

Impatiens hirsutisepala (Balsaminaceae),
A NEW RECORD FOR THE FLORA OF VIETNAM

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ABSTRACT

Species of *Impatiens hirsutisepala* new distribution central Vietnam, the new record species shows similarities with *I. hirsutisepala* shows similarities with *Impatiens marianae* in its creeping densely pilose stem, petiole, lamina, densely pubescent inflorescence axis, lateral sepals, lower sepal, curved spur, dorsal petal (cucullate) and ovary, but differs from the latter in having orange-red flowers, pale reddish orbicular lateral sepals, navicular lower sepal with abruptly constricted spur and dorsal petal with blunt horn. A detailed description along with colour photographs, and similarities with allied species are illustrated in detail are provided.

Keywords: Balsaminaceae, *Impatiens hirsutisepala*, new record species, central Vietnam.

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INTRODUCTION

Balsaminaceae are also well known as ornamental plants that can be propagated easily by seeds and cuttings. *Impatiens* Linnaeus (1753: 937) is one of the largest genera of angiosperms, comprising over one thousand recognized species (Bhaskar, 2012; Yu, 2012), distributed in the tropical and subtropical regions of the Old World as well as in the northern temperate regions (Mabberley, 2008). During the last ten years, researchers have paid much attention to this genus, especially in South-East Asia and have come across several articles.

Ho (1999) reported 34 *Impatiens* species from Vietnam, subsequently Ban (2003) also recorded 34 species, but he excluded *Impatiens attopeunsis* Hook.f. (1908: 29, t. 2853) and *Impatiens platisejala* Y.L. Chen

(1988: 6,7) for the former list. Later two species *Impatiens kamtilongensis* Toppin (1920: 356) (Chinh et al., 2015) and *Impatiens morsei* Hook. f. (1909: 2874) (Son et al., 2015) newly recorded for Vietnam. Presently, altogether 38 species are recorded in Vietnam excluding the proposed new species.

MATERIALS AND METHODS

During the floristic explorations in central Vietnam, the author noticed an unknown creeping *Impatiens* having densely pilose stems and orange-red flowers from Tay Giang district and Phong Dien district. Critical study with relevant literature (Ho, 1999; Ban 2003; Hooker, 1875, 1904–1906, 1908; Toppin, 1920; Yu, 2016), the unknown species shows affinities with an endemic Indian species *Impatiens marianae* Hooker (1905: 27) but shows significant differences (Table 1).

Table 1. Comparisons of *Impatiens hirsutisejala* and *Impatiens marianae*

Characters	<i>Impatiens hirsutisejala</i>	<i>Impatiens marianae</i>
Flowers	Orange-red with dark reddish nerves at throat	Purple to purplish-white with reddish nerves at throat
Lateral sepals	Orbicular, acute at apex, pale red	Ovate, acuminate at apex, white
Lower sepal	Navicular with abruptly constricted spur	Bucciniform with gradually constricted spur
Dorsal petal horn	Blunt	Acute
Distribution	Laos, Central Vietnam	Central Vietnam, Northeastern India

RESULTS

Taxonomic treatment

Impatiens hirsutisejala Tardieu 1944 In: Not. Syst., ed. Humbert, 11: 183 (Figs. 1 & 2). **Type:** Laos, Pokoon pro. Banoc 1200 malt, 19 September 1928, *Poilane N 15603*. **Holotype** (P00780714 digital image!). **Isotype** (P04543308 digital image!).

Annual decumbent herbs, 20–25 cm tall; stem terete, densely pilose, pinkish brown with white hairs, roots arising from the internodes, internodes 1.7–2.3 cm. Leaves alternate, petiolate; lamina 2.7–3 × 1.5–1.8 cm, broadly ovate to orbicular, apex obtuse rarely acute, base rounded to cuneate, pilose with white hairs on both surfaces, green to pale green or greenish pink above and pale pink beneath; lamina

margin crenate, crenation minutely apiculate; lateral nerves 6–8 on each side, prominent, pale pink; petiole 5–7 mm long, terete, pilose, pale green to pale pink. Inflorescence axillary, pedunculate, 2-flowered, flowers Orange-red with reddish patch on throat; bract 4–5 × c.0.5–mm, ovate-lanceolate, acuminate at apex, densely pubescent, pale pink; peduncle 1.8–2 cm long, densely pubescent, pale pink to pale green; pedicel 1.3–1.5 cm long, densely pubescent, pale pink to pale green; lateral sepal 2, 8–9 × 6–7 mm, orbicular, shortly keeled on back, acumen c.1 mm long, densely pubescent throughout, transparent, orange-red; dorsal petal 16–18 × 13–14 mm, cucullate, glabrous except densely pubescence along the blunt keeled dorsal surface, orange; lateral united petals 2.7–3 × 0.9–1.1 cm, 2-lobed, orange with reddish

patch on throat; basal lobe 8–10 × 7–11 mm, triangular obovate, apex obtuse, orange; distal lobe 16–17 × 8–11 mm, dolabriform-triangular, apically obtuse, orange; lower sepal 1.3–1.5 × 1.7–2 cm, navicular sepal with abruptly constricted spur, densely pubescent, orange-red apex aristate; spur 3.8–4.2 cm long, cylindrical, deeply curved, densely pubescent, orange-red

with pale greenish-brown aristate apex. Column *c.* 7 × *c.* 2 mm, straight, curved towards the apex; filament *c.* 5.5–6 × 2 mm, glabrous, white with pale pink towards the base; anther *c.* 2 × *c.* 2.5 mm, glabrous, yellow. Pistil 5.5–6 × *c.* 2 mm, pale green; ovary ellipsoid, pubescent, pale green. Capsule (half immature) 8–10 × *c.* 3 mm long, linear, pubescent, pale green.



Figure 1. Impatiens hirsutisepala, A & B. habit [Photos by L. H. Truong]

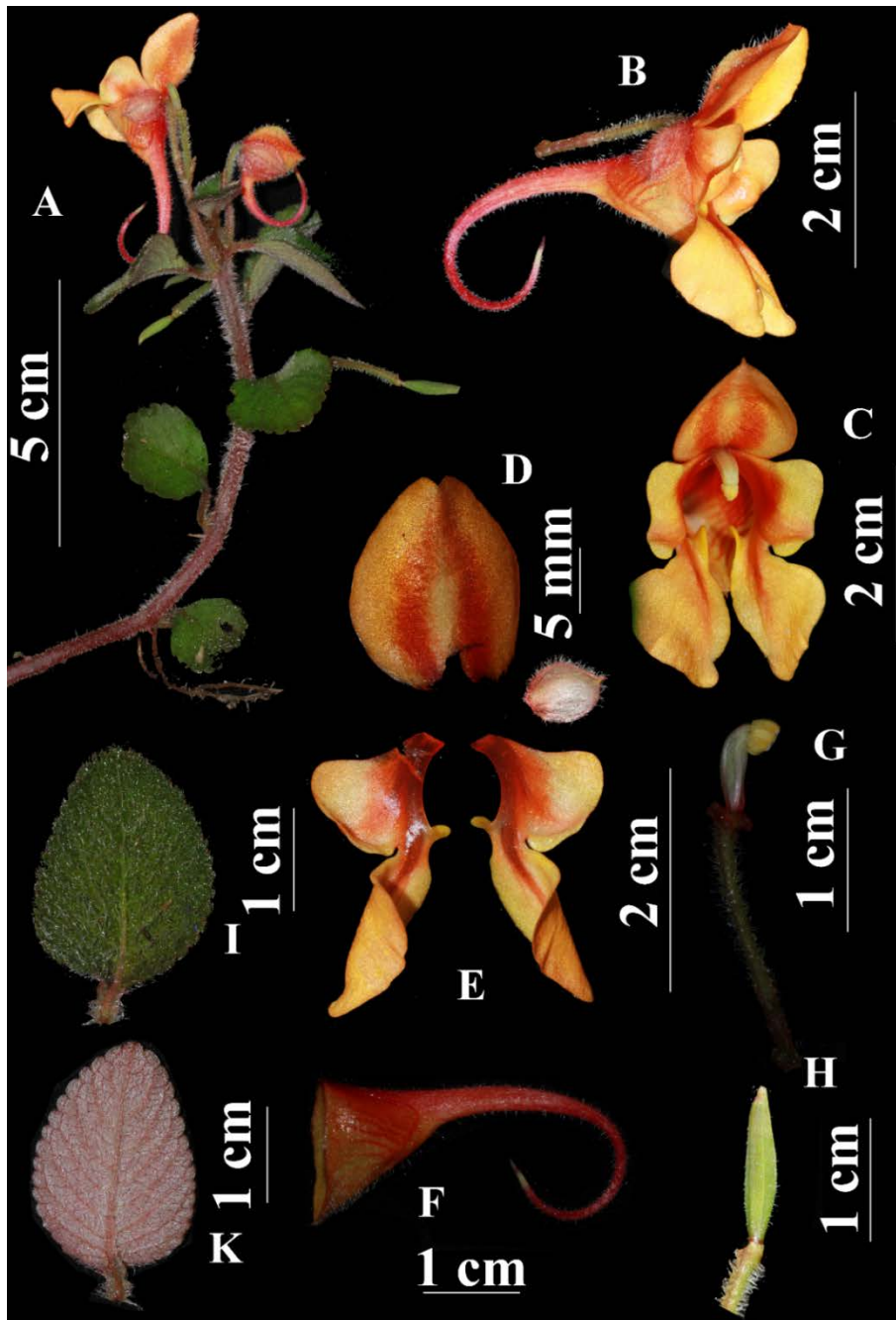


Figure 2. *Impatiens hirsutisepala*, A. Habit. B. Flower, lateral view. C. Flower, frontal view. D. Dorsal petal. E. Lateral united petals. F. Lower sepal with spur. G. Stamens with pedicels. H. Mature fruit. I. Leaf adaxial surfaces. K. Leaf abaxial surfaces
 [Photos by L. H. Truong and Design by V. S. Hareesh]

Etymology and habitat: This species is epiphytic or lithophytic in humid evergreen broad-leaved forests at elevations of 740–1,200 m.a.s.l. Flowering and fruiting, April to September.



Figure 3. Habit photographs of the *Impatiens marianae* [Photos by V. S. Hareesh]

Distribution: Vietnam: Hue City, Quang Nam province, and Laos.

Additional specimen examined: Hue City, Phong Dien, 16°04'30.8"N 107°29'17.0"E, 740–750 m a.s.l., 17 June 2024, V.T. Chinh, T.A. Le, CQL 336 (VNMN); Central Vietnam. Quang Nam province, Tay Giang district: 16°00'49.5"N 107°30'56.9"E, 790–800 m a.s.l., 24 March 2017, Tay Giang 96 (VNMN, CALI, VNMN); Laos, Pokoon pro. Banoc 1200 malt, 19 September 1928, Poilane N 15603 (P).

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