

BEGONIA SICCAAUDATA (BEGONIACEAE) A NEW SPECIES FROM SULAWESI

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SUMMARY

A new species *Begonia siccacaudata* is described. It belongs to the sect. *Petermannia* but is distinguished from other species by being stemless with a short fleshy rhizome. The female flowers are solitary, the male flowers are borne on a many-flowered thyrsoid inflorescence of a type not yet described within the genus. The epithet *siccacaudata* refers to the axes of the inflorescences which persist for a long time after dying off.

Key words: *Begonia* section *Petermannia*, Malesia, Sulawesi.

INTRODUCTION

During a touristic trip through Indonesia in 1993 J.J. Wieringa collected material of a *Begonia* on Sulawesi that could not be identified. It had the habit of a species of sect. *Diploclinium* but on closer inspection was found to belong to sect. *Petermannia*. The latter section comprises about 200 species (Doorenbos et al., 1998), although some of these may be synonymous, while on the other hand others undoubtedly still await discovery. As there exists no critical review of this section and many species are known only from one, often incomplete description, it might seem inappropriate to present yet another species. However, the fact that the plant shows one character that is probably new to sect. *Petermannia* and another that may be new to the whole genus *Begonia* clearly warrants its description as a new species.

TAXONOMIC NOTES

Of the 21 species of *Begonia* that have been described from Sulawesi, 17 belong to sect. *Petermannia* and 4 to sect. *Sphenanthera*. Notably absent are species of sect. *Diploclinium*, a section well represented in Borneo and particularly in the Philippines (Doorenbos et al., 1998). Initially it seemed as if *B. siccacaudata* filled this gap but the solitary, protogynous female flowers and the thyrsoid male inflorescence place it firmly in *Petermannia*. Species of the latter section characteristically are subshrubs with upright stems 25–200 cm high, although some have creeping stems, rooting at the nodes, ascendant or with upright laterals, and a few are lianescent. A stemless species of sect. *Petermannia* with a short rhizome has not yet been described, unless *B. holosericea* Teijsm. & Binn. from Ternate or *B. promethea* Ridl. from Borneo can be so regarded. For the present, however, the descriptions of these two species are too

vague to be certain of their precise habit. Photos of the type material reproduced by Smith et al. (1986) are inadequate to resolve this question.

Furthermore, the inclusion of these two species in sect. *Petermannia* remains in doubt. *Begonia siccacaudata* also differs from other species in this section in the form of the male inflorescence, although its composition follows the pattern characteristic for sect. *Petermannia* as described by Irmscher (1914). Closest to *B. siccacaudata* in this respect is *B. naumoniensis* Irmsch., but in that species the nodes of the main axis bear 2–4 peduncles instead of a single one, and no stipules. Moreover, the first lateral axes of the dichasium are not reduced and have bracts, which are not found in *B. siccacaudata*. Outside the sect. *Petermannia* species in which female and male flowers are borne in different parts of the plant are rare. Two examples come to mind. The Brazilian section *Trachelocarpus* comprises stemless plants with the female flowers solitary on the rhizome and the male flowers in umbellate cymes with strongly reduced axes. *Begonia longipetiolata* Gilg of the African section *Tetraphila* is similar in these respects. In both cases, however, the peduncles of the male cymes are implanted on the rhizome, not on a separate axis.

In 1898 S.H. Koorders collected a *Begonia* in Sulawesi of which he had a drawing made that was later included in a posthumous publication (Koorders, 1922). This drawing appears to depict leaves, male and female inflorescences all arising from a short rhizome. The caption reads “*Begonia* spec. nova (?) (affinis *Strachwitzia* (?) Warburg)”. *Begonia strachwitzii*, at that moment a nomen nudum, was validated by Irmscher (1913) from Warburg’s material, presumably the same specimen that Koorders saw. That he collected a similar plant is evident from the picture of the fruits. The habit, however, shows a very different species. In my opinion, two plants have been mixed up, presumably at Bogor, so that one cannot be sure that both were collected in Sulawesi. It remains possible that in addition to *B. siccacaudata* there exists another stemless *Begonia* of sect. *Petermannia*, perhaps even in Sulawesi.

DESCRIPTION

***Begonia siccacaudata* J. Door., spec. nov. — Fig. 1**

Herba parva, acaulis, rhizomate brevi crasso, species unica in sectione habitu tali. Inflorescentia mascula terminalis, thyrsioidea, folia vulgo absentia, stipulae praesentes et persistentes, pedunculos monochasia umbelliformes gerens, axibus lateralibus reductis, bracteis absentibus. Flos femineus solitarius in axis foliolorum rhizomati insidens. — Typus: *J.J. Wieringa 1902* (holo WAG), Indonesia, Sulawesi Selatan, c. 12 km ESE of Maros near Bantimurung Waterfalls, 5° 02' S, 119° 41' E, 60 m a.s.l. Paratypus: *J. van Veldhuizen s.n.*(WAG).

Stemless monoecious perennial herb. Rhizome tuberous, branched, branches up to 3 cm long and 1.1 cm thick, green at first, later light greyish brown, smooth but for a few remnants of stipules and petioles. *Leaves* glabrous. Stipules narrowly triangular or slightly ovate, rapidly shrivelling but not caducous, up to 5 mm long and 2–3 mm broad at the base, acute with a hair up to 2 mm long implanted adaxially just under the tip. Petioles up to 5 cm long, up to 2 mm thick when fresh, much thinner when dried. Leaf blade broadly ovate, usually asymmetrical, slightly fleshy when fresh but very thin and brittle when dried, upper side dark greyish green with rows of white spots

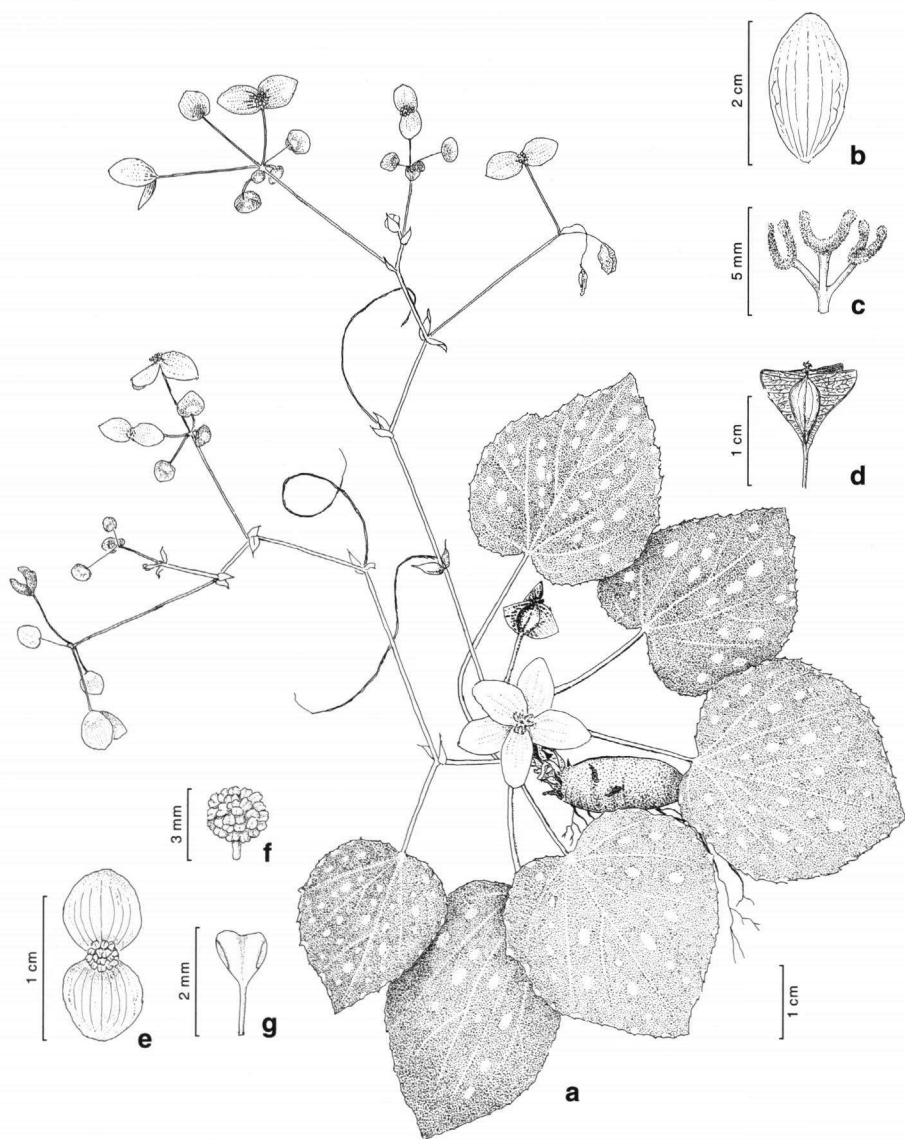


Fig. 1. *Begonia siccacaudata* J. Door. a. Habit, showing the distinctive dry, persistent peduncles; later, the main axis of the male inflorescence will dry out in a similar way; b. male flower; c. androecium; d. stamen; e. female tepal; f. styles; g. fruit. — Drawn after a living topotype.

along the edge and between the nerves, dark or light red beneath, up to 5–6 by 5 cm, slightly cordate, acute, edge entire or serrulate, fimbriate with minute hairs up to 1 mm long. *Male inflorescence* a glabrous thyse. Main axis more or less geniculate, internodes to 35 mm long, at each internode 2 stipules, like those on the rhizome but without or with only a minute hair, leaves nearly always absent, occasionally rudimentary, peduncles in the axils of the (absent) leaves, up to 45 mm long, bearing cymes

terminated by a pedicelled male flower flanked by two monochasia with almost completely reduced axes. *Male flowers* on pedicels 20–28 mm long, tepals 2, elliptic or oval, obtuse, 9–10 by 11–12 mm, entire, bright rose-pink. Androecium actinomorphic, stamina 20–40, filaments unequal, the longest ones in the centre, 0.5–1.5 by the length of the anthers, connective not visible between the pollen sacs and not produced. Pedicel, tepals and androecium are shed as a whole, the peduncle dries out but remains on the plant; eventually the main axis of the inflorescence including the stipules also dries out and persists on the plant, at least for some time (hence the specific epithet). *Female inflorescences* solitary on the rhizome, glabrous, peduncle (if present, it is covered by stipules and extremely short) apparently bearing one flower; pedicel initially short but elongating to up to 45 mm in the ripe fruit, 1 mm thick when fresh; bracteoles absent; tepals 5, 11–13 by 7–9 mm, oblong to lanceolate, entire, pale pink-rose. Styles 3, shortly united at base, bifid at half of their length, the branches united by a stigmatic band that spirals once around them. Ovary with 3 locules, placentae axillary, bilamellate with ovules on both surfaces. Fruit erect, glabrous, 8–10 mm long, greatest distance between the distal ends of the wings 11–12 mm, tepals and styles \pm caducous, wings 3, subequal, triangular, widest at or near the top. Dehiscence of fruit not yet known.

Distribution — Known only from the type locality.

Habitat — Forest. Plants found growing on a vertical wall at the entrance of a cave.

Note — The material Wieringa collected consists of herbarium specimens of fruiting plants. A few small plants were brought to Wageningen alive and planted in a greenhouse where in due course they started to flower. Male flowering was profuse but only 4 female flowers developed. These were pollinated. It seemed that some seed-set occurred but no seedlings grew. When it became clear that these efforts to obtain young plants had failed the old were in a poor condition and failed to produce more female flowers. Accordingly, although the female flowers had been described, all had been used for pollination and were not preserved. Thus the paratype consists only of male inflorescences. Failure to reproduce this plant was disappointing as its compact habit and profuse bright pink male flowers give it considerable ornamental value.

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