

A REVISION OF THE GENUS *KAJEWSKIELLA* (RUBIACEAE)

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SUMMARY

A full taxonomic treatment of *Kajewskiella* is given, including a key. A second species, *K. polyantha* is described as new. Systematic relationships, inflorescence morphology, and the nature of the zygomorphic flowers are discussed. A complete survey of this latter feature in the *Rubiaceae* is included. The genus is tentatively placed in the tribe *Condamineae*.

INTRODUCTION

Kajewskiella is a small and little-known genus from the Solomon Islands. The superficial appearance of the plant, especially the zygomorphic flowers, was the cause of its sometimes being pre-identified as a *Gesneriaceae* (as *Cyrtandra cymosa*: BSIP 8617). Within the *Rubiaceae* the genus was also confused with *Dolicholobium*.

Merrill & Perry (1947) described *Kajewskiella* as strongly suggesting *Xanthophytum* (in vegetative and seed characters), *Dolicholobium* (in fruit characters), and *Bikkia* (also in fruit characters). Flowering material is still sparsely represented in the herbaria. It had already been suspected that more than one taxon is involved (Ridsdale, P. S. Green, pers. comm.). A careful study of the few collections available has shown that two species are involved; one of these, *K. trichantha*, is endemic in Bougainville whereas the other one, *K. polyantha*, also occurs in other islands of the Solomons.

INFLORESCENCE MORPHOLOGY

In both species of *Kajewskiella* the bracts of the inflorescence are usually not opposite. The lower (larger) bracts possess colleters on the basal part of their adaxial side. As colleters are only present on stipules and absent from normal leaf petioles, this poses a problem of homology. Nevertheless, the colleter-bearing bracts in the inflorescence are homologous to leaves for the following reasons:

- 1) in *Xanthophytum papuanum* both stipules and reduced leaves are present in the inflorescence and colleters are found on the inside of the stipules as well as of the leaves;
- 2) the lowest bracts are inserted at right angles to the leaf subtending the inflorescence;
- 3) the lower bracts bear partial inflorescences or solitary flowers in their axils.

The positions of the bracts on the inflorescence axis show interesting aberrations from the normal rubiaceous arrangement.

In *K. polyantha* the inflorescences show re- and concaulescence. Pairs of lateral branches (partial inflorescences) or the lateral flowers are inserted at different heights on the main axis, or three or four partial inflorescences are inserted at the same level; the lowest pair is sometimes exactly opposite.

This is illustrated by an inflorescence from *NGF 31346*, shown in fig. 1, e. The lower two partial inflorescences are not inserted at the same level on the main axis. The next four, however, are all inserted at almost the same height. Finally, two solitary flowers are present; one of these is the terminal flower with, at its base, another lateral flower represented by an abortive flowerbud. Cross-sections of the axis show that of pairs of partial inflorescences or solitary flowers the xylem cylinders can be traced within the main axis downwards until they unite with the xylem cylinder of the main axis at the same height. Hence, the partial inflorescences show concaulescence which is unequal for each of the members of a pair.

The lower three partial inflorescences have their bracts inserted at their point of departure from the main axis, the higher ones lack bracts at the comparable location, but have a bract on their own axis, whereas the upper solitary flowers have bracts inserted on the pedicel more or less at the base of the hypanthia.

The lowest partial inflorescence shows neither concaulescence nor recaulescence. In the second and third partial inflorescences the bracts are vertically displaced by means of recaulescence over the same length as the concaulescence of the lateral axis. In the other partial inflorescences the recaulescence exceeds the concaulescence resulting in the insertion of the bract on the lateral axis.

The partial inflorescences are not arranged in two planes of the main axis perpendicular to each other, as could have been expected if the arrangement is thought to be a derivation of the decussate arrangement. This deviation could have been caused by the unequal insertion of the lower lateral branches.

In *K. trichantha* the inflorescence is contracted. No concaulescence was observed; the bracts are recaulescent (Fig. 1a – c). The partial inflorescences show a spiral ($2/5$) arrangement (Fig. 1, c).

ZYGOMORPHIC FLOWERS OF KAJEWSKIELLA AND OTHER RUBIACEAE

Kajewskiella has zygomorphic flowers; the hypanthium and the corolla tube are curved and the calyx- and corolla-lobes are unequal in length, but the same in form, linear or linear-lanceolate and triangular respectively.

Asymmetrical calyces or corollas and zygomorphic flowers are known to occur in a restricted number of genera scattered in different tribes of the *Rubiaceae*. It proved exceedingly time consuming to find complete and unambiguous information regarding the occurrence of these characters in the different genera. This information was scattered throughout numerous publications, making it difficult to rapidly compare *Kajewskiella* to other *Rubiaceae* with zygomorphic flowers. Therefore, the results of this complete survey of genera (with the abbreviated name of the tribe added within brackets) are summarized below.

Asymmetrical flower buds occur in *Posoqueria* (Gard.)

Flowers with a zygomorphic appearance, the corolla tube being divided almost to the base, occur in *Aulacocalyx* (= *Dorothea*: Gard.) and perhaps also in *Molopanthera* (Cinch.), *Synapthantha* (Hedyot.) and *Spathichlamys* (Rond.).

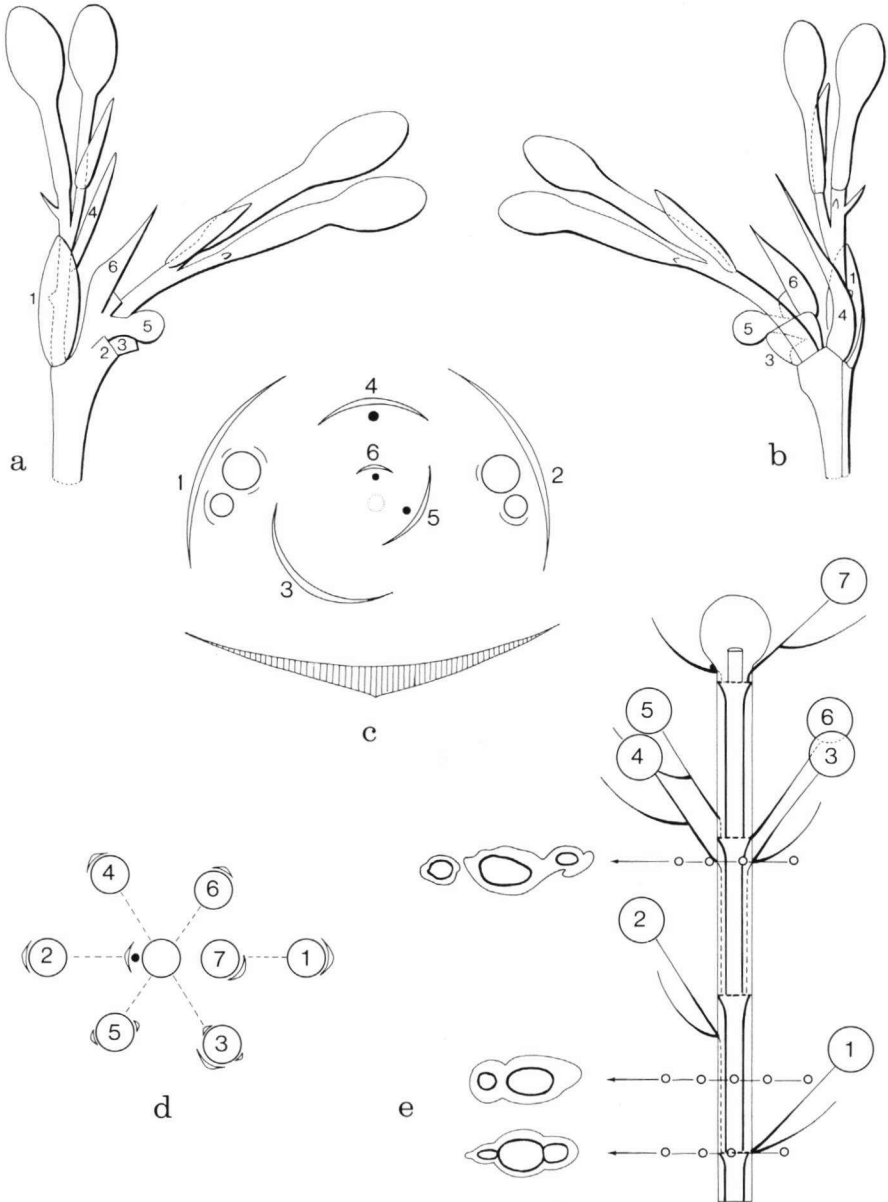


Fig. 1.—Inflorescence morphology of *Kajewskiella*. — a–c. *K. trichantha* (NGF 13753a): a, b. Inflorescence viewed from both sides, flowers highly diagrammatic, lower bracts numbered 1–6 in sequence; c. Inflorescence diagram, leaf shaded, bracts also numbered 1–6 in sequence; d, e. *K. polyantha* (NGF 31346): d. Inflorescence diagram, partial inflorescences numbered 1–7 in sequence, note the aberrant arrangement; e. Diagrammatic representation of inflorescences, partial inflorescences numbered 1–7 in sequence, transverse section of stem at different heights shown on the left.

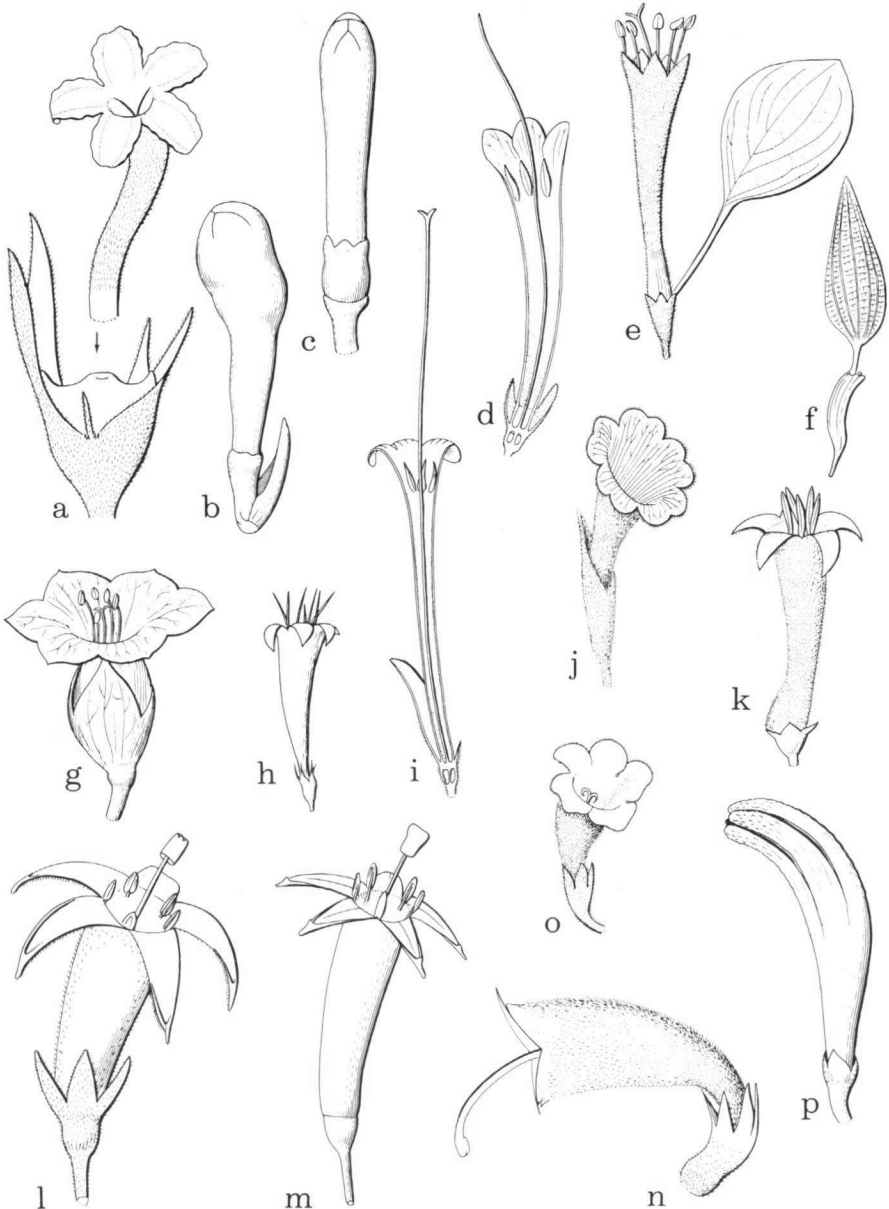


Fig. 2. — Zygomorphic flowers of some Rubiaceae. — a. *Merumea coccocypseloides* Steyerl., $\times 1.9$; b. *Cephalis stipulacea* Bl., $\times 3$; c. *Ottoschmidtia dorsiventralis* Urb., $\times 8$; d. *Ernestimeyera (Alberta) magna* O.K., $\times 1.5$; e. *Pogonopus exsertus* Oerst., $\times 1$; f. *Cosmocalyx spectabilis* Standl., $\times 1$; g. *Tammsia anomala* Karst., $\times 1$; h. *Coutarea hexandra* Schum., $\times 0.5$; i. *Nematostylis anthophylla* Baill., $\times 1.5$; j. *Hippotis albiflora* Karst., $\times 1.5$; k. *Palicourea rigida* H. B. K., $\times 2.25$; l. *Ancylanthus fulgidus* Welw., $\times 1.5$; m. *Temnocalyx obovatus* Robijns, $\times 1.5$; n. *Dichilanthe zeylanica* Thw., $\times 1$; o. *Henriquezia nitida* Spr., $\times 1$; p. *Sarcopygme pacifica* Setch. & Christoph. (*Hochr. 3306.*) — Drawings after: a, h, o, Steyermark; b, Valetton; c, Urban; d, e, g, i—k, n, K. Schum.; f, Hutch.; l, m, Robijns.

Asymmetrical or zygomorphic calyces, with the calyx-lobes unequal in length or one of them slightly enlarged, are of more common occurrence in the *Rubiaceae*: *Pentanisia* (Knox.); *Otiophora* (Anthosperm); *Declieuxia* (Psychtr.); *Nematostylis* (Fig. 2, i), *Belonophora* (Alb.); *Pentas*, *Otomeria* (Hedyot.); *Sommerera*, *Stipularia* (Isert.); *Dendrosipanea* (Rond.).

Calyces with one lobe expanded to form a relatively large, generally petaloid, pallid or coloured, bract-like lobe occur in many genera, all in the sub-family *Cinchonoideae*: *Calycophyllum*, *Monadelphanthus*, *Capirona*, *Schizocalyx* (Cinch.); *Pinkneya*, *Pogonopus* (Cond.) (Fig. 2, e); *Pallasia*, *Warschewiczia* (Rond.); *Mussaenda*, *Pseudomussaenda* (Isert.); *Ernestimeyera* (Alberta) *magna* (Alb.) (Fig. 2, d); *Cosmocalyx* (Coff.) (Fig. 2, f).

In *Jackiopsis* (Jackieae) generally three of the five calyx-lobes expand to form a wing in the fruit (Ridsd. in prep.).

Curved corolla tubes, or corolla tubes which are asymmetrical at the base, occur in: *Psychotria curviflora*, *Cephaelis stipulacea*, (Fig. 2, b) *Palicourea* (Psychtr.) (Fig. 2, k); *Macrocnemum* (Cinch.); *Belonophora* (Alb.); *Acranthera* (Isert.).

In *Ottoschmidia* (Guett.) the corolla-lobes are unequal in length. (Fig. 2, c).

These forms of asymmetrical calyces and corollas differ from the situation in *Kajewskiella*, where the flowers are zygomorphic in all their parts. The genera with zygomorphic flowers, which are possibly comparable to those in *Kajewskiella* are listed below:

	hypan- thium	calyx lobes	corolla tube	corolla lobes
<i>Guettardoideae</i>				
<i>Dichilanthe</i> (Guett.) (Fig. 2, h)	+	—	+	—
<i>Cinchonoideae</i>				
<i>Ancylanthus</i> (Vang.) (Fig. 2, l)	—	—	±	±
<i>Temnocalyx</i> (Vang.) (Fig. 2, m)	—	no lobes	±	—
<i>Ernestimeyera</i> (Alb.) (Fig. 2, d)	—	+	+	—
<i>Hippotis</i> (Isert.) (Fig. 2, j)	—	—	+	—
<i>Tammsia</i> (Isert.) (Fig. 2, g)	—	—	+	—
<i>Augusta</i> (Rond.)	—	—	+	—
<i>Pallasia</i> (Rond.)	—	+	+	—
<i>Ferdinandusa</i> (Cinch.)	—	—	+	+
<i>Coutarea</i> (Cinch.) (Fig. 2, h)	—	+	+	—
<i>Merumea</i> (Cinch.) ¹ (Fig. 2, a)	—	+	+	—
<i>Duidania</i> (Cinch.)	—	+	+	—
<i>Rubioideae</i>				
<i>Ravnia</i> (Hill.) ²	—	+	+	—
<i>Sarcopygme</i> (Mor.) ³ (Fig. 2, p)	—	—	+	+
<i>Henriquezieae/Henriqueziaceae</i>				
<i>Henriquezia</i> ⁴ (Henr.) (Fig. 2, o)	—	—	+	+
<i>Kajewskiella</i>	+	+	+	+

+ = curved or unequal lobes; — = not curved or equal lobes.

¹*Merumea*: Steyermark (1972) places this genus in the *Cinchoneae* but does not mention if raphides are present or absent. Considering the placement it seems probable that this genus should be transferred to the subfamily *Rubioideae*. The pilose seeds are exceptional in the family.

²*Ravnia*: Generally this genus is placed in the *Cinchoneae*. Standley (1938) reports that the seeds have a tuft of hairs at the top, a characteristic feature, only known so far in the genus *Hillia*. If this observation is correct, then the genus must be transferred to the tribe *Hillieae* Brem., in which it further agrees in its epiphytic habit.

³*Sarcopygme*: Setchell & Christopherson (1935) placed this genus in the *Morindeae*. Raphides are present.

⁴*Henriquezia*: Koek-Noorman (1969) notes that the wood anatomy of *Henriquezia jenmanii* differs in some respects from that of the *Rubiaceae*. Bremekamp (1957) considers that the important characters are the zygomorphic flowers combined with a band of hairs on the ventral side of the throat, and basally curved filaments inserted on the tube on various levels.

Individually these characters all occur within the *Rubiaceae* but Bremekamp considers the combination to be great enough to warrant the recognition of a separate family. This standpoint was followed by Verdcourt (1958), however Steyermark (1952, 1974) includes it in the *Rubiaceae*.

A curved corolla tube is mentioned for *Perakanthus*. (*Urophyll.*) but from the material and plate it became clear that only a very slight curvature occurs.

It remained uncertain whether *Pentagonia*, *Lecananthus*, and *Aulacodiscus* (all *Isert.*) had zygomorphic flowers and were, in this feature, comparable with *Kajewskiella*.

Within this list *Kajewskiella* occupies a very excentric position. The combination of unequal calyx- and corolla-lobes with a curved hypanthium and corolla tube is apparently not yet known in the *Rubiaceae*.

SYSTEMATIC RELATIONSHIPS

Merrill & Perry were unable to satisfactorily place *Kajewskiella* in the known tribes of the *Rubiaceae* nor suggest other genera of close affinity. They noted that according to the classification of the family by K. Schumann (1891) the genus seemed to belong to the *Hedyotideae* (= *Oldenlandieae* K. Schum., *nom. illeg.*), and indicated a superficial resemblance to *Xanthophytum*.

In the modern systems of classification of Bremekamp (1966) and Verdcourt (1958) the tribe *Hedyotideae* of the subfamily *Rubioideae* are partly characterized by the presence of raphides in the plant tissues. Raphides are absent in *Kajewskiella*, which excludes the possibility that it can be placed in the *Hedyotideae*.

Bremekamp found that many genera (e.g. *Xanthophytum*, *Xanthophytopsis*, *Lerchea*, and *Paedicalyx*), originally placed in the *Hedyotideae*, lacked raphides. He created a new tribe, the *Pomazotoideae* in the subfamily *Cinchoneae*, to accommodate these genera. Verdcourt questioned the absence of raphides, noting rod-like crystals. He left the genera, placed in the *Pomazotoideae* by Bremekamp, in the *Hedyotideae*, noting a link with the *Cinchoneae*.

Unfortunately the delimitation of *Xanthophytum* is vague. Bakhuizen f. (1953)

reduced the asiatic genera *Xanthophytopsis* and *Paedicalyx* to synonyms of *Xanthophytum*, without discussing the reasons for this reduction.

The *Pomazotoideae* are characterized by small flowers with spatulate calyx-lobes, a hypocrateriform corolla which is inside densely white pubescent up to the throat and a club-shaped stigma. The placentas are always peltately attached to the septum and may be hemispherical, as in *Paedicalyx attopevensis* and *Xanthophytum fruticosolum*, or flattened and ovate as in *Xanthophytum calycinum* and *Xanthophytopsis balansae* or obovate as in *Xanthophytum papuanum*. The ovules are arranged over the whole placenta and vertically to its surface. The fruits of *Xanthophytopsis*, *Xanthophytum papuanum*, material from the Louisiade Archipelago and *Xanthophytum calycinum* are septicidally dehiscent, whilst those of *Xanthophytum fruticosolum* and *Lerchea* fall apart into two cocci. The fruits of *Paedicalyx* are unknown. The difference in dehiscence appears to be correlated with the extent of the thickened endocarp.

Kajewskiella, however, has a flattened placenta which is adaxially adnate to the septum over the greater part of its length and bears slightly ascending ovules. The fruits are septicidally dehiscent.

Thus, the only remaining possibility is to place *Kajewskiella* in one of the tribes *Cinchoneae* or *Condamineae*, both belonging to the subfamily *Cinchonoideae*. These two tribes have a valvate aestivation and a long linear placenta which is adnate to the septum over the greater part of its length. These characters also occur in *Kajewskiella*.

The *Cinchoneae* are characterized by vertically imbricate, winged seeds. In *Kajewskiella*, the seeds are unwinged which excludes the possibility that it can be placed in this tribe.

In the *Condamineae* the ovules are numerous and the seeds are mostly not winged (Verdcourt, 1958). *Pinkneya* has a placenta which is densely covered with ovules which are attached in the middle to the placenta; they are horizontal and slightly vertically imbricate. The seeds are only slightly winged. In *Kajewskiella* the many or numerous ovules are lying near or close to each other, they are attached just below the middle to the placenta, slightly ascending, vertically arranged but not imbricate. The seeds are not winged.

Thus, the tentative conclusion is that *Kajewskiella* should be placed in the *Condamineae*, where it occupies an excentric position.

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KAJEWSKIELLA

Kajewskiella Merrill & Perry, *J. Arn. Arb.* 28 (1947) 331. — Type species: *K. trichantha* Merrill & Perry.

Shrubs. *Tissues* without raphides. *Indumentum* (densely) red- to dark brown pubescent to villose. *Branchlets* hairy. *Stipules* interpetiolar, laterally free, successive pairs conspicuously overlapping each other, inside hairy, with colleters in lower part, outside hairy, nerves parallel, margins entire, long ciliate, hairs appressed. *Leaves* opposite, chartaceous, sparsely hairy above and below, densely so on midrib. *Petioles* hairy, flattened above. *Inflorescence* axillary; axis branched, elongating with age, hairy; bracts decreasing in size acropetally, entire, inside glabrous but lower bracts sometimes basally with colleters which have an acute apex, base attenuate, nerves parallel. *Flowers* 5-merous, bisexual, zygomorphic. *Hypanthium* curved. *Calyx* infundibular, semi-persistent; tube glabrous within; lobes unequal in length, margin entire, ciliate, nerves 3, parallel. *Corolla* tube infundibular, curved, glabrous within; lobes valvate, (narrowly) triangular, unequal in length, inside glabrous. *Stamens* epipetalous, free; anthers basifixed, introrse, longitudinally dehiscent, base obtuse. *Disk* annular, glabrous. *Style* exerted, terete, apically glandular; stigma club-shaped, glandular. *Ovary* 2-locular; placenta adnate to the septum over the greater part of its length; ovules numerous, slightly ascending. *Fruit* a fusiform capsule, slightly angular, hairy, light to dark brown, septicidally dehiscent; exocarp deteriorating with age, with 10 thickened strands; endocarp horny. *Seeds* numerous, horizontal, pentagonal, flat, reticulate.

KEY TO THE SPECIES

1a. Stipules generally 20–30 × 10–20 mm. Leaves (17–)23–31 × 6–11 cm; lateral nerves (19–)25–34 pairs. Inflorescence frequently with more than 6 flowers, rarely less, flowering acropetally; largest bracts over 10 mm long. Corolla tube up to 15 mm long. Stamens not exerted; filaments up to 6 mm long, anthers up to 3 mm. Style 1–2 cm long, up to 5 mm exerted.

1. *K. polyantha*

b. Stipules generally 7–13 × 3–8 mm. Leaves 10–18(–23) × 4–6(–7) cm; lateral nerves 17–21(–24) pairs. Inflorescence with up to 6 flowers; flowering basipetally; largest bracts up to 10 mm long. Corolla tube over 25 mm long. Stamens exerted; filaments over 25 mm long, anthers 3 mm or more. Style over 4 cm long, over 10 mm exerted **2. *K. trichantha***

1. *Kajewskiella polyantha* M. Jansen, *spec. nov.* — Fig. 3, a–e.

Frutex 1.5–6 m altus. *Stipulae* deciduae vel subpersistentes, ovatae ad ovato-oblongae (ad lanceolatae), 21–31(–44) mm longae, 9–20(–26) mm latae, parte anteriore plerumque 80–130 colleteris subsessilibus gaudienti, sine glandulis, apice cuspidata, costa prominente, nervis 30–37. *Folia* oblonga, (17–)23–31 cm longa, 6–11 cm lata, pagina utrinque costa dense pubescenti ad villosa, apice longe acuminata, basi attenuata, nervis lateralibus (19–)25–30(–35) paribus. *Petioles* (1.5–)3.0–7.5(–8.5) cm longi, circa 2 mm crassi. *Inflorescentia* 3–17(–32)-flora. *Pedunculo* 4–10(–15) cm longo. *Inflorescentiis partialibus* ad 8, unde quaeque (2–)3–7(–12)-flora: *bracteis* 50–60, ovato-lanceolatis ad linearibus, 1–26 mm longis, 1–6 mm latis, basi interioriter utrinque 1–6 colleteris, exterioriter sparse pubescentibus, apice acuminato ad caudato, nervis ad 7, interdum glandulosis. *Flores* c. 22 mm longi, c. 12 mm diametro. *Pedicelli* 2–4(–8) mm longi, dense pubescentes, glandulis globosis, c. 0.2 mm diametro. *Hypanthia* interdum plus minusve abaxialiter curvata, *tubo calycis* 1–2 mm longo, 4–4.5 mm diametro, exterioriter villosa, glanduloso (ut in pedicellio), lobis linearibus, 5–12(–17) mm longis, 0.5–0.7 mm latis, superioribus inferioribus minoribus, utrinque pubescentibus. *Tubus corollae* 13–14 mm longus, basi c. 2 mm diametro, fauce 4–5 mm diametro, reticulate nervatus, exterioriter nervis pilosis, lobis 2–6 mm longis, 1–2 mm latis, superioribus inferioribus minoribus, exterioriter pubescentibus ad villosis. *Stamina* non exserta, filamentibus 5–6 mm longis, 0.2–0.4 mm latis, antheribus 2–3 mm longis, 0.6–0.7 mm latis, apice acuminato, connectivo 0.5–0.7 mm longo, c. 0.3 mm lato. *Discus* 0.4 mm altus, 1.0–1.4 mm latus, atro-fuscus. *Stylus* 9–12(–20) mm longus, c. 0.2 mm diametro, interdum ultra faucem corollae ad 5 mm exsertus, atro-fuscus, parte superiore dense glandulosa, stigmatibus 0.7–0.9 mm longo, c. 0.5 mm diametro. *Placentae* circulares in diametro, c. 4 mm longae, c. 0.3 mm diametro, ovulis numerosis. *Pedunculi* in fructu non elongati, *fructibus* (6–)9–12(–19) mm longis, c. 2 mm diametro, glandulosis, glandulis globosis, albis. *Semina* c. 0.3 mm diametro.

T y p u s: *Kotali et al. BSIP 11350* (L, holo; iso in K).

Shrub 1.5–6 m high. *Stipules* deciduous to subpersistent, ovate to ovate-oblong(-lanceolate), 21–31(–44) × 9–20(–26) mm; inside generally with 80–130 colleters, subsessile, without glands; apex cuspidate; nerves 30–37, middle nerve prominent. *Leaves* oblong (young ones ovate-oblong), (17–)23–31 × 6–11 cm, sparsely hairy; apex long acuminate; base attenuate; lateral nerves (19–)25–30(–35) pairs. *Petioles* (1.5–)3.0–7.5(–8.5) × c. 0.2 cm. *Inflorescence* with 3–17(–32) flowers, flowering acropetally, aborted buds sometimes present. *Peduncle* 4–10(–15) cm long. *Partial inflorescences* up to 8, each with (2–)3–7(–12) flowers. *Bracts* 50–60, ovate-lanceolate to linear, 1–26 × 1–6 mm; inside basally with 1–6 colleters on each side, outside sparsely hairy; apex acuminate to caudate; up to 7-nerved, sometimes with black glands. *Flowers* c. 22

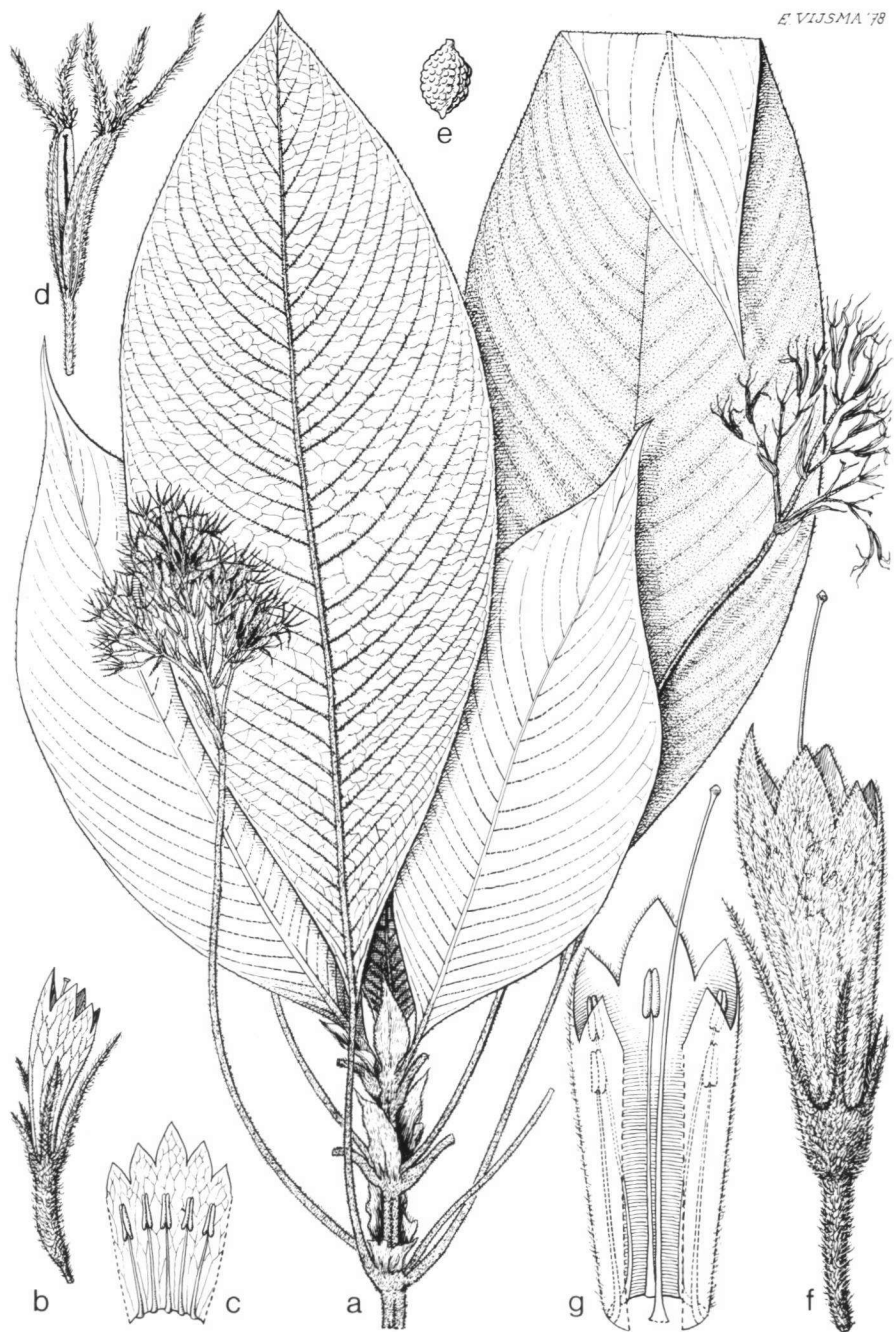


Fig. 3. — *Kajewskiella polyantha* and *K. trichantha*. — a–d. *K. polyantha* (BSIP 11350): a. habit, $\times 0.5$; b. flower, $\times 2$; c. idem partly dissected, $\times 2$; d. fruit, $\times 3$; e. seed, $\times 30$; f, g. *K. trichantha* (NGF 13753a): f. flower, $\times 2$; g. idem, partly dissected, $\times 2$.

× 12 mm. Pedicels 2–4(–8) mm long, densely hairy, with dark glands, these globose, 0.2 mm in diameter. *Hypanthium* sometimes slightly abaxially curved. *Calyx tube* 1.0–2.0 × 4.0–4.5 mm, inside glabrous, outside villous, glandular (as pedicel); *calyx-lobes* linear, 5–12(–17) × 0.5–0.7 mm, upper lobes shorter than lower ones, dark-brown hairy on either side, apex acute. *Corolla tube* 13–14 mm long, diameter 2 mm at the base and 4–5 mm at the throat, outside pilose on nerves, net-nerved; *lobes* 2–6 × 1–2 mm, upper lobes shorter than lower ones, outside hairy. *Stamens* not exerted; filaments 5–6 × 0.2–0.4 mm; anthers 2.0–3.0 × 0.6–0.7 mm, apex acuminate; connective 0.5–0.7 × 0.3 mm. *Disk* 0.4 × 1.0–1.4 mm, dark-brown. *Style* 9.0–12.0(–20.0) × 0.2 mm, sometimes up to 5 mm exerted, dark-brown, densely covered with glands in the upper part, these whitish; stigma 0.7–0.9 × 0.5 mm. *Placenta* circular in cross section, c. 4.0 × 0.3 mm; ovules numerous. *Infructescences* with a peduncle which does not continue to elongate in fruit bearing stage. *Fruits* (6–)9–12(–19) × 2 mm, outside with glands, these globose, 0.2 mm in diameter, white; pedicels 5–7 mm long. *Seeds* 0.3 mm in diameter.

Distribution: Solomon I.

SOLOMON ISLANDS. Bougainville I. Kapikavi, NGF 31346 (A, BRI, CANB, K, L). – New Georgia Group. Vella Lavella Isl., BSIP 11350 (K, L); Kolombangara Isl., BSIP 8617 (K, L). – Guadalcanal Isl. Mt. Gallego, BSIP 4621 (L).

Ecology: Primary lower montane forest, sometimes in low altitudinal mossy forest. Alt. 100–950 m. Flowering in January and July.

2. *Kajewskiella trichantha* Merrill & Perry. – Fig. 3, f, g.

K. trichantha Merr. & Perry, J. Arn. Arb. 28 (1947) 331. – Type: *Kajewski 1734* (A, holo).

Shrub 0.5–5.5 m high. *Stipules* subsistent, (broadly) ovate, 7–13(–15) × (2–)3–8(–10) mm; inside generally with 30–60 colleters, rarely more, with a stalk, 0.2–0.6 mm long, white, moderately to densely covered with glands, these globose, c. 0.05 mm in diameter, light- to red-brown; apex acuminate to cuspidate; nerves (12–)16–22, middle nerve prominent. *Leaves* oblong to lanceolate, (young ones same form), (6–)10–18(–23) × (2.5–)4–6(–7) cm, densely hairy; apex cuspidate to caudate; base attenuate; lateral nerves (17–)18–21(–24) pairs. *Petioles* (1.5–)2.0–4.5 × c. 0.1 cm. *Inflorescence* with (1–)2–5(–6) flowers, flowering basipetally, aborted buds present. *Peduncles* 2.5–6.0 cm long. *Partial inflorescences* not present. *Bracts* 5–7(–12), linear, 0.8–9.0 × 0.1–1.5 mm; inside basally with 0–3 colleters on each side, outside hairy; apex caudate; up to 5-nerved, without black glands. *Flowers* 30–45 × c. 25 mm. *Pedicels* (5–)7–8 mm long, hairy, without glands. *Hypanthium* adaxially curved. *Calyx tube* 5–7 × 5–6 mm, inside basally with globose, red-brown glands, c. 0.05 mm in diameter; outside pilose to pubescent on nerves, glands absent; *calyx lobes* linear-lanceolate (4–)6–11(–14) × 1–2 mm, upper lobes longer than lower ones, inside glabrous; outside moderately pilose, apex acuminate. *Corolla tube* 25–37 mm long, diameter 3 mm at the base and 8–13 mm at the throat, outside long pubescent to pilose, parallel nerved; *lobes* 2–5(–11) × 2–3(–6) mm, upper lobes longer than lower ones, outside densely long pilose. *Stamens* exerted; filaments 27–43 × 0.4 mm; anthers 3.0–4.0 × 0.5–1.0 mm, apex obtuse; connective 1.0 × 0.5–0.6 mm. *Disk*

0.6–1.0 × 1.0–2.0 mm, light-brown. *Style* 41–49 × 0.5 mm, 12–16 mm exerted, light-brown, sometimes with glands, these black; stigma 0.9–1.0 × (0.5–)1.0–1.5 mm. *Placenta* laterally flattened in cross section, *c.* 7.0 × 0.6 mm; ovules many. *Infructescences* with a peduncle which sometimes conspicuously elongates in fruit bearing stage, (2.5–)4–6(–15) cm long. *Fruits* 14–27(–32) × 2 mm, outside without glands; *pedicels* 6–16(–22) mm long. *Seeds* 0.7 × 0.4 mm.

Distribution: Solomon I.

SOLOMON ISLANDS. Bougainville Isl. Kupei Gold Field, *Kajewski 1734* (A), 1659 (A, BISH), 1667 (A); Pavairi, *NGF 30641* (BRI, CANB, L); *NGF 30547* (L); Lake Loloru, *NGF 31381* (A, BRI, CANB, K, L); Panguna, *NGBF 1224* (BRI, K, L); Crown Prince Mts., *NGF 13753a* (L).

Ecology: Primary, lower montane to montane forest. Alt. (100–)600–1500 m. Flowering in May and October.

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