

A New Species of *Impatiens* (Balsaminaceae) from Mt. Kinabalu, Borneo

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Impatiens kinabaluensis S. Akiyama & H. Ohba (Balsaminaceae) is described and illustrated.

Key words: *Impatiens*, Kinabalu, new species, taxon.

Impatiens L. (Balsaminaceae) consists of 450 to 850 species distributed in tropical Africa, India and in the northern hemisphere with concentrations of species in tropical Africa, southeast Asia, and the Sino-Himalayan region (Grey-Wilson 1980, Cronquist 1981). During a collection trip to Mt. Kinabalu, Borneo in March 2004 a species of *Impatiens* was collected by two of the authors, Ikeda and Tsukaya. Akiyama and Ohba observed it in December 2004. The morphology generally resembles that of the southerly group (Grey-Wilson 1980), but the shape of petals is different from the known species. This is most similar to *I. platypetala* Lindl. described from Java, although the results of a chromosome count indicates that it is different from *I. platypetala* (Ikeda et al. 2005). After a comparison of characters with those of four species described from Borneo and with *I. platypetala* from Java, this is considered to be a new species, described here.

Impatiens kinabaluensis S. Akiyama & H. Ohba, sp. nov. [Figs. 1–3]

Ex *Impatienti platypetala* Lindl. javaensis et toto speciebus bornensibus dorso petalis obovati triangularibus apice bilobulatis et lobis basalibus petalorum unifornum laterali-um ovatis apice bilobulatis distincte majoribus quam illis distalibus eorum apicibus bilobulatis cum minus appendice bene differt.

Type: Malaysia. Sabah (Borneo Island). Kinabalu National Park, Mt. Kinabalu, Timponon Gate–Layang–Layang, near Pondok Timponon, alt. 1770 m, 6°03'N 116°33'E (H. Tsukaya, R. Imaichi, H. Nagamasu & H. Ikeda 0403201, 14 March 2004, TNS-holo, BORH-iso, TI-iso).

Plants 0.3–1.2 m tall, erect, branched near base; branches sometimes subpendulous up to 1.5 m long. Leaves aggregated in whorls at apical part, upper whorls consisting of 2–5 leaves; petiole 2–8 cm long; blade elliptic,

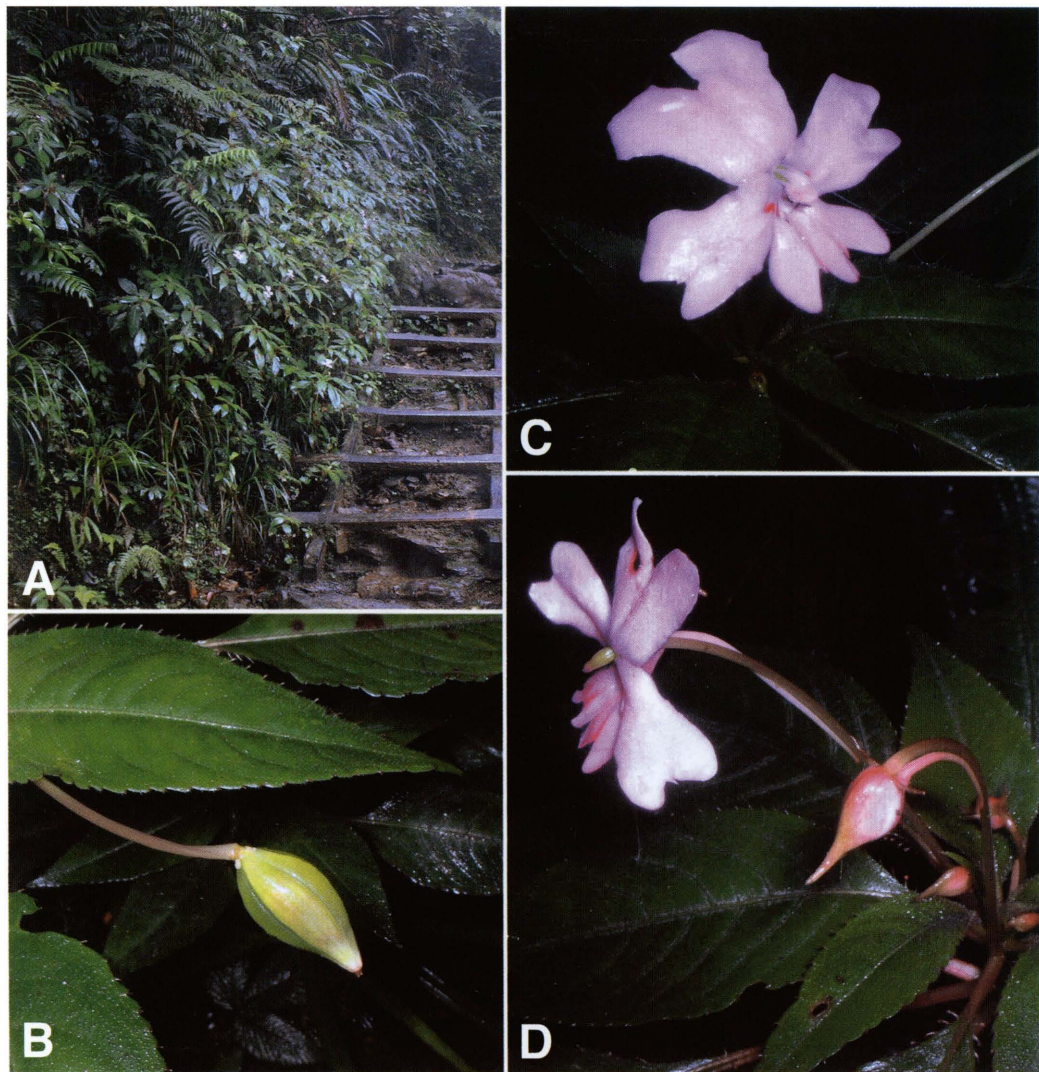


Fig. 1. *Impatiens kinabaluensis* S. Akiyama & H. Ohba (on 12 December 2004, Mt. Kinabalu). A: Habitat. B: Fruit. C and D: Flower (front view and lateral view).

6–12 cm long, 2–5 cm wide, apex acuminate, base cuneate, margins shallowly serrate, with glandular hairs basally, pubescent on both surfaces, lower surface with more dense hairs.

Flowers solitary at upper leaf axil, pedicellate. Pedicel 5–10 cm long, glabrous. Flowers pink, ca. 3 cm long. Lateral sepals 2,

ovate, ca. 3 mm long, apex acute. Lower sepal pink, navicular, constricted into a spur, ca. 1.2 cm long, 6 mm deep (excluding spur); spur 2–3 cm long in overall length, nearly straight, apex not coiled. Dorsal petal pink, flat, obovate-triangular, ca. 2 cm long, ca. 2 cm wide, apex bilobed, with a crest-like appendage ca. 4 mm high. Lateral united pet-

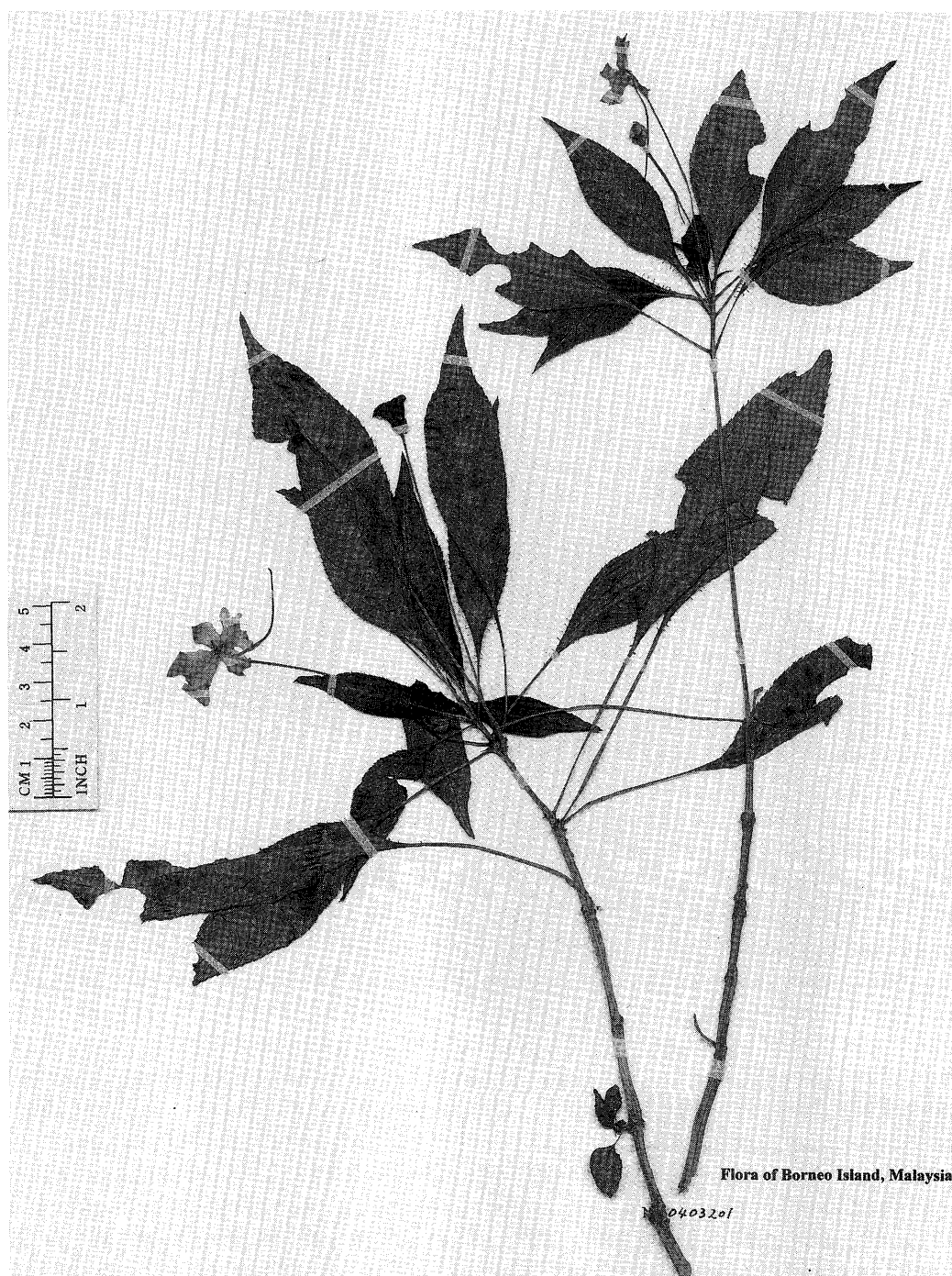


Fig. 2. Holotype of *Impatiens kinabaluensis* S. Akiyama & H. Ohba (H. Tsukaya, R. Imaichi, H. Nagamasu & H. Ikeda 043201, TNS).

als pink; the basal lobe ovate, ca. 1.8 cm long, ca. 1.1 cm wide, apex obliquely bilobed, red spotted with yellow centre near base; the distal lobe ovate, ca. 1.5 cm long, ca. 7 mm wide, apex bilobed with a tip, without ventral appendage. Stamens 5; filaments pink; anthers pink, without appendage. Ovary glabrous. Fruit fusiform, ca. 2 cm long, ca. 7 mm broad, glabrous.

On shady wet places in forests and slopes beside streams.

Other specimens examined. Malaysia. Sabah (Borneo Island). Mt. Kinabalu, Liwagu, alt. 1500 m (M. Togashi 6857, 22 Sept. 1966, KYO). Kinabalu National Park. Between Carson's Camp and Power Station, alt. 2700–1900 m (S. Kokawa & M. Hotta 3700, 10 Jan. 1969, KYO); Along Sng. W. Mesilau, alt. 1600–1800 m (S. Kokawa & M. Hotta 4374, 23 Jan. 1969, KYO); (S. Kokawa & M. Hotta 4385, 23

Jan. 1969, KYO); Along Sng. Mamut, near Poring, alt. 600–850 m (S. Kokawa & M. Hotta 4854, 3 Feb. 1969, KYO); Mamut Hill, south of Mamut Camp, alt. 1400–1650 m (S. Kokawa & M. Hotta 5339, 10 Feb. 1969, KYO).

We visited the National Herbarium of the Netherlands, University Leiden branch to examine specimens from Mt. Kinabalu including those cited by Beaman et al. (2001), but could not examine them because all the specimens collected in Mt. Kinabalu were on loan.

This species has been confused with *Impatiens platypetala* Lindl. in having solitary flat pink flowers and apically aggregated leaves (Masamune 1942, van Steenis 1949, Beaman et al. 2001). Certainly it is similar to *I. platypetala*, but differs from the latter and

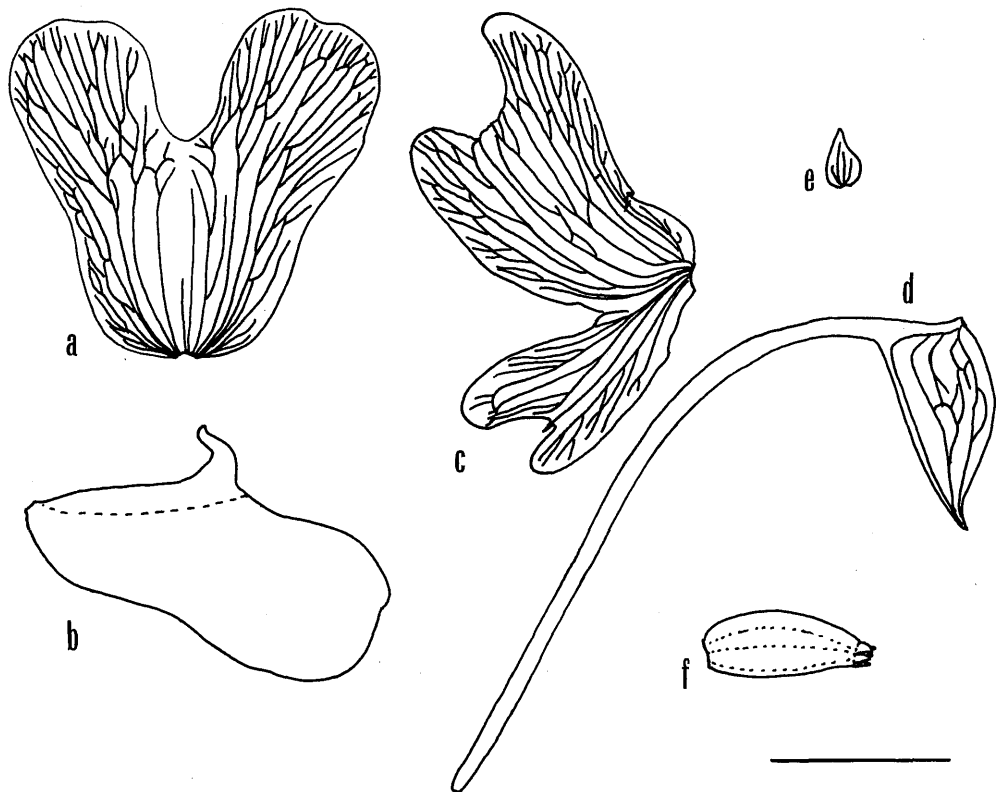


Fig. 3. *Impatiens kinabaluensis* S. Akiyama & H. Ohba. a: Dorsal petal. b: Dorsal petal (folded). c: Lateral united petals. d: Lower sepal. e: Lateral sepal. f: ovary. Bar indicates 1 cm for a–e and 2 cm for f.

other Bornean species, i. e., *I. borneensis* Miq., *I. hubertii* Hook. f., *I. orthosepala* Hook. f., and *I. winkleri* Hook. f., in having an obovate-triangular dorsal petal with bilobed apex, ovate basal lobe of the lateral united petals with obliquely bilobed apex distinctly larger than the distal lobe, and the ovate distal lobe with bilobed apex and a tip. *Impatiens borneensis* is distinct in the petal-like subobovate lateral sepals (Miquel 1870). *Impatiens hubertii* is characterized by the widely obcordate distal lobe of the lateral united petals twice as large as the basal one, *I. orthosepala* by the widely obcordate distal lobe of the lateral united petals three times larger than the basal one; and *I. winkleri* by the falcate obovate basal lobe of the lateral united petals and the distal one as long as the basal one (Hooker 1910).

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秋山 忍^a, 大場秀章^b, 池田 博^c, 塚谷裕一^d, M. マハメド^e: キナバル山 (ボルネオ) 産ツリフネソウ属 (ツリフネソウ科) の一新種

キナバル山 (マレーシア・サバ) で採集したツリフネソウ属の1種を記載した。本種 *Impatiens kinabaluensis* は、ピンク色の平開する花をもち、これまでマレーシア地域に広く分布し、種内変異の大きい *I. platypetala* Lindl. と混同されていた。例えば Beaman J. H. ら著「The Plants of Mount Kinabalu, vol. 4」にも *I. platypetala* Lindl. として掲載されている。本種は、先が2裂する倒卵状三角形の背軸側花弁 (旗弁)、基部裂片の方が大きい側花弁をもつことにより他の種から区別される。

and partly no. 1440517 (to H. Tsukaya).

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本種はキナバル山の中腹にはかなりの個体数がみられるが、ボルネオの他地域で採集された標本はみられなかった。本種はキナバル山の固有種と考えられる。

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