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Cover images: *Mapania sembilangensis* Miraadila, Shabdin & Meekiong. A. Habit; B. Leaf apex details; C. Sheath margin details; D. Capitata inflorescence; E. Spike; F. Spicoid bract [Drawing by Meekiong, K.].

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A NEW SPECIES OF *BEGONIA* (BEGONIACEAE) FROM SUMBAWA, LESSER SUNDA ISLANDS, INDONESIA

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ABSTRACT

GIRMANSYAH, D. 2016. A new species of *Begonia* (Begoniaceae) from Sumbawa, Lesser Sunda Islands, Indonesia. *Reinwardtia* 15(2): 115 – 118. — A new species of *Begonia* L. (Begoniaceae), *Begonia semongkatensis* Girm., is described from Sumbawa Island, Lesser Sunda Islands, Indonesia. The species belongs to *Begonia* section *Reichenheimia*. An illustration, identification key and distribution maps are provided.

Key words: *Begonia semongkatensis*, Begoniaceae, section *Reichenheimia*, Sumbawa.

ABSTRAK

GIRMANSYAH, D. 2016. Satu jenis baru *Begonia* (Begoniaceae) dari Sumbawa, Kepulauan Sunda Kecil, Indonesia. *Reinwardtia* 15(2): 115 – 118. — Satu jenis baru dari marga *Begonia* L. (Begoniaceae), *Begonia semongkatensis* Girm., telah dideskripsikan dari Sumbawa, Kepulauan Sunda Kecil, Indonesia. Jenis ini termasuk ke dalam seksi *Reichenheimia*. Ilustrasi, kunci identifikasi dan peta distribusi dari jenis ini juga tersedia.

Kata kunci: *Begonia semongkatensis*, Begoniaceae, seksi *Reichenheimia*, Sumbawa.

INTRODUCTION

The genus *Begonia* L. (Linnaeus, 1753) is one of the largest flowering plants, currently estimated to have 1803 species distributed throughout tropical and subtropical Asia, Africa and America (Hughes *et al.*, 2015b). In Southeast Asia, Indonesia is a center diversity for *Begonia* with 231 accepted species of *Begonia* (Girmansyah, 2016). The Lesser Sunda Islands (Nusa Tenggara) has five species recorded so far *ie.* *Begonia bimaensis* Undaharta & Ardaka (Undaharta *et al.*, 2015), *B. multangula* Blume (Hughes *et al.*, 2015a), *B. sumbawaensis*, *B. jaranpusangensis* and *B. brangbosangensis* (Girmansyah, 2016).

The Lesser Sunda Islands comprise many islands, most of which are part of Indonesia and are administered as the provinces of Bali, West Nusa Tenggara (Lombok & Sumbawa) and East Nusa Tenggara (Flores, Sawu, Roti, Solor, Alor and West Timor). West Nusa Tenggara comprises the western portion of the Lesser Sunda Islands with Sumbawa Island being the biggest island in the province.

Sumbawa is situated between Lombok in the west and Flores in the east. Botanical explorations in Sumbawa are summarised in Van Steenis and Kruseman (1950). A floristic study of West Sumbawa has been reported in Wiriadinata *et al.* (2013). Recent botanical explorations in May 2016, conducted by Herbarium Bogoriense (RCB-LIPI) recorded one new species of *Begonia* from West Sumbawa, between Semongkat and Batu Dulang (Fig. 1). All available specimens from BO,

E, K, L and SING and digital images from Hughes *et al.* (2015b) have been consulted.

There are five species of *Begonia* in Sumbawa as recorded by Girmansyah (2016); this recent new discovery brings the number of *Begonia* in Sumbawa to six species.

TAXONOMY

***Begonia semongkatensis* Girm. spec. nov.** Fig. 2

Similar to *Begonia bimaensis* Undaharta & Ardaka (Undaharta *et al.*, 2015) but differs in tuber (absent *vs.* present), plant height up to 16 cm (*vs.* less than 10 cm), stipules lanceolate, 10–12 × 3 mm (ovate to elliptic, 3 × 1–2 mm), petiole from 1–13 cm long (*vs.* 3.5–7.5 cm long), peduncle 2–11 cm (*vs.* 3–6 cm), male and female flowers tepals abaxially hairy (*vs.* glabrous), number of stamen 24 (*vs.* 40), and female flower pedicels 9–10 mm long (*vs.* 2.5–4 mm long) and fruit pedicel 10–15 mm (*vs.* 2–5 mm long). — TYPE: Indonesia, West Nusa Tenggara, Sumbawa Island, Brang Pelat, Batu Lanteh Subdistrict, 12.5 km SW of Sumbawa, between Semongkat to Batu Dulang, 08°33'506"S 117°19'876"E, 381 m elev., 12 May 2016. Deden Girmansyah Deden 2385 (Holotype: BO!; Isotype: E!).

Perennial, monoecious herb, up to 16 cm tall, tuber absent. *Stems* very reduced, internodes *ca.* 1 mm long; stipules lanceolate, 10–12 × 3 mm, margin with sparse hairs, caducous. *Leaves* alternate; petioles, 1–13 cm long, green to reddish, with scattered multicellular glandular hairs; lamina basifixed, 1.5–10 × 1.2–7 cm, asymmetric, ovate, base cordate, lobes commonly overlapping, apex acute, margin shallowly undulate, sparsely villose, with

Key to the species of *Begonia* from Sumbawa (Modified key from Girmansyah, 2016)

- 1 a. Rhizomatous or tuberous herb; leaves ovate to broadly ovate 2
 b. Erect herb; leaves ovate to oblong 4
 2 a. Base tuberous; leaves lobed, upper surface with long hairs *B. bimaensis*
 b. Base rhizomatous; leaves entire, upper surface glabrescent or with short hairs ... 3
 3 a. Up to 16 cm tall, leaves 1.5–10 × 1.2–7 cm, number of stamens 24, fruit 10–15 mm long *B. semongkatensis*
 b. Up to 30 cm tall, leaves size 10–30 × 9–29 cm, number of stamen 48, fruit 22–30 mm long *B. sumbawaensis*
 4 a. Leaves broadly ovate or orbicular, margin shallowly lobed; fruit fleshy and indehiscent..... *B. multangula*
 b. Leaves elliptic, oblong, ovate or narrowly ovate, margin entire; fruit dry and dehiscent 4
 5 a. Leaves ovate to elliptic; petiole hairy *B. jaranpusangensis*
 b. Leaves narrowly ovate to oblong; petiole glabrous *B. brangbosangensis*

minute teeth at the end of the veins, upper surface green to dark reddish green with sparse short glandular hairs, lower surface pale green to reddish with sparse villose hairs; venation palmate-pinnate, veins pale green to reddish, base 2 pairs, along midrib 4–5. *Inflorescence* cymose, few-flowered, axillary, protandrous, bisexual; peduncles 2–11 cm long, pale green to reddish, with sparse hairs; *bracts* minute, elliptic, margin slightly fimbriate, persistent. *Male flowers*: pedicels 10–30 mm long, tepals 4, pink, outer tepals *ca.* 9–10 × 10 mm, sub-orbicular, abaxially sparsely hairy, inner tepals *ca.* 9 × 4–5 mm, obovate to elliptic; androecium yellow, symmetric,

globose, stamens *ca.* 24, filaments fused at base into a short column *ca.* 1 mm long; filaments 0.2–0.3 mm long, anther *ca.* 1 mm long, broadly obovate, dehiscing through lateral slits as long as anther, apex retuse. *Female flowers*: 1 or 2, pedicels 9–10 mm long, bracteoles absent; tepals 3–4, pink, unequal, two outer tepals broadly ovate, *ca.* 7 × 5–6 mm; sparsely hairy on abaxial surface, one or two inner tepal elliptic, 5 × 2–3 mm, glabrous; ovary 3–5 × 2–3 mm (excluding wings), ellipsoid, glabrous, reddish white, locules 3, placentation axile, placentae entire, wings 3, sub equal, pinkish, acuminate at base, rounded to acute at apex, widest point 2–5 mm long; stigmas 3, Y-

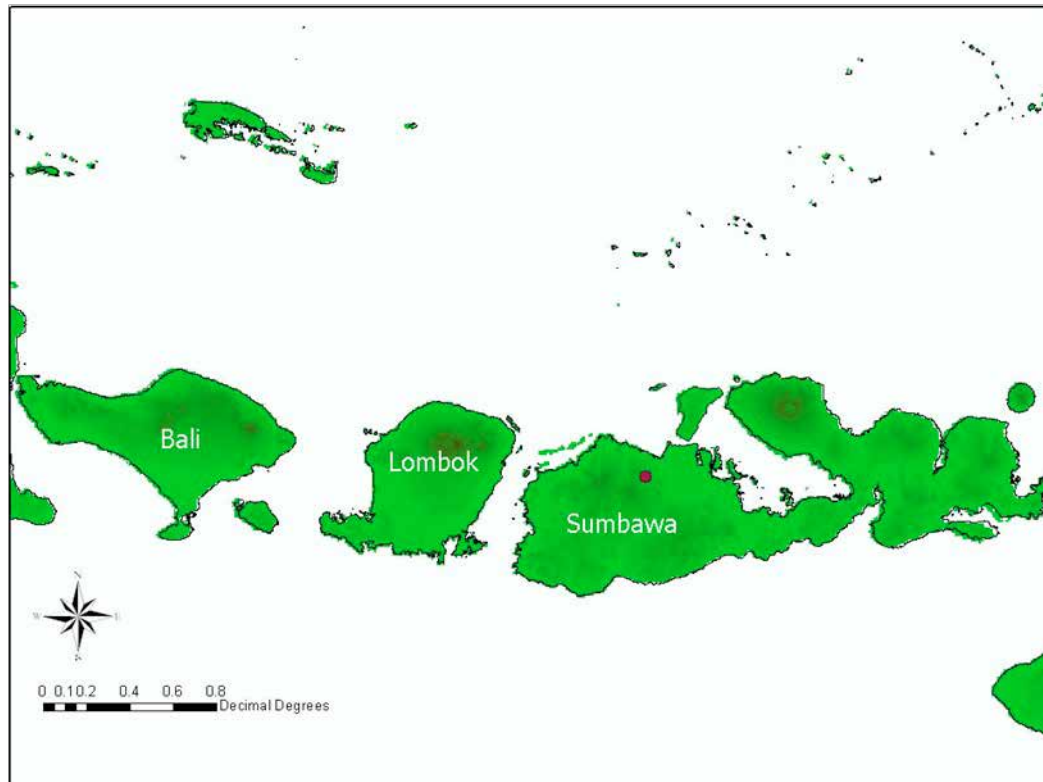


Fig. 1. Type locality of *Begonia semongkatensis* Girm. in West Sumbawa.

shaped, stigmatic surface once spirally twisted. *Fruit* with pedicel 10–15 mm long, capsule ellipsoid, $7-9 \times 4-5$ mm, (excluding wings), dehiscent, splitting along the wing attachments, wing shape as for the ovary, widest point, 3–4 mm long. *Seeds* barrel-shaped, 0.24–0.27 mm long, collar cells more than a half of seed length.

Distribution. Endemic to Sumbawa, between Semongkat to Batu Dulang.

Habitat. This species grows on sandstone cliffs in semi-shade along the main road from Semongkat to Batu Dulang.

Etymology. The epithet '*semongkatensis*' refers to the Semongkat area, one of the famous tourism object in Sumbawa Besar district from where the type material was collected.

Specimens examined. West Sumbawa, Mt. Batu Lanteh rather dry slope, N of Batu Dulang, 4 May 1961, *Kostermans 18684* (A); Sumbawa, 1927, *Rensch 546* (B).

Notes. This species varies in stature and leaf size, which ranges from 1 to 10 cm. Observations of living plants in the field clarified this variation. It is not only the size of leaves which vary, but also the number of flowers per individual. In the small-sized plants, the number of flowers is two, one male flower and one female flower. In larger plants, the number of flowers is 3–5, male flowers 2–3 and female flowers 1–2. In addition, the shape, size and color of the leaves also varies, so that scattered colonies can look quite different and at first glance could potentially be confused as different species (Fig. 3).

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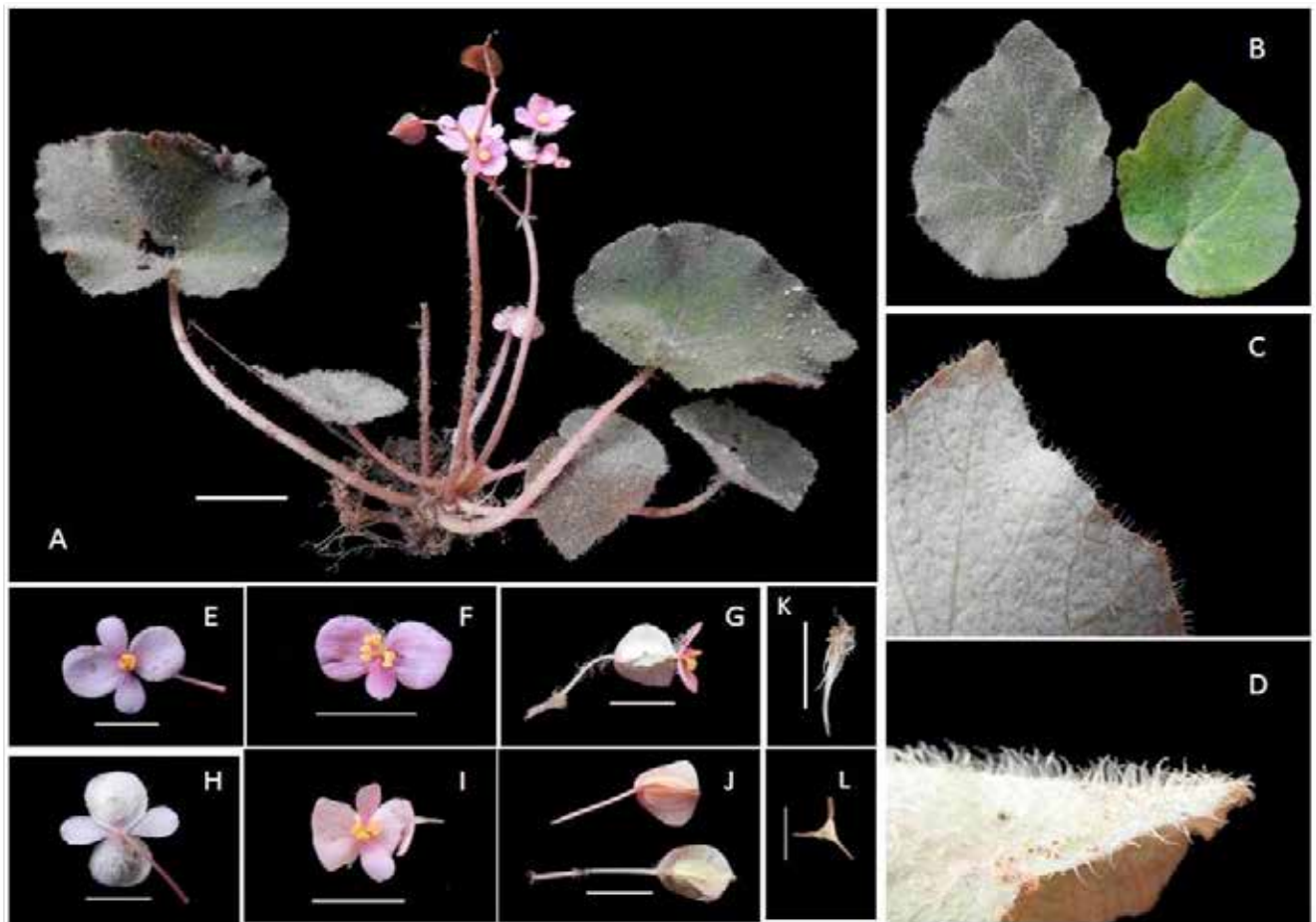


Fig. 2. *Begonia semongkatensis*. A. Habit. B. Leaf colour. C. Leaf margin. D. Leaf abaxial surface. E. Male flower. F. Female flower with three tepals. G. Female flower showing ovary, side view. H. Male flower dorsal side. I. Female flower with 4 tepals. J. Fruits, K. Stipule, L. Ovary transverse section. Scale bars: A (2 cm); E–L (1 cm). (Photos: Deden Girmansyah).

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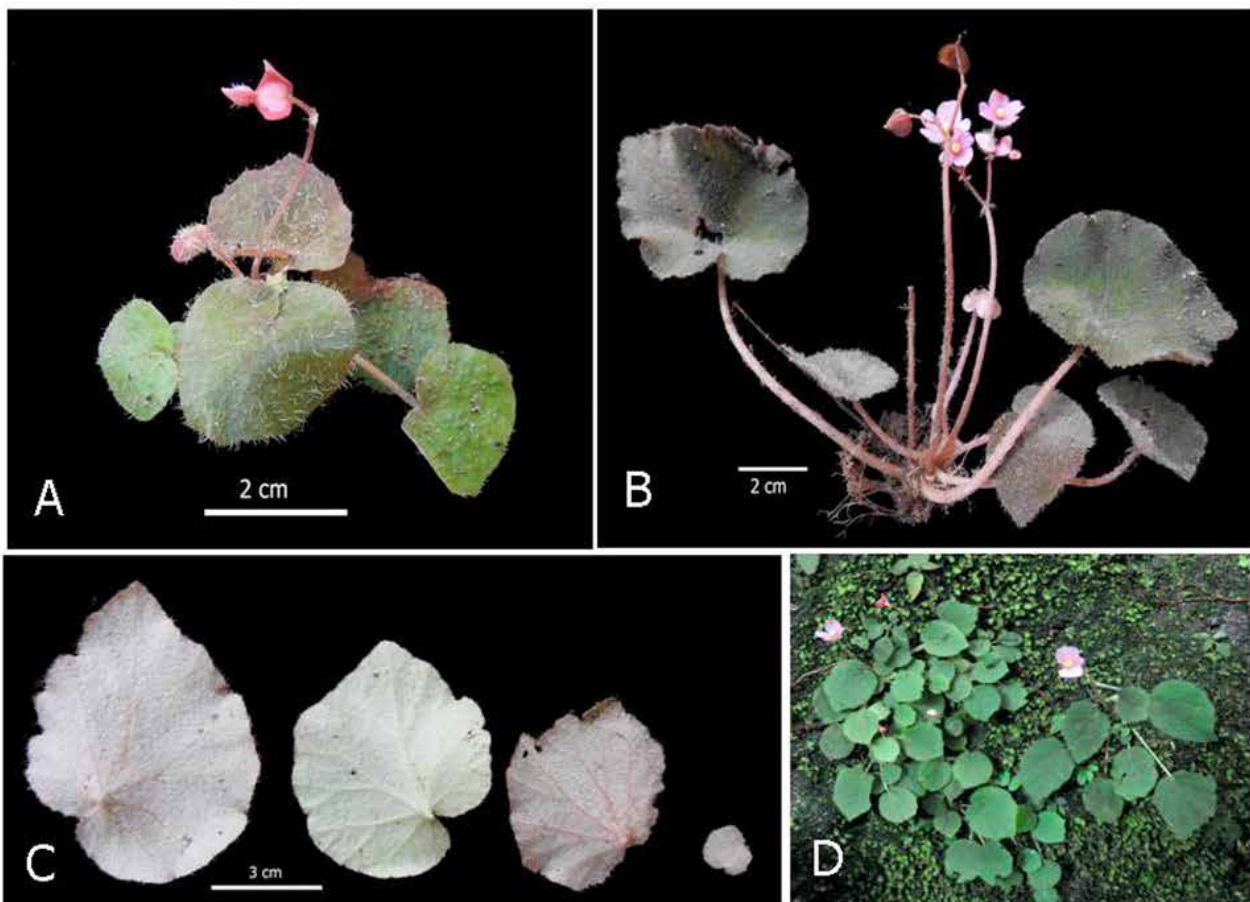


Fig. 3. *Begonia semongkatensis*. A & D. Habit with small leaves and single flower; B. Habit with larger leaves with more than one flower; C. Leaf shape comparison within the species. (Photos: Deden Girmansyah).

INSTRUCTION TO AUTHORS

Scope. *Reinwardtia* is a scientific irregular journal on plant taxonomy, plant ecology and ethnobotany published in June and December. Manuscript intended for a publication should be written in English.

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