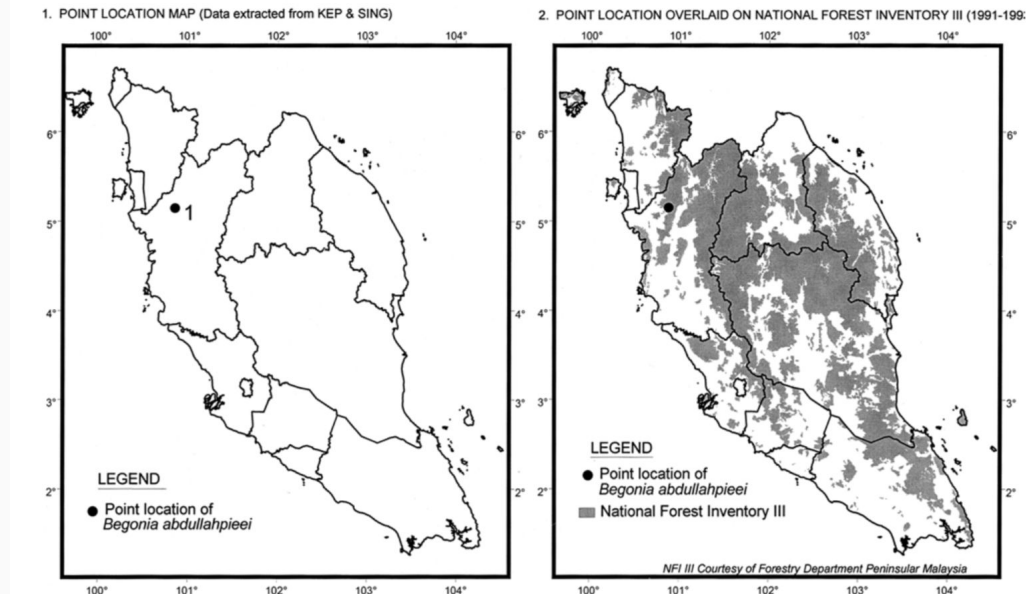


Fig. 3 Geographical distribution of *Begonia abdullahpieei* in Peninsular Malaysia. Left: 1 = Kelian Gunong. Right: EOO = 10 km²; AOO = 10 km².

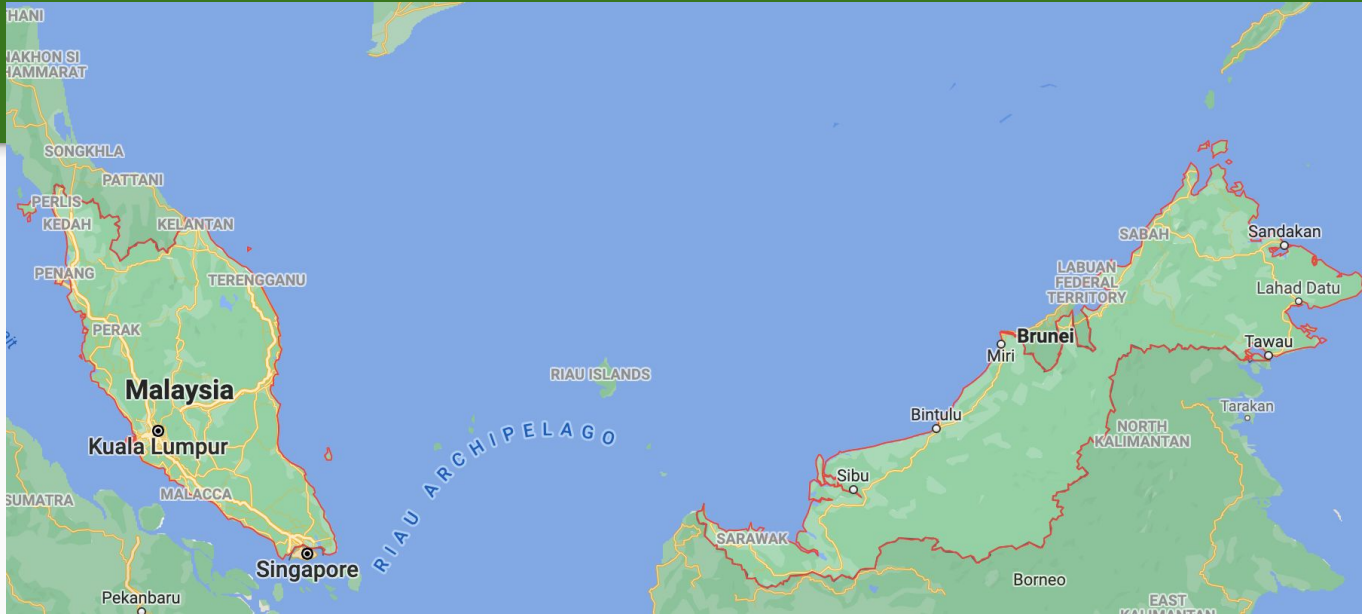
Habitat Disturbance

All begonias on the Peninsula grow in primary forest or on limestone hills. Many are extremely local, small populations, requiring pristine habitat to maintain their population(s).

Some of the threats to begonia habitats are forestry or opening up of the forest canopy, the silting of streams due to logging, clear-felling for agriculture or other activities, limestone hills quarrying, and even mountaintop clearing for telecommunication equipment. Removal of forest canopy exposes begonias in deep shade to direct sunlight and extreme rainstorms.

In 2005, only four begonias here were growing in or near protected habitats of the 52 native species identified at that time.

Habitat Disturbance



East Malaysia, like most of Borneo, was formerly covered with lowland rain forests with over 2,000 tree species. However, much of it has been cleared, due to the increase in logging since the 1960s and the increase of shifting cultivation. Over 80% of Sarawak's forests have been felled, and the logging throughout East Malaysia has polluted waterways, increased erosion, and damaged agriculture.

Section **Platycentrum**

This begonia belongs to Begonia section **Platycentrum** (which includes about 120 different begonias). Among these are begonias we've seen:

B. annulata, *B. cathcartii*, *B. decora*, *B. emeiensis*, *B. formosana*, *B. hatachoa*, *B. hemsleyana*, *B. iridescens*, *B. koksunii*, *B. limprichtii*, *B. longiacaulis*, *B. palmata*, *B. pavonina*, *B. rex*, *B. sizemoreae*, *B. thomsonii*, *B. versicolor*, *B. xanthina*

This being a **polyphyletic** section, they have been grouped together based on characteristics that do not imply that they share a common ancestor that is not also the common ancestor of many other taxa, per Dr. Mark Tebbitt.

Per Ruth Kiew, “[This begonia] belongs to section *Platycentrum* because it has a rhizome, more or less symmetrical leaves, male flowers with four tepals that open before the female flowers, and pendent fruits with three unequal wings and two locules each with two placentas.”



Begonia abdullahpieei Kiew. **A.** The plant. **B.** Male flower. **C.** Stamen cluster. **D.** Stamens. **E.** Female flower. **F.** Styles and stigmas. **G.** Papillose hairs of the stigma. **H.** T.S. ovary. **I.** Fruit. **J.** Seed. **K.** The upper leaf surface. **L.** The lower leaf surface. (RK 4907)

Description

This begonia is known only from the type locality in Perak state, growing in deep shade on rocks along a small stream.

The plant grows compact. It has emerald green leaves with minute spike-like hairs. Leaves grow from 3 to 9 inches long, and have red veins as are the stems. It is monoecious.



In situ

Photos credit: *Begonias of Peninsular Malaysia*, Ruth Kiew, Natural History Publications (Borneo), 2005



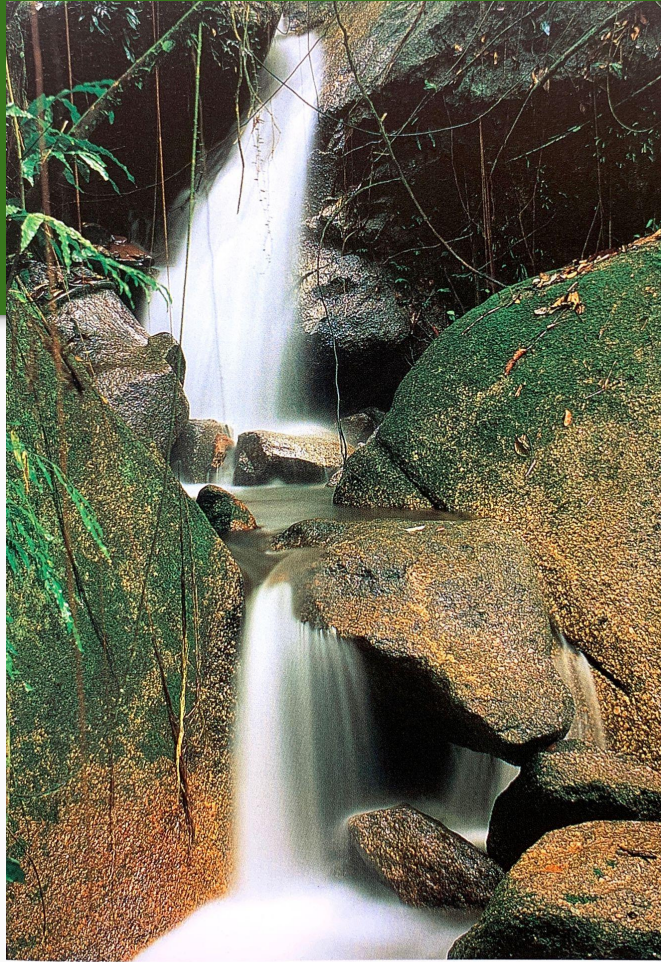
In situ



Closeups of female flower and fruit on right.



In situ



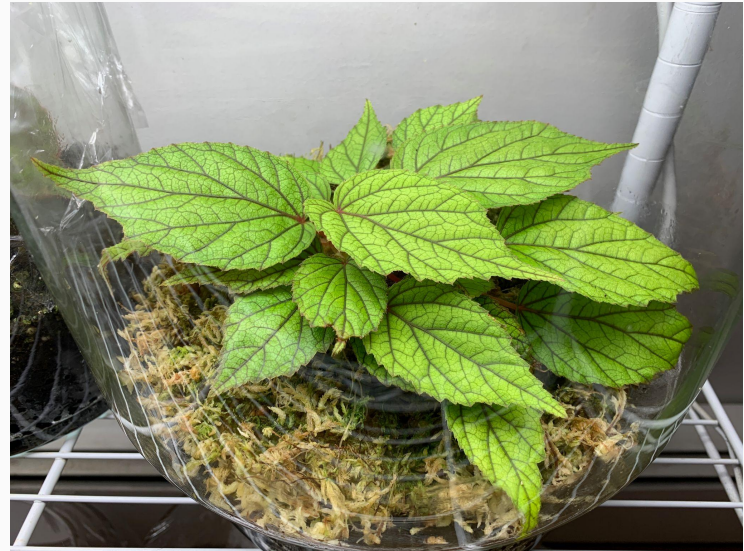
Pice's Begonia grows on large boulders in a small stream.

Growth Indoors

Cutting received on April 15, 2021



Plant from cutting on May 28, 2021



Growth Indoors

Begonia abdullahpieei is one of the plants being grown for the Seeds For Conservation effort for ABS

Hope to get it to flower to collect seed to share with everyone

Extremely hands-free, easy to grow so far

No meltdown or damage from humidity

Can propagate leaves on wet paper towel

Grow Notes:

- two bulb four-foot LED light fixture, placed twelve inches from the source
- started in glass 8" dia. terrarium with pebbles, charcoal, and Pro-Mix H-P medium, tablespoon limestone
- distilled water, only watered three times, no fertilizer, so far
- moved to 16" dia. bowl currently in, June 2021

Let's all grow

B. abduallahpieei

