



Impatiens marroninus, a new species of *Impatiens* (Balsaminaceae) from Sumatra, Indonesia

N. Utami¹

Key words

Balsaminaceae
endemic
Impatiens
Indonesia
new species
taxonomy

Abstract *Impatiens marroninus* Utami (Balsaminaceae), collected from Sumatra, Indonesia, is described and illustrated as a new species. The species belongs to subg. *Impatiens* sect. *Kathetophyllon*. It is characterized by opposite or whorled leaves, yellow flowers with red maroon stripes in the upper part of the two lateral petals, dark green leaves and the lower sepal deeply navicular and constricted into a short curved spur. This combination of morphological characters was previously unknown. Detailed description, illustration, phenology, IUCN conservation assessment and ecology of the species are provided.

Published on 5 February 2020

INTRODUCTION

Balsaminaceae comprises annual or perennial herbs with flowers that exhibit a remarkable diversity. The family consists of two genera, the monotypic genus *Hydrocera* (L.) Wight & Arn. and *Impatiens* L. *Hydrocera* has as single species, *H. triflora* (L.) Wight & Arn., widely distributed in the Indo-Malaysian countries ranging from India and Sri Lanka to S China (Hainan) and Indonesia. On the other hand, *Impatiens* has over 850 species and is distributed worldwide. Most species of *Impatiens* are concentrated in five hotspots: Southeast Asia and southwestern China, eastern to central Himalayas, southern India, tropical Africa, and Madagascar (Grey-Wilson 1980). Since I started exploring *Impatiens* in Indonesia, especially those in Sumatra, several new species of *Impatiens* have been described in addition to the ones mentioned in Grey-Wilson's treatment (1989). Grey Wilson (1989) published 20 new species of *Impatiens* from Sumatra. Currently, c. 35 species of *Impatiens* are found, most of which grow in the montane forest (Grey-Wilson 1989, Shimizu & Utami 1997, Utami 2005, 2009, 2011, 2012, 2013). During field work carried out at Rantau Dedap, S Sumatra in 2015 by Harry Wiriadinata, a number of collections were made. Among these collections was an unfamiliar *Impatiens* collected in a submontane area on the forest floor at 1700 m a.s.l. After checking the literature and examining the available herbarium material of *Impatiens*, it is concluded that this is an undescribed, likely rare species, which is described and illustrated here.

TAXONOMY

Impatiens marroninus Utami, sp. nov. — Fig. 1a–b, 2

Etymology. The species epithet refers to the colour of the peduncles, which is maroon.

Impatiens marroninus is similar in morphology to *I. beccarii* Hook.f. ex Dunn. In *I. marroninus* the leaf is dark green; lower sepal deeply navicular, constricted into a shortly curved spur; lateral petals symmetrical, yellow with red maroon stripes in the upper part (latter unique to *Impatiens*). *Impatiens beccarii* (Fig. 1c–d) has green leaves; lower sepal shallowly navicular and constricted into a curved filiform spur; lateral petals \pm asymmetrical, yellow with red or orange markings. Both species are endemic to Sumatra. — Type: *H. Wiriadinata* 14280 (holo BO), Indonesia, South Sumatra, Muara Enim, Palembang.

Glabrous perennial herbs, up to 80 cm tall; stems erect, simple. Leaves spirally arranged, somewhat congested towards the stem tops, dark green; petiole 1–3 cm long; lamina ovate to elliptic, 5–15 by 2.5–5 cm, base acute, margin crenate, apex obtuse to acuminate, lateral veins 5–8 pairs. Inflorescences 1–2-flowered racemes; peduncles c. 3.5 cm long, maroon; bracts linear, 1–3 cm long. Flowers yellow. Sepals: lateral two ovate, c. 1 by 1 cm, white to maroon; lower sepal deeply navicular, c. 1.5 by 1 cm, constricted into a short curved spur, latter reddish, c. 1.5 cm long. Petals: upper lateral petals usually with maroon stripes in upper part; dorsal petal cucullate, c. 2 by 0.5 cm, yellow with red stripes outside; lower lateral petals united, c. 3 by 1 cm; upper part of each pair oblong to suborbicular, c. 1.5 by 1 cm, yellow with smooth red stripes; lower part of each pair ovate to subovate, c. 1.5 by 1 cm, yellow with red stripes. Ovary glabrous. Fruit unknown.

Distribution — Sumatra (see data of type).

Ecology & Habitat — This newly described species is found growing on the submontane forest floor at altitudes of 1700 m a.s.l. The specimen was collected flowering in October; further investigations are required to determine the exact flowering and fruiting seasons.

Conservation status — Since this species is only known from one locality at present, a preliminary conservation status of Data Deficient (DD) seems appropriate (IUCN 2001).

¹ Herbarium Bogoriense, Botany Division, Research Center for Biology-LIPI, Cibinong Science Center, Jln. Raya Jakarta-Bogor, Km 46, Cibinong 16911, Bogor, Indonesia; e-mail: utami_16002@yahoo.com.



Fig. 1 a–b. *Impatiens marroninus* Utami; b. *I. marroninus* Utami with short curved spur. — c–d. *Impatiens beccarii* Hook.f. ex Dunn; d. *I. beccarii* Hook.f. ex Dunn with long filiform spur. — Photos by H. Wiriadinata.

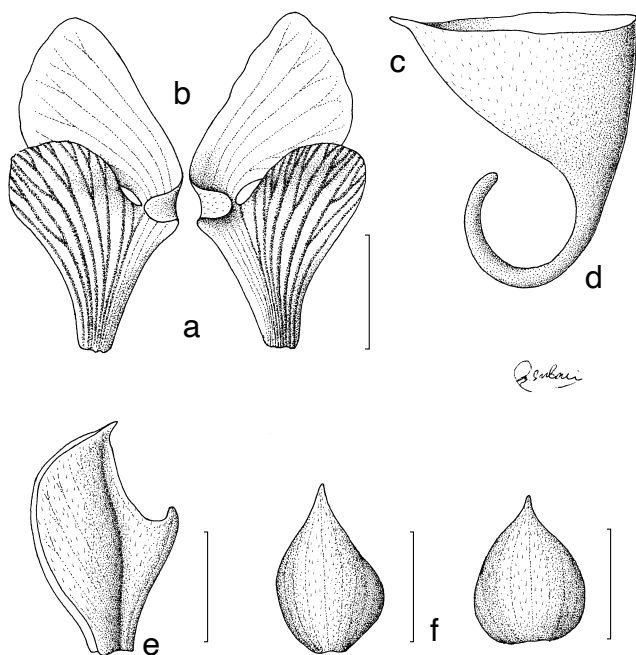


Fig. 2 *Impatiens marroninus* Utami. a. Lower petal; b. upper petal; c. lower sepal; d. spur; e. dorsal petal; f. pair of lateral sepals. — Scale bars = 1 cm. — Drawing by Sobari.

REFERENCES

- Grey-Wilson C. 1980. *Impatiens* of Africa. Balkema, Rotterdam.
- Grey-Wilson C. 1989. A revision of Sumatran *Impatiens*. *Studies on Balsaminaceae* VII. *Kew Bulletin* 44: 67–106.
- IUCN 2001. *IUCN Red List Categories and Criteria: Version 3.1*. IUCN Species Survival Commission, Gland and Cambridge.
- Shimizu T, Utami N. 1997. Three new species of *Impatiens* (Balsaminaceae) added to Flora Malesiana. *Kew Bulletin* 52: 435–442.
- Utami N. 2005. Two new species of *Impatiens* (Balsaminaceae) from Batang-gadis National Park, North Sumatra, Indonesia. *Blumea* 50: 443–446.
- Utami N. 2009. *Impatiens rubricaulis* (Balsaminaceae), a new species of *Impatiens* (Balsaminaceae) from west Sumatra. *Reinwardtia* 13: 93–94.
- Utami N. 2011. *Impatiens kunyitensis* (Balsaminaceae), a new species from Sumatra, Indonesia. *Kew Bulletin* 66: 187–190.
- Utami N. 2012. *Impatiens talakmauensis* (Balsaminaceae), a new species from western Sumatra, Indonesia. *Acta Phytotaxonomica et Geobotanica* 63(1): 51–54.
- Utami N. 2013. *Impatiens kerinciensis* (Balsaminaceae), a new species from Sumatra, Indonesia. *Kew Bulletin* 68: 687–688.