BLUMEA 28 (1982) 177 – 180

ADDITIONS TO THE GENUS KANIA (MYRTACEAE) IN MALESIA WITH NOTES ON CLOEZIA

PETER G. WILSON

School of Botany, University of New South Wales
P.O. Box 1, Kensington 2033, N.S.W.

SUMMARY

The genus *Kania* Schltr. is defined and its relationship with *Metrosideros* Banks *ex* Gaertn. and *Cloezia* Brongniart et Gris (= *Mooria* Montr.) is clarified. Two new combinations are made: *Kania urdanetensis* (basionym *Photinia urdanetensis* Elmer, transferred from *Cloezia*) and *K. microphylla* (basionym *Tristania microphylla* Quisumbing et Merrill). The known range of *Kania* is extended to the Philippines and *Cloezia* is now considered to be restricted to New Caledonia.

INTRODUCTION

When Schlechter described the genus *Kania*, Bot. Jahrb. 52 (1914) 118, he was uncertain of its affinities, and after considering the *Guttiferae*, the *Myrtaceae* and the *Saxifragaceae*, he finally thought it best to consider it an aberrant genus in the *Saxifragaceae*. The ensuing taxonomic confusion has already been adequately outlined by van Steenis (1969) who concluded, falsely, that since *Kania eugenioides* Schltr. was conspecific with a species of *Metrosideros* (*M. parviflora* C. T. White) it should be transferred to the latter genus. In doing this he overlooked the significance of two important floral characters that he mentioned, viz. the elongated anther connective and the basal attachment of the ovules. With regard to the latter, van Steenis rightly refers to the similarity of this arrangement to that found in the genus *Lysicarpus* F. v. Muell., an arrangement also found in the genus *Cloezia* Brongniart et Gris.

Dawson (1972), after his detailed consideration of *Mooria* (= *Cloezia*), concludes that that genus and *Metrosideros* are not very closely related and suggests affinities with *Lysicarpus* and *Kania*. The significant differences are the protuberant anther connectives enclosing a large apical oil gland with an overlying vesicular epidermis and the basal placentas remote from the base of the style. Pike (1956) also found that the pollen of *Metrosideros parviflora* (= *Kania eugenioides*) does not conform with that of other *Metrosideros* species.

Briggs and Johnson (1979) follow Dawson in grouping *Cloezia*, *Lysicarpus*, and *Kania* in their Kania alliance. They have, however, added *Basisperma* to these, an action that cannot be justified on morphological and anatomical grounds. The three related genera may be distinguished with the following key.

1a. Stamens grouped, the outer whorl sterile; the stigma distinctly capitate . **Lysicarpus**
b. Stamens all fertile, in a single series, rarely grouped; the stigma only slightly dilated 2
2a. Ovules up to 10 per loculus, in a single, more or less circular series on the placenta . . . . . **Cloezia**
b. Ovules over 10 per loculus, scattered over the surface of the placenta . . . . **Kania**

KANIA

Kania Schltr., Bot. Jahrb. 52(1914) 119. — T y p e s p e c i e s: *K. eugenioides* Schltr.

Trees or shrubs; branching monopodial. *Leaves* opposite, petiolate, dorsiventral, gland-dotted. *Inflorescences* axillary panicles or cymes, often borne in the uppermost axils to give the appearance of being terminal. *Flowers* yellow, pentamerous. *Petals* with a thickened central region and membranous edges, gland-dotted. *Sepals* pubescent on the abaxial surface, persistent. *Stamens* in one whorl, two to five times the number of petals, somewhat unequal in length, the whorl sometimes discontinuous; anthers with elongated connectives at least half as long as the anther cells, filament attached at the base of the connective. *Ovary* half-inferior, three locular; style filiform, set into a slight depression in the ovary summit; stigma small, convex; placentas small, oblique in the basal angles of the loculi, remote from the base of the style; ovules anatropous, scattered on the placenta, usually 12 or more per loculus. *Capsule* exserted beyong the hypanthial rim, loculicidal. Fertile seeds linear, few. Embryo straight, cotyledons lying face to face.

D i s t r i b u t i o n. The three known species are indigenous to Malesia; one species in New Guinea and two species in the Philippines.

KEY TO THE SPECIES

1a. Inflorescence paniculate; petals twice as long as broad; fruit strongly exserted, exceeding the fruiting hypanthium by *c.* 3 mm . . . . . **K. eugenioides**
b. Inflorescence a 3 – 7 flowered cyme; petals as long as broad; fruit only exceeding the fruiting hypanthium by c. 1 mm. 2
2a. Sepals unequal; stamens tending to be grouped opposite the petals; leaves small, up to 30 mm long and 10 mm wide, venation rather obscure . . . . . **K. microphylla**
b. Sepals more or less equal; stamens in an unbroken series; leaves at least 30 mm long and 12 mm wide, venation prominent on the lower surface . . . . . **K. urdanetensis**

Kania eugenioides Schltr.

K. eugenioides Schltr., Bot. Jahrb. 52 (1914) 120. — *Metrosideros eugenioides* (Schltr.) Steen., Blumea 16 (1969) 358.
Backhousia aurea Ridl., Trans. Linn. Soc. Bot. 9 (1916) 43. — *Metrosideros aureus* (Ridl.) Diels, Bot. Jahrb. 57 (1922) 418.
Backhousia arfakensis Gibbs, Contrib. Phyt. Arfak (1917) 153. — *Metrosideros gibbsiae* Diels, Bot. Jahrb. 57 (1922) 418, *non M. arfakensis* Gibbs.
Metrosideros pullei Diels, Bot. Jahrb. 57 (1922) 417. — *M. pullei* var. *parvifolia* C. T. White, J. Arn Arb.23 (1942) 80.

Metrosideros parallelinervis C. T. White, J. Arn. Arb. 23 (1942) 79.
Metrosideros parviflora C. T. White, J. Arn. Arb. 23 (1942) 80.

Trees or shrubs, the young stems densely pubescent. *Leaves* petiolate, variable in shape and size. *Inflorescences* paniculate, pubescent; flowers more than 7 per inflorescence. *Sepals* equal, triangular, pubescent on the margins, gland-dotted. *Petals* approximately 4 mm long and 2 mm wide, somewhat concave, more or less glabrous, gland-dotted. *Stamens* in a single series, mostly 12–20, 4–5 mm long; elongated anther connective almost as long as the anther cells, gland-dotted. *Ovary* only partly inferior, the free part covered with a reddish-brown tomentum; style 5–6 mm long, set into a small pit in the ovary summit; ovules 12–16 per loculus. *Fruit* strongly exserted, *c.* 3.5 mm long, the surface pubescent.

N o t e s. 1. Synonymy follows van Steenis (1969)
2. This species is usually found in midmountain forests and on ridges. As van Steenis (1969) points out, the variability of the leaves and the habit are related to the habitats in which the specimens were found.

Kania microphylla (Quisumbing & Merrill) Wilson, *comb. nov.*

Tristania microphylla Quisumbing & Merrill, Philip. J. Sc., Bot. 36 (1928) 176. — T y p e : *Ramos & Edano, Bur. Sci. 4513*, Mt. Alzapan, Luzon (UC!)

Small tree, young branchlets 4-angled, red-brown appressed-pubescent. *Leaves* small, 15–30 mm long, 3.5–10 mm wide; lamina narrow elliptical, venation obscure, apex acute to acuminate; petiole 1–3 mm long. *Inflorescence* cymose, red-brown pubescent; flowers usually 3 per cyme, sepals unequal, 1–1.5 mm long. *Petals* rounded, approximately 2 mm long by 2 mm wide, with a thick central region and membranous margins, gland-dotted. *Stamens* in a single series but grouped in threes opposite the petals with gaps or single stamens opposite the sepals, elongated anther connective about half the length of the anther cells. *Ovary* half inferior, the free summit pubescent; style about 2.5 mm long, set into a small pit on the ovary summit; ovules 12–17 per loculus. *Fruit* 2.5–3.5 mm long, with an indumentum of scattered bristles up to 1 mm long.

N o t e. This species is only known from the type collection at 1700 metres in mossy forest. So, like *K. eugenioides,* it also seems to occur in high altitude forests. The species is distinctive in having grouped stamens and bristly pubescence on its fruit.

Kania urdanetensis (Elmer) Wilson, *comb. nov.*

Photinia urdanetensis Elmer, Leaflets Philipp. Bot. 8 (1915) 2802. — *Cloezia urdanetensis* (Elmer) Merrill, Philip. J. Sc. 14 (1919) 429. — *Mooria urdanetensis* (Elmer) Merrill, En. Philip. (1923) 182. — T y p e: *Elmer 13694,* Mt. Urdaneta, Mindanao (UC!).

Small tree; young branchlets 4-angled, brownish appressed-pubescent, glabrescent. *Leaves* 30–55 mm long, 12–25 mm wide; lamina ovate-elliptical, venation prominent on the lower surface, apex acute to acuminate; petiole 3–4 mm long. *Inflorescence* cymose, densely red-brown appressed tomentose, flowers 3–7 per cyme. *Sepals* more or less

equal, about 2 mm long. *Petals* rounded, about 2.5 mm long and 2.5 mm wide. *Stamens* 15–20, in a single series, more or less equally spaced on the rim of the hypanthium; elongated anther connective as long as or slightly longer than the anther cells, gland-dotted. *Ovary* partly inferior, the free part densely pubescent; style about 1.5 mm long, set into a small pit on the ovary summit, ovules 12–15 per loculus. *Fruit* unknown.

N o t e s. 1. This species is known only from the type collection from a wind-swept mossy ridge at 1600 metres. It is distinct from *K. microphylla* in its larger leaves, its anther appendage much longer relative to the length of the anther cells, and in not having grouped stamens.
2. Kalkman, Blumea 21 (1973) 430, wrongly suggests that this might be a species of *Syzygium*.

NOTES ON CLOEZIA

With the removal of *C. urdanetensis* (Elmer) Merrill from *Cloezia* Brongn. et Gris, the genus is now restricted to New Caledonia, further confirming the phytogeographic isolation of that island. The only other species described from outside New Caledonia, *C. microphylla* (A. C. Sm.) A. C. Sm., has only recently been removed from the genus and transferred to *Decaspermum*. The full nomenclatural details are as follows:

Decaspermum cryptanthum A. J. Scott

Mooria microphylla A. C. Sm., B. P. Bishop Mus. Bull. 141 (1936) 110. — *Cloezia microphylla* (A. C. Sm.) A. C. Sm., J. Arn. Arb. 36 (1955) 286. — *Decaspermum microphyllum* (A. C. Sm.) J. W. Dawson, Allertonia 1 (1978) 404, *nom. illeg.*, *non* Merrill, Philip. J. Sc. 18 (1921) 289. — *Decaspermum cryptanthum* A. J. Scott, Kew Bull. 34 (1980) 63.

Scott's paper was already in press when Dawson published the illegitimate combination and hence this has been omitted from the synonymy until now.

ACKNOWLEDGEMENTS

I am grateful to Dr. R. Ornduff (UC) for the loan of the type specimens of *Tristania microphylla* and *Photinia urdanetensis*.

REFERENCES

Briggs, B. G., and L. A. S. Johnson. 1979. Evolution in the Myrtaceae — evidence from inflorescence structure. Proc. Linn. Soc. New South Wales 102:157–256
Dawson, J. W. 1972. Pacific capsular Myrtaceae 7. Mooria. Blumea 20:331–334
Pike, K. M. 1956. Pollen morphology of Myrtaceae from the south-west Pacific area. Aust. J. Bot. 4:13–53
Steenis, C. G. G. J. van. 1969. Reduction of the genus Kania Schltr. to Metrosideros (Myrtaceae). Blumea 16:357–359.