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Two new species of *Begonia* (section *Petermannia,* Begoniaceae) from Zamboanga Peninsula, Philippines with notes on an amended description of *B. elatostematoides*

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ABSTRACT: Two new *Begonia* species, *Begonia beringii* and *Begonia gampura*, are reported from Zamboanga Peninsula, Philippines. *Begonia elatostematoides* was rediscovered, and an amended description is provided. Colour plates, ecological notes, distribution map, and preliminary assessment of their conservation status are provided. This brings the total number of *Begonia* section *Petermannia* in Zamboanga Peninsula to 18.

KEY WORDS: *Begonia affinis, B. bangsamoro*, *B. beringii*, *B. gampura*, *B. oblongata*, lectotypification, Mindanao Island, rediscovery.

INTRODUCTION

Begonia L. is the sixth-largest genus of flowering plants with 2084 species occurring throughout the subtropics and tropics of both the New World and Old World (Moonlight *et al.,* 2018; Hughes *et al.,* 2015–). Currently, 155 species are recorded in the Philippines (Dela Cruz *et al.,* 2022; Delos Angeles *et al.,* 2022; Mazo and Rubite, 2022; Moonlight *et al.,* 2018; Hughes *et al.,* 2015–), in which 76 species are classified under *Begonia* section *Petermannia* (Klotzsch) A.DC. and 79 species under *B.* section *Baryandra* A.DC. *Begonia* section *Petermannia* is one of the most species-rich sections in Asia with 468 species known (Moonlight *et al.,* 2018; Hughes *et al.,* 2015–). Members of this section are characterized by the caulescent habit; inflorescences axillary or terminal where male flowers are distal and female flowers basal, protogynous; generally, two-tepaled staminate flowers and five-tepaled pistillate flowers (Rubite, 2012). In contrast, members of *Begonia* section *Baryandra* are characterized by rhizomatous habit; axillary inflorescences where male flowers are basal and female flowers distal, protandrous; four-tepaled staminate and pistillate flowers (Rubite, 2012).

In Zamboanga Peninsula (Fig. 1), there are 17 *Begonia* species, all but one species, *Begonia anisoptera* Merr., belongs to the *B.* section *Baryandra* (Mazo and Rubite, 2022). Mazo and Rubite (2022), in their ongoing studies of Philippines *Begonia*, three additional *Begonia* species were discovered in Zamboanga. Morphological studies based on a survey of taxonomic literature relevant to Philippines *Begonia*, herbarium specimens, and living materials collected from the field confirmed that two of the three species discovered are distinct from the 17 *Begonia* species recorded for Zamboanga. The first *Begonia* species from Zamboanga City is similar to *B. bangsamoro* D.P.Buenavista, Pranada & Y.P.Ang but differs in having strigose stems, lanceolate stipules, pinnately-veined leaves, axillary inflorescences, and larger capsules, while the second *Begonia* species is similar to *B. affinis* Merr. but differs in having a scabrid stems, sparsely scabrid stipules with aristate and sparsely pilose apices, sparsely pilose peduncles, and larger capsules. Separately, the third *Begonia* species matches *B. elatostematoides* Merr., a species endemic to Zamboanga that was described in 1912. We hereby describe the two new species and provided a detailed revision to the description of *B. elatostematoides*.

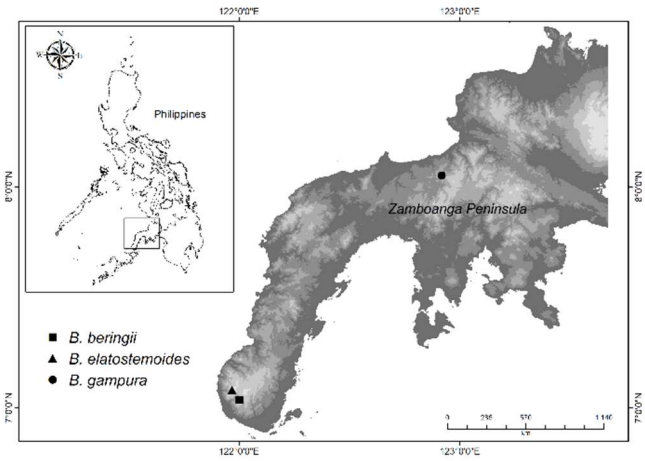

Fig 1. Distribution map of ***Begonia beringii***, ***B. gampura***, and ***B. elatostematoides***.

Table 1. Morphological comparison between ***Begonia bangsamoro*** and ***B. beringii***. (*Based on Buenavista *et al*., 2021)

Characters	*Begonia bangsamoro**	*Begonia beringii*
Stem	pilose	strigose
Stipule	persistent, ovate, 6–10 × 7–7.5 mm, glabrous adaxially, sparsely hairy abaxially, apex aristate	persistent; lanceolate, 5–7 × 2–3 mm, sparsely strigose adaxially; glabrous abaxially, apex cuspidate
Petiole	1.5–2.1 × 2.0–6.5 mm long, pilose	4–10 × 1.5–2.0 mm long, sparsely strigose
lamina	lance-ovate, 7.6–10.8 × 3.1–4.1 cm, base cordate, apex caudate or attenuate, puberulent, glabrescent adaxially, appressed puberulous abaxially, venation basally palmate	lanceolate, 5.5–12.0 × 1–3 cm, base cordate, inequilateral, apex acuminate, minutely echinate adaxially, minutely scabrid abaxially, venation pinnately veined
Inflorescence	terminal	axillary
Ovary	6–7 × 5 mm, sparsely minute hirsute; wings 3, subequal	8.0–8.5 × 5.0–5.5 mm, minute hirsute; wings 3 (–4), subequal
Capsule	6–7 × 5 mm	7–10 × 14–16 mm

MATERIALS AND METHODS

Species description were based on dried herbarium specimens, fresh materials, and *in situ* field images of the three species. Herbarium specimens and protologues of species closely related to the three Zamboanga *Begonia* species in *Begonia* section *Petermannia* were investigated and scrutinized. Conservation assessments of the three Zamboanga species were assessed using the International Union for Conservation of Nature (IUCN) criteria (IUCN Standards and Petitions Subcommittee, 2019).

TAXONOMIC TREATMENT

Begonia beringii Mazo, Salatan & Rubite, ***sp. nov.***
§ *Petermannia*; **Fig. 2**

***Type*:** PHILIPPINES. Mindanao, Zamboanga City, Brgy. Upper La Paz, Km 16, Western Mindanao State University-Experimental Forest Area, elevation 934 m elevation, 7°3′22.34″N, 122°0′43.98″E, 10 December 2021, *K.R.F. Mazo 71;* (Holotype PNH [PNH 25603]; Isotype CMUH).

Diagnosis: A species similar to *Begonia bangsamoro* in having persistent stipules, lacerated lamina, cordate leaf base, 4-tepaled staminate flowers, and minutely hirsute ovary with 3 subequal wings. However, it differs in having strigose (vs. pilose) stems, lanceolate (vs. ovate) stipules, pinnately-veined (vs. basally palmate) leaves, axillary (vs. terminal) inflorescences, and larger capsules (7–10 × 14–16 mm vs. 6–7 × 5 mm). A comparison between *B. beringii* and *B. bangsamoro* is presented in Table 1.

Description: Herb monoecious, perennial, terrestrial, up to 45 cm tall. **Stem** unbranched, erect and arching, 3–4 mm in diameter, maroon, strigose, internodes 1.5–5.0 cm long. **Stipule** persistent, green, lanceolate, 5–7 × 2–3 mm, sparsely pilose adaxially, glabrous abaxially, margin ciliate, apex cuspidate. **Leaves** alternate; **petiole** terete, 4–10 × 1.5–2.0 mm, maroon, sparsely strigose; **lamina** asymmetric, basifixed, lanceolate, 5–12 × 1–3 cm, base cordate, inequilateral, margin lacerated, serrate to double serrate, apex acuminate; adaxially green, minutely echinate between veins, sometimes with white spots coloration, abaxially pale green, reddish-brown along the edge, minutely scabrid; secondary veins 5–7 pairs. **Inflorescence** axillary, few-flowered, 1(–2). **Staminate flower** bracteoles persistent, lanceolate, 4–5 × 1.0–1.5 mm, red, sparsely puberulent, margin ciliate, apex acuminate; pedicel 4.5–7.0 mm long, white, sparsely puberulous; tepals 4, white; outer tepals broadly ovate to suborbicular, 10–11 × 6.5–7.5 mm, adaxially glabrous, abaxially sparsely puberulent, apex rounded; inner tepals linear to oblanceolate, 6.0–6.5 × 2.0–2.5 mm, glabrous on both surfaces, apex acute; **androecium** actinomorphic, stamens 25–30, filaments *ca.* 1 mm long, fused at base; anthers obovoid, 2–3 mm, apex retuse. **Pistillate flower** bracteoles persistent, lanceolate, 4.5–5.0 × 1.0–1.2 mm, red, puberulent, margin ciliate, apex acuminate; pedicel 4.5–5.0 mm long, white, sparsely puberulent; tepals 5, pinkish, glabrous on both surfaces; outer tepals elliptic to obovate, 9–10 × 5.0–6.5 mm, apex rounded; inner tepals oblong to oblanceolate, 9.5–11.0 × 3.0–5.5, apex rounded, apex rounded; **styles** 3, yellow, apically bifid, 3.0–3.5 mm long, stigma in spiral band and papillose all around; **ovary** trigonous-elliptic, pale green, 8.0–8.5 × 5.0–5.5 mm (wings excluded), short hirsute; wings 3(–4), subequal, pale green, pinkish on the edge, distally truncate, 6–9 mm long, 3.5–6.5 mm wide; locules 3, placenta bilamellate. **Capsule** trigonous-elliptic, 7–10 × 14–16 mm (wings included); pedicel 5.0–5.5 mm long; wings 3, subequal, truncate distally, acute proximally, 7.5–8.0 mm long, 6.5–8.0 mm wide.

Etymology: This species is named after Mr. Severino Salcedo, also known as *manong* or *papang Bering*, who has made a remarkable contribution as a farmworker of the then Forest Research Institute-Bureau of Forest Development (FORI-BFD) and as a forest guard of the Western Mindanao State University Experimental Forest Area until his retirement in 2018. Mr Salcedo has a good understanding in plant taxonomy, especially in identification of native and endemic species, including some of the introduced plants. In addition, he also mentored some of the students and faculty members as well while at attached to the university.

Phenology: Flowers and fruits were observed in December.

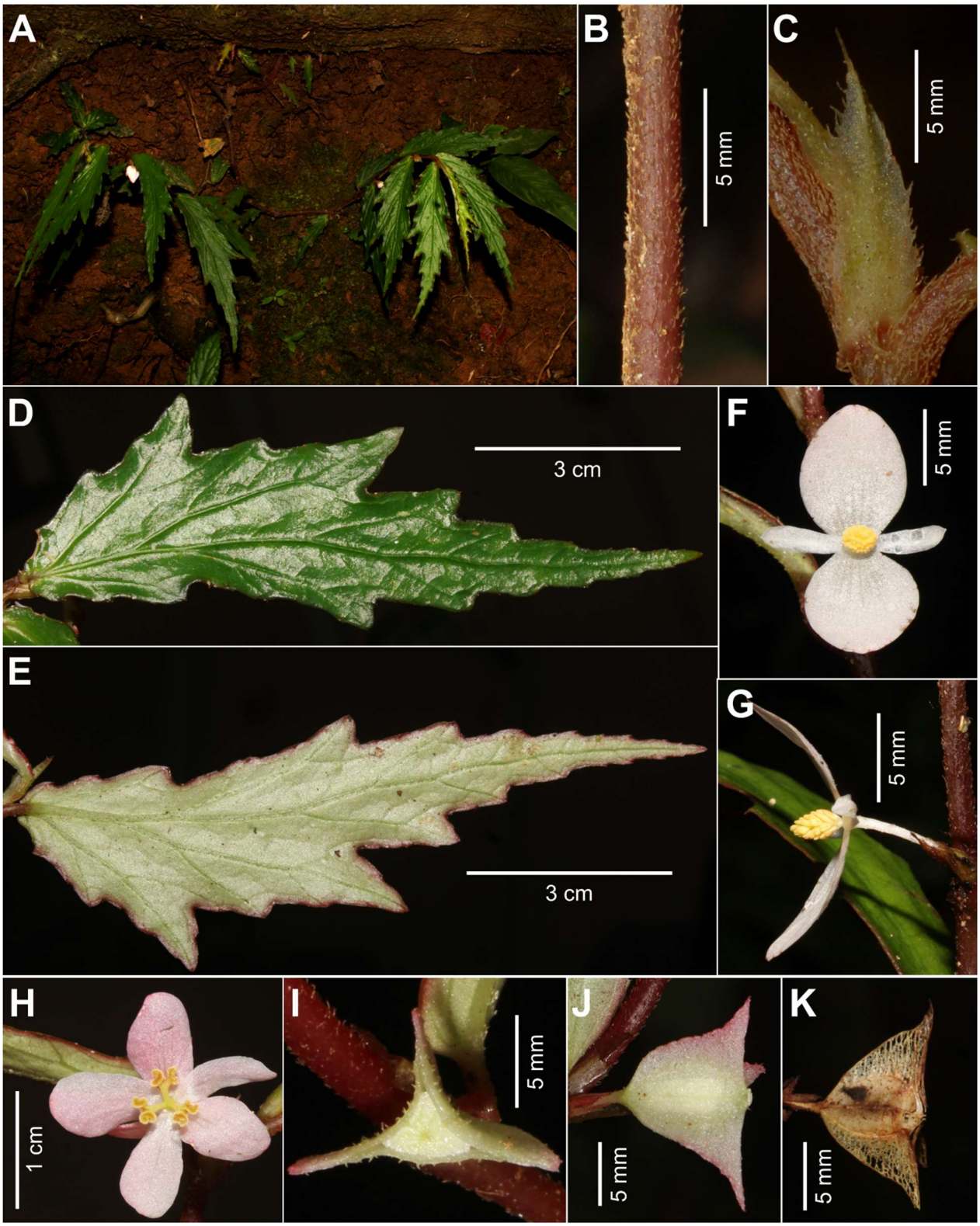

Fig. 2. ***Begonia beringii*** Mazo, Salatan & Rubite. **A.** Habit and habitat; **B.** Stem; **C.** Stipule; **D.** Leaf adaxial surface; **E.** Leaf abaxial surface; **F.** Staminate flower, front view; **G.** Staminate flower, side view; **H.** Pistillate flower, front view; **I.** Cross-section of the ovary; **J.** Side view of the ovary; **K.** Capsule. All from *K.R.F. Mazo 71*. Photographs: K. R. F. Mazo.

Distribution and habitat: *Begonia beringii* is so far recorded in WMSU Experimental Forest Area, Upper La Paz, Zamboanga City (Fig. 1). This species grows in a shaded environment near water bodies at 600–900 m elevation. *Begonia beringii* is also likely to occur in adjacent areas like the east of the Pasonanca Natural Park and in the remaining forest of barangay Patalon and Talisayan (San Ramon), in the northwest of the Zamboanga City.

Proposed conservation status: *Begonia beringii* is currently known from single locality with about 100 populations each with about 3–10 individuals were observed. The experimental forest of WMSU situated in Upper La Paz, Zamboanga City is managed by the College of Forestry and Environmental Studies. Some areas are part of the buffer zone of Pasonanca Natural Park. However, the distribution range and exact number of population/individuals of this species is yet to be determined. Following IUCN Red List Guidelines (IUCN Standards and Petitions Subcommittee, 2019) therefore, we provisionally classified *B. beringii* as Data Deficient (DD).

Notes: One of the important diagnostic characters of *Begonia beringii* is axillary inflorescences with 4-tepaled staminate flowers. Although these features was also recorded for some species of *Begonia* from Zamboanga which are: *B. amamampang*, *B. elatostematoides*, *B. mindanaensis* and *B. parvilimba*, *B. beringii* is distinct in having lanceolate and lacerated lamina. In addition, *B. beringii* also resembles *B. lacera* and *B. lancifolia* that occur in the nearby island of Basilan based on their lanceolate and lacerated leaves. However, it differs from *B. lacera* and *B. lancifolia* in having strigose (vs. glabrous) stems, axillary (vs. terminal) inflorescences, and 4-tepaled staminate flowers (vs. 2-tepaled).

Other specimens examined: ***Begonia amamampang*** Mazo & Rubite. Philippines, Mindanao, Zamboanga del Norte Province, Municipality of Leon B. Postigo, Brgy. Tinuyop, 28 October 2021, *K.R.F. Mazo 55* (PNH 258596); Philippines, Mindanao, Zamboanga del Norte Province, Municipality of Leon B. Postigo, Brgy. Tinuyop, near sitio Tiwalos, 12 November 2021, *K.R.F. Mazo 59* (PNH 258598); ***Begonia elatostematoides*** Merr. Philippines, Mindanao, Zamboanga, Sax River Mountains, November 1911, *E.D.Merrill 8232* (PNH 112705); Philippines, Mindanao, Zamboanga City, barangay La Paz (Upper), Km 16, WMSU Experimental Forest Area, 10 December 2021, *K.R.F. Mazo 68* (PNH 258602; CMUH); ***Begonia lacera*** Merr. Philippines, Mindanao, Basilan Island, Cumalarang River, August/September 1912, *J. Reillo 16161* (B); ***Begonia lancifolia*** Merr. Philippines, Mindanao, Basilan Island, Cumalarang River, August/September 1912, *J. Reillo 16162* (B); ***Begonia mindanaensis*** Warb. Philippines, Mindanao, Zamboanga, Malangas October 1919, *M.Ramos & G.Edano 37246* (L); ***Begonia parvilimba*** Merr. Philippines, Mindanao, Zamboanga, Malangas October 1919, *M.Ramos & G.Edano 36936* (PNH112889); Philippines, Mindanao, Zamboanga del Norte, Leon B. Postigo, Brgy. Tinuyop, Ekam River, February 2021, *K.R.F. Mazo 9* (CMUH).

Begonia gampura Mazo & Rubite, ***sp. nov.***
§ *Petermannia*; **Figs. 3 & 4B**

Type: Philippines, Mindanao, Zamboanga del Norte Province, Leon B. Postigo, Barangay Tinuyop, Molina river, 8° 2'59.65" N, 122°56'9.85"E, 590 m elevation, 21 November 2021, *K.R.F. Mazo 60*; (Holotype: PNH [PNH 258599]; Isotype: CMUH).

Diagnosis: *Begonia gampura* is most similar to *B. affinis* in having an erect caulescent stem habit, terminal cymose inflorescences, 4-tepaled staminate flowers and capsules with three equal wings. However, *Begonia gampura* differs in having a scabrid stem (vs. densely setose), sparsely scabrid stipules with aristate and sparsely pilose apices (vs. glabrous, apex long acuminate, ciliate), sparsely pilose peduncle (vs. sparsely setose), and larger (20–26 × 22–27 mm) capsules (vs 17 × 5–6 mm). A detailed comparison of morphological characters is provided in Table 2.

Description: Herb monoecious, perennial, terrestrial. **Stem** branched, erect, up to 60 cm tall, 2.5–3.5 mm in diameter, greenish to reddish-brown, scabrid on young stems, internodes 2.4–7.8 cm long, nodes rooting on the lower portion. **Stipule** caducous, greenish or reddish-brown, ovate to triangular, 8.0–11.5 × 2.0–3.5 mm, sparsely scabrid adaxially, glabrous abaxially, margin entire, the aristate apex, sparsely pilose. **Leaves** alternate; **petiole** terete, 7–15 × 1.5–3.0 mm, reddish-brown, pilose to puberolous; **lamina** oblong-elliptic to obovate, asymmetric, basifixed, 7–12 × 2.3–4.5 cm, base obliquely cordate, the lobes rounded, margin irregularly serrate, ciliate, apex acuminate; adaxially surface glossy, olivaceous, glabrous; abaxially reddish maroon, glabrescent, except the sparsely strigose veins; venation palmate-pinnate, 6–8 major lateral veins, branching dichotomously. **Inflorescence** terminal, bisexual; panicle 3.5–4.5 cm long, peduncle reddish-green, sparsely pilose, 1.3–2.0 cm long; pistillate flower 1(–2), arising from the base of inflorescence, staminate flower distal, on cymes branching up to 3–5 times; protogynous. **Bracts** persistent, in pair, lanceolate, 5–7 × 1.5–2.0 mm, becoming smaller towards the apex of the inflorescence, reddish-green to red, glabrous on both surfaces, margin entire, apex cuspidate (up to 1.5 mm). **Staminate flower** pedicel 1.5–3.0 mm long, reddish-white, sparse minutely scabrid to glabrous; tepals 4, glabrous on both sides, deep pink; outer tepals broadly ovate, 6.0–6.5 × 5.3–5.6 mm, apex obtuse; inner tepals oblanceolate to narrowly obovate, 4.0–4.5 × 2.0–2.2 mm, apex acute; **androecium** actinomorphic, stamens 22–26, yellow; filaments 0.3–0.5 mm long, fused at base; anthers 1.0–1.5 mm long, obovoid, apex retuse. **Pistillate flower** pedicel 1.0–1.5 cm long, maroon, puberulent; tepals 5(–7), glabrous, pinkish; outer tepals 3 or 4, lanceolate to oblanceolate, 10–11 × 4.5–5.5 mm, apex obtuse; inner tepals 2 or 3 lanceolate or oblanceolate, 12–13 × 5.0–8.5 mm, apex rounded or obtuse; **styles** 3, golden yellow, apically bifid, 4–5 mm long, stigmas in spiral band and papillose all around. **Ovary** trigonous-ellipsoid, green, 12–14 × 4.0–5.5 mm (wings excluded), glabrous, wings 3 (sometimes 4); wings equal, brownish-green, obtuse distally, 12.5–

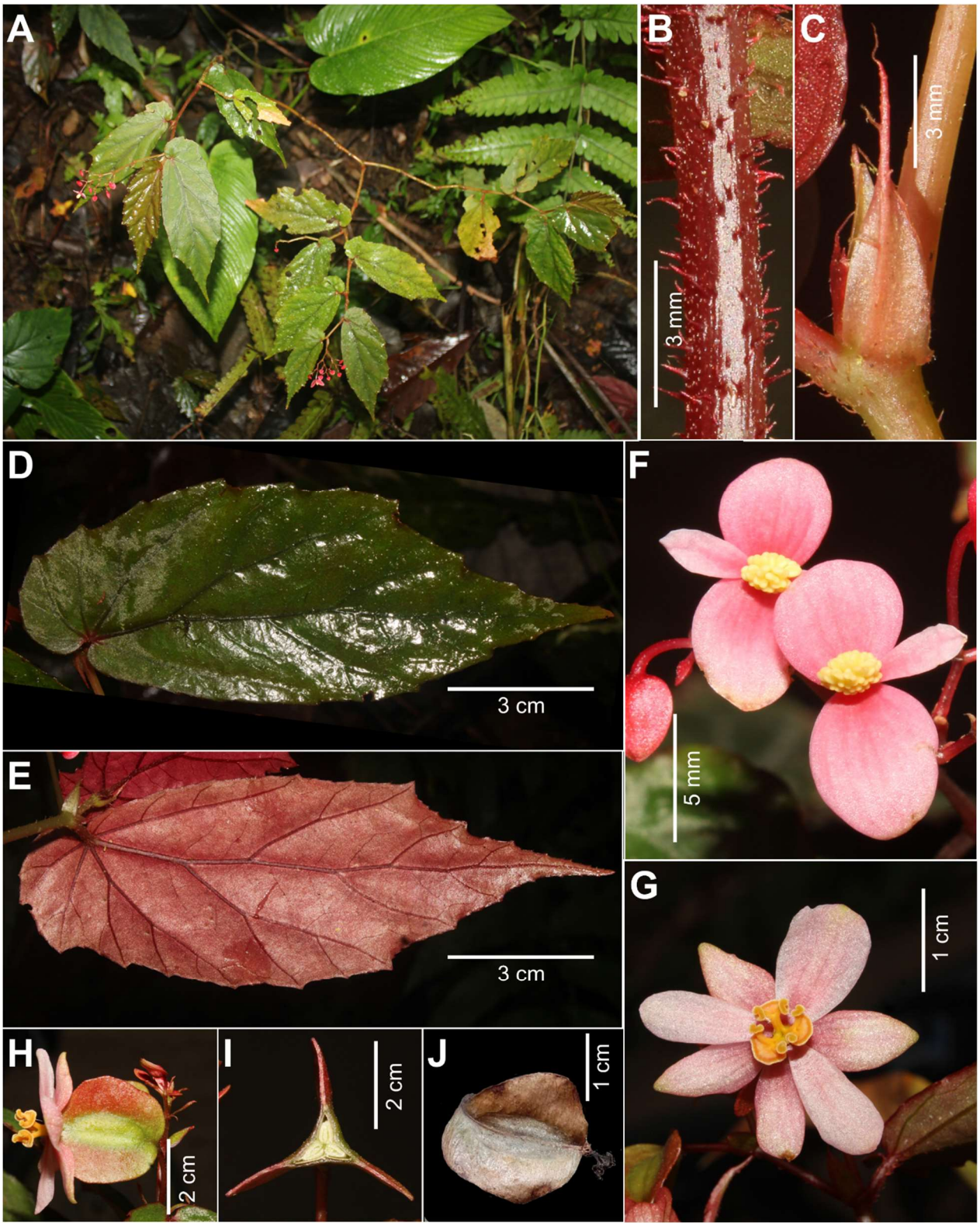

Fig. 3. ***Begonia gampura*** Mazo & Rubite. **A.** Habit and habitat; **B.** Stem; **C.** Stipule and portion of the petiole; **D.** Leaf adaxial surface; **E.** Leaf abaxial surface; **F.** Staminate flower, front view; **G.** Pistillate flower, front view; **H.** Pistillate flower showing the ovary; **I.** Cross-section of the ovary; **J.** Capsule. All from *K.R.F. Mazo 60*. Photographs: K. R. F. Mazo.

Table 2. Morphological comparison between ***Begonia affinis***, ***B. gampura*** and ***B. oblongata***.

Characters	*Begonia affinis*	*Begonia gampura*	*Begonia oblongata*
Stem	densely setose	scabrid	glabrous
Stipules	persistent, triangular, 6–7 × 3.0–3.5 mm, glabrous, apex long acuminate, ciliate	caducous, ovate to triangular, 8.0–11.5 × 2.0–3.5, sparsely scabrid, apex aristate, sparsely pilose	caducous, broadly ovate, 9–10 × 3.5–4.0 mm, glabrous, apex mucronate
Petiole	4–8 mm long, densely setose	7–15 mm long, pilose to puberulous	5–12 mm long, glabrous
Lamina	oblong-obovate to obovate-oblanceolate, 9–14 × 4.5–5.0 cm, base laterally cordate, margin distantly, irregularly dentate, apex caudate, glabrous adaxially, sparsely pubescent abaxially, venation pinnate, 3–5 major lateral veins	oblong-elliptic to obovate, 7–12 × 2.3–4.5 cm, base obliquely cordate, margin irregularly serrate, ciliate, apex acuminate, glabrous adaxially, glabrescent abaxially, except the sparsely strigose veins, venation palmate-pinnate, 6–8 major lateral veins	oblong to lanceolate, 8–19 × 1.2–5.5 cm, base asymmetrically cordate, margin irregularly, distantly dentate, apex long acuminate to subcaudate, glabrous on both sides, venation palmate-pinnate, 5–6 major lateral veins
Peduncle	1.5–2.0 cm long, sparsely setose	1.3–1.8 cm long, sparsely pilose	1.0–2.5 cm long, glabrous
Bracts	persistent, narrowly ovate to lanceolate, glabrous, 3.5–5.0 × 1.0 mm, glabrous, apex acuminate, ciliate	persistent, lanceolate, 5.3–7 × 1.5–1.8 mm, glabrous, apex cuspidate	caducous*
Staminate flower	pedicel glabrous; tepals 4, glabrous, pale pink	pedicel sparse minutely scabrid; tepals 4, deep pink to red	pedicel glabrous; tepals 2, deep pink to red
Ovary	10–13 × 2.5–3.5 mm, sparsely echinate	12–14 × 4.0–5.5 mm, glabrous	10–16 × 5.0–7.0 mm, glabrous
Capsule	turbinate, 17 × 5–6 mm; wing 3, equal	trigonous-ellipsoid, 20–26 × 22–27 mm, wing 3, equal	trigonous-ellipsoid, 14–20 x 13–19 mm, wing 3, equal

**Not observed*

Fig. 4. Inflorescences showing staminate flowers. **A. *Begonia affinis***; **B. *B. gampura***; **C. *B. oblongata***. Photographs: K.R.F. Mazo.

16.0 × 5–7 mm; locules 3, placenta bilamellate. **Capsule** trigonous-ellipsoid, recurved, 2.0–2.6 × 2.2–2.7 cm (wings included); pedicel 1.0–1.7 cm long; wings 3, equal, truncate distally, rounded proximally, 23–27 mm long, 9–11 mm wide.

Etymology: The species epithet 'gampura' is derived from the Subanen language which means reddish-maroon, reflecting the color of the abaxial surface of the leaves. The epithet is applied here as a noun in apposition.

Phenology: Flowers and fruits were observed between November and December.

Distribution and habitat: *Begonia gampura* is only known from the type locality in barangay Tinuyop, Leon B. Postigo, Zamboanga del Norte (Fig. 1). It was observed growing on soils under a semi-open environment in a lowland tropical secondary forest, at an elevation of 590 m.

Proposed conservation status: *Begonia gampura* is known only from the type locality with two populations, each with about one or two mature individuals. After 16 months of fieldwork with up to six times per month, we failed to locate any additional populations at the type locality. The area is not currently protected under the country's National Integrated Protected Areas System by the Department of Environment and Natural Resources. Given the ongoing threats such as shifting cultivation and small-scale gold mining, the single area of occurrence and the small number of <50 mature individuals, we provisionally classified *B. gampura* as Critically Endangered CR D (IUCN Standards and Petitions Subcommittee, 2019).

Notes: *Begonia gampura* and *B. affinis* both have 4-tepaled staminate flowers (Fig. 4A, B). However, *Begonia gampura* can be distinguished from *B. affinis* in having

scabrid (vs. densely setose) stems, caducous and sparsely scabrid (vs. persistent and glabrous) stipules, glabrous (vs. sparsely echinate) ovaries, and trigonous-elliptic (vs. turbinate) capsules. This new species also similar to *B. oblongata* but differs in having a scabrid (vs. glabrous) stem, sparsely scabrid (vs. glabrous) stipules with sparsely pilose, aristate (vs. mucronate, glabrous) apex, 4-tepaled (vs. 2-tepaled; Fig. 4C) staminate inflorescences (Fig. 4B), and persistent (vs. caducous) bracts.

Other specimens examined: ***Begonia affinis*** Merr. Philippines, Mindanao, Zamboanga, Sax River Mountains, November 1911, *E.D.Merrill 8251*(PNH 112543); Philippines, Mindanao, Zamboanga del Norte, Leon B. Postigo, Brgy. Tinuyop, February 2021, *KRM 0002* (CMUH); ***Begonia oblongata*** Merr. Philippines, Mindanao, Zamboanga, December 1911, *E.D.Merrill 8166* (PNH 112871); Philippines, Mindanao, Zamboanga del Norte, Leon B. Postigo, Brgy. Tinuyop, February 2021, *KRM 0001* (CMUH).

Begonia elatostematoides Merr., in Philip. J. Sci. 7:309 (1912); § *Petermannia*; **Fig. 5**

***Type*:** Philippines, Mindanao, Zamboanga, Sax River Mountains, November 1911, *E.D.Merrill 8232* (lectotype US, here designated; isolectotype PNH 112705).

Description: Herb monoecious, perennial, terrestrial, up to 40 cm tall. **Stem** unbranched, erect, 3–6 mm in diameter, green, tomentose, internodes 2–6 cm long. **Stipule** persistent, green, lanceolate, 10–13 × 4–5 mm, pilose, margin ciliate, apex aristate. **Leaves** alternate; **petiole** terete, 1–6 × 1–2 mm, green, tomentose; **lamina** asymmetric, oblong-obovate, 5–9 × 1–4 cm, base cordate, inequilateral, margin entire, ciliate, apex acuminate, blunt; adaxially green, sparsely minutely echinate, reddish when young, abaxially pale green, densely strigose on the nerves, surface echinate; secondary veins 5–7 pairs. **Inflorescence** axillary, few-flowered, 1(–3). **Staminate flower** bracteoles persistent, lanceolate, 3–7 × 1–2 mm, green, sparsely pilose, margin ciliate, apex acuminate; pedicel 5.0–8.5 mm long, white, sparsely puberulous; tepals 4, white; outer tepals broadly ovate to orbicular, 4.0–5.5 × 5–6 mm, glabrous on both surface, apex rounded; inner tepals oblong, 4–6 × 1.5–2.0 mm, glabrous on both sides, apex acute; **androecium** actinomorphic, stamens 15–20, filaments *ca.* 1 mm long, fused at base; anthers obovoid, 2–3 mm, apex retuse. **Pistillate flower** bracteoles persistent, lanceolate, 3.0–4.5 × 1.5–2.0 mm, green, sparsely pilose, margin ciliate, apex acuminate; pedicel 2.0–2.5 mm long, white, sparsely puberulent; tepals 5, white; outer tepals oblong-obovate, 11.0–13.5 × 5–6 mm, apex acute or obtuse, glabrous on both surfaces; inner tepals oblanceolate, 11.0–13.5 × 3–5, apex acute to obtuse, glabrous on both surfaces; **style**s 3, yellow, apically bifid, 3–4 mm long, stigma in spiral band and papillose all around; **ovary** sub-rhomboid-obovate, red, 5.5–6. 0–4.5 mm (wings excluded), echinate; wings 3, equal, red, distally truncate, 6–7 mm long, 2.0–2.5 mm wide; locules 3, placenta bilamellate. **Capsule** sub-rhomboid-obovate, 6.0–6.5 × 7.0–7.5 mm (wings included), echinate; pedicel 2.5–3.0 mm long; wings 3, equal, truncate distally, rounded proximally, 5.0–5.5 mm long, 2.0–2.5 mm wide.

Phenology: Flowers and fruits were observed between April and December.

Distribution and ecology: *Begonia elatostematoides* is endemic to the Zamboanga Peninsula and known only from the Zamboanga City (Fig. 1). The species was observed growing on soils or rocks in a shaded or semi-shaded environment in tropical lowland forest, at an elevation of 600–1000 m.

Proposed conservation status: *Begonia elatostematoides* is known only from around the Zamboanga City, thus a restricted occupancy. During a fieldwork conducted in 2020, about 10 populations were discovered. Each of these populations were observed to have about 5–20 individuals. In December 2021, about 60 populations were found, indicating that populations of *B. elatostematoides* are growing. However, the area is not yet properly botanized, therefore, we provisionally classified *B. elatostematoides* as Data Deficient (DD) following IUCN Red List Guidelines (IUCN Standards and Petitions Subcommittee, 2019).

Notes: *Begonia elatostematoides* was first collected in 1911 by Merrill from the type locality in Sax River, San Ramon, Zamboanga del Sur (now Zamboanga City). Merrill (1912) noted that *B. elatostematoides* is similar to *B. ciliifera* Merr. but differs in its smaller habit size (20–40 cm) and smaller leaves (5–9 × 1–4 cm vs. 6–11 × 2–4 cm) that are nearly glabrous adaxially, and entire (vs. distantly serrate) leaves. We are confident that the specimen collected in the type locality in Zamboanga City represents *B. elatostematoides* as it matches well with the type specimen in having tomentose stem and petioles, sparsely minutely echinate or nearly glabrous oblong-obovate leaves, and sub-rhomboid-obovate capsules.

Specimens examined: ***Begonia elatostematoides*** Merr. Philippines, Mindanao, Zamboanga City, barangay La Paz (Upper), Km 16, WMSU Experimental Forest Area, 760 m. elevation, 7°5'46.67"N, 122°0'36.36"E, 10 December 2021, *K.R.F. Mazo 68* (PNH 258602; CMUH); Mindanao: Zamboanga, Sax River Mountains, November 1911, *E.D.Merrill 8232*.

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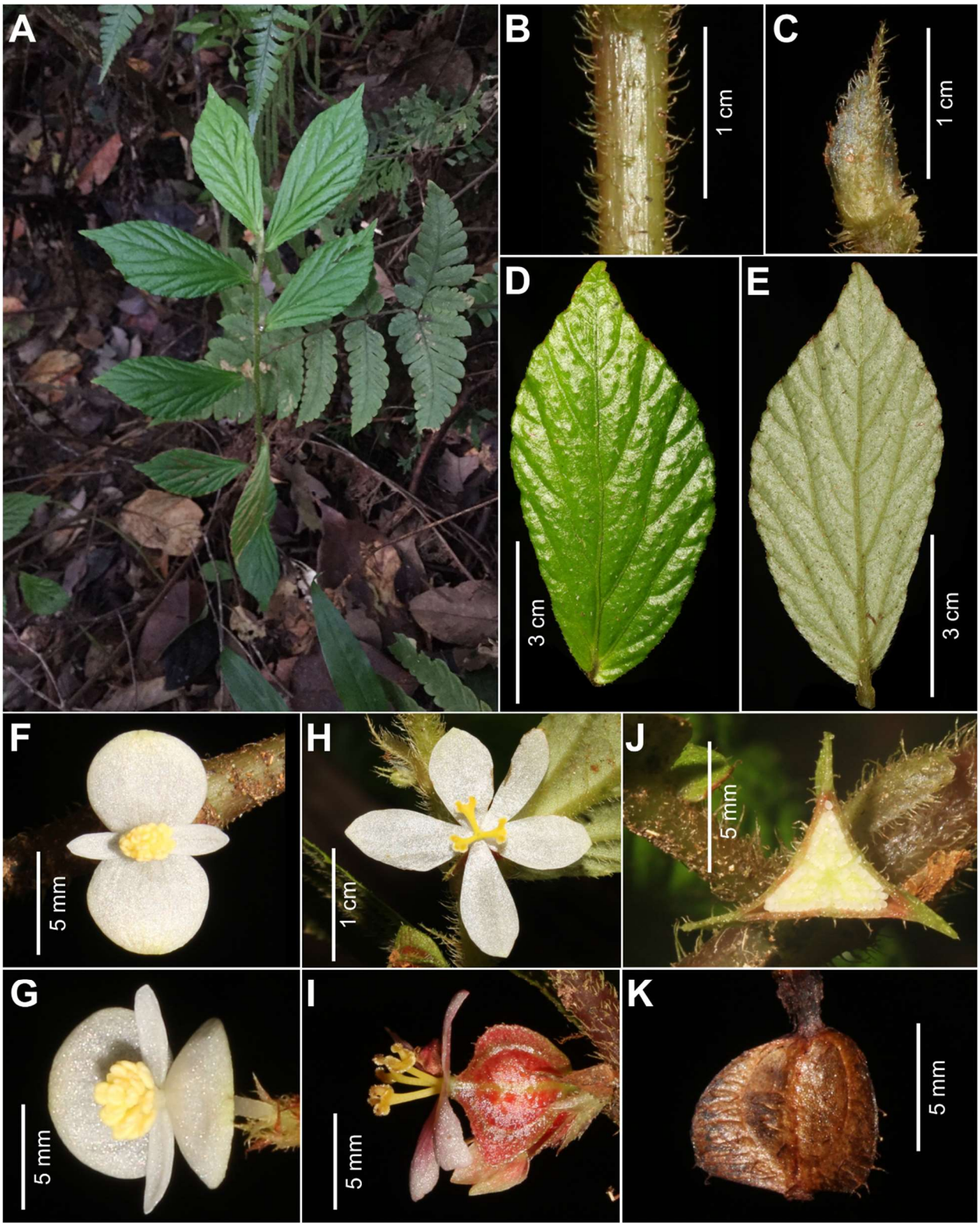

Fig. 5. ***Begonia elatostematoides*** Merr. **A.** Habit and habitat; **B.** Stem; **C.** Stipule; **D.** Leaf adaxial surface; **E.** Leaf abaxial surface; **F.** Staminate flower, front view; **G.** Staminate flower, side view; **H.** Pistillate flower, front view; **I.** Pistillate flower showing the ovary; **J.** Cross-section of the ovary; **K.** Capsule. All from *K.R.F. Mazo 68*. Photographs: K. R. F. Mazo.

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