



FABACEAE

A NEW SPECIES OF *LESSERTIA* (GALEGEAE) FROM KWAZULU-NATAL, SOUTH AFRICA

INTRODUCTION

Balkwill & Balkwill (1999) recognised nine species of *Lessertia* DC. in their revision of the genus for KwaZulu-Natal, including three previously undescribed species first listed but not described by Ross (1972), all with linear or falcate, compressed fruits, and therefore belonging to sect. *Stenolobae* Harv. (1862). Subsequent fieldwork has revealed a fourth new species, with the subfalcate-shaped and inflated fruits typical of sect. *Platylobae* Harv. (Harvey 1862).

***Lessertia amajubica* Nkonki, sp. nov.**

TYPE.—KwaZulu-Natal, 2730 (Vryheid): Amajuba District Municipality Area, Dannhauser Municipality Area, (–BB), 9 Oct. 2006, *Ngwenya 2991* (NH, holo.; NBG, NH, PRE [2 sheets], iso.).

Decumbent, multi-stemmed perennial herb with a woody rootstock, up to 0.1 m high. *Branches* green, cano-pubescent or densely pubescent. *Stipules* lanceolate, 1–3 mm long. *Leaves* imparipinnate, 35–45 mm long; leaflets closely 6–7-jugate, oblong, 3–7 × 2–3 mm, base obtuse, apex emarginate, densely strigose abaxially, glabrous adaxially; petioles 3–5 mm long. *Inflorescences* densely subcapitate, 8–10-flowered; peduncles

longer than leaves, 45–64 mm long; pedicels 1–3 mm long; bracts oblong, 2–4 mm long, acute, pubescent with white hairs; bracteoles present at base of calyx, 1–2 mm long, pubescent with white hairs. *Flowers* 7–8 mm long, pink to purple. *Calyx* subequally 5-lobed, 3–4 mm long, strigose with white hairs; tube 1–2 mm long; lobes triangular-oblong, 2–3 mm long. *Standard* broadly ovate to suborbicular, 4–6 mm long, emarginate, glabrous; claw linear, 1–2 mm long. *Wings* 4–5 mm long, lamina oblong, as long as keel, obtuse, glabrous, without sculpturing; claw linear 1–2 mm long. *Keel* 4–5 mm long, lamina boat-shaped, obtuse, glabrous, pocket absent; claw linear 1–3 mm long. *Stamens* diadelphous; anthers monomorphic, basifixed. *Pistil* stipitate, hairy; ovary 5–6 mm long, narrowly elliptic; style ± 2–5 mm long, curved upwards, bearded terminally and along upper surface. *Fruits* subfalcate, inflated, 18–23 × 6–8 mm, sparsely hairy, ± 5–11-seeded, indehiscent. *Flowering time*: March to December. Figure 1.

Etymology: named for the type locality in the the district Amajuba.

Distribution and habitat: apparently highly localised and known only from the vicinity of Fairbreeze Village in Amajuba District near Dannhauser in KwaZulu-



FIGURE 1.—Holotype of *Lessertia amajubica* Nkonki, Ngwenya 2991 (NH).

Natal (Figure 4). It grows in grassland on sandstone, in well-drained soils exposed to full sun, at altitudes of 1 213–1 345 m.

Diagnostic characters: *Lessertia amajubica* is similar to *L. harveyana*, *L. stricta* and especially *L. excisa*, but differs from these species in the subcapitate inflorescence, the short leaves and leaflets, the strigose vestiture of the stems, leaves and calyx, shape and relative length of the calyx lobes, and especially in the hairy ovary and markedly inflated, sparsely hairy fruits (Figures 2, 3; Table 1). The calyx lobes in *L. amajubica* are triangular-oblong, 2–3 mm long and \pm twice as long as the tube; in *Lessertia excisa* the calyx lobes are broadly triangular, 1–2 mm long, and the tube 1 mm long; in *L. harveyana* narrowly triangular, 3–4 mm long with tube 2 mm long; and in *Lessertia stricta* broadly triangular, 1 mm long with tube 2–3 mm long. *Lessertia harveyana* is characterised by broad, obovate leaflets and obliquely depressed-ovate, glabrous fruits; *L. stricta* by long, oblong-lanceolate leaflets, lax inflorescences, long pedicels and long, obliquely obovoid-oblong, attenuate fruits; and *L. excisa* by its subfalcate, compressed fruits with black hairs on the calyx. Immature fruits of *Lessertia excisa* (Figure 3, B5) are almost identical to those of *Lessertia amajubica* (Figure 3, B2 & 3) in side view. It is critical to compare only mature fruits when identifying *Lessertia* species.

Only *Lessertia stricta* has a distribution potentially overlapping with *L. amajubica*; with *L. harveyana* occurring further southwards and eastwards, and *L. excisa* known only from the western parts of the Northern and Western Cape Provinces (Figure 4).

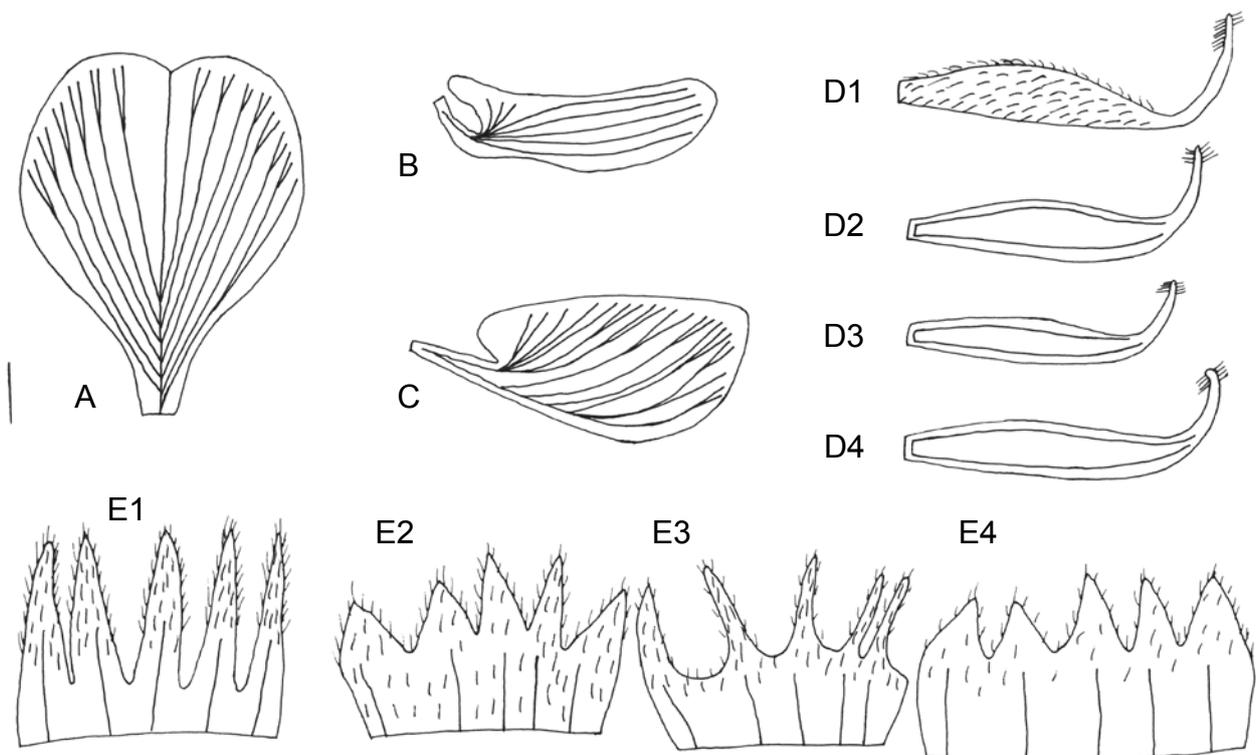


FIGURE 2.—Flower structure (calyces, petals and pistils) in *Lessertia amajubica*, *L. excisa*, *L. harveyana* and *L. stricta*. A–D1, E1, *L. amajubica*, Ngwenya 548 (NH); A, standard petal; B, wing petal; C, keel petal; D1, pistil; E1, calyx. D2, E2, *L. excisa*, Acocks & Hafstrom 2317 (PRE); D2, pistil; E2, calyx. D3, E3, *Lessertia harveyana*, Pegler 1281 (PRE); D3, pistil; E3, calyx. D4, E4, *Lessertia stricta*, Germishuizen 4367 (PRE); D4, pistil; E4, calyx. Scale bar: 1 mm.

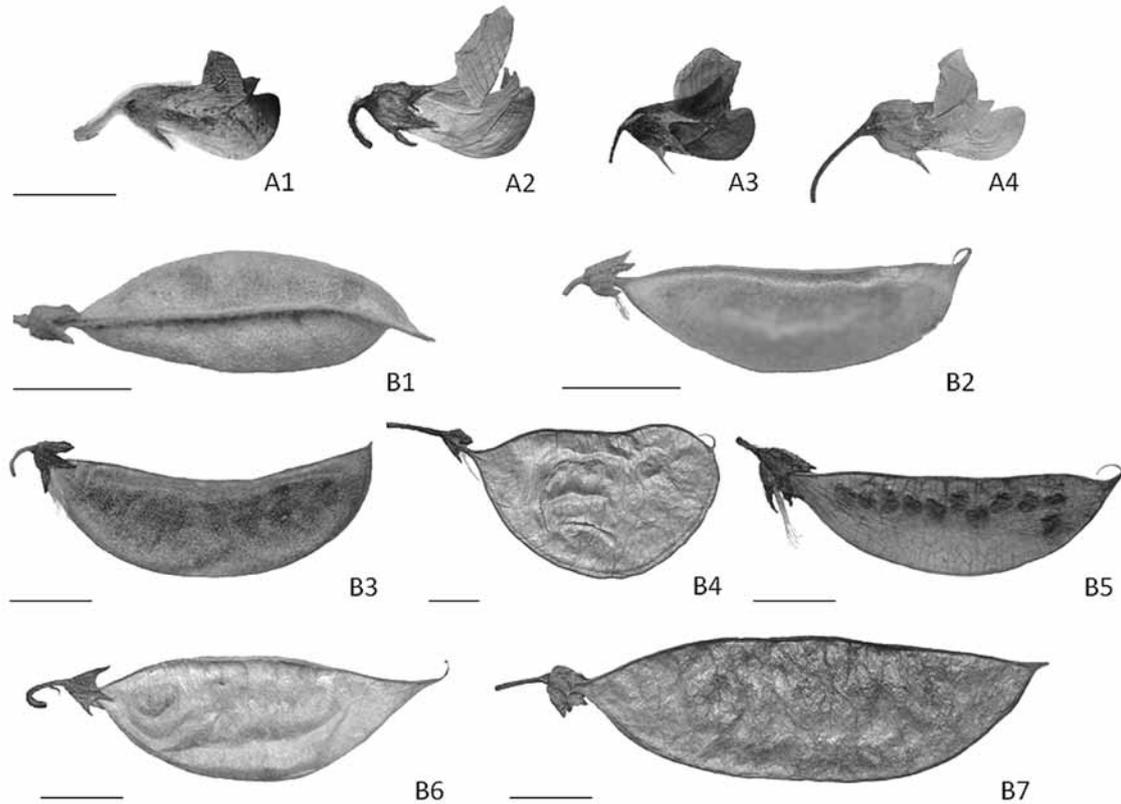


FIGURE 3.—Diagnostic characters of *Lessertia amajubica* and morphologically similar species. A, flowers. B, fruits. A1, *Lessertia amajubica* (Ngwenya 2991); A2, *Lessertia excisa* (Ecklon & Zeyher 32792, NBG); A3, *Lessertia harveyana* (Grobelaar 657, PRE); A4, *Lessertia stricta* (Junod 17375, PRE). B1, B2, *Lessertia amajubica*, fruit in top and side views (both Ngwenya 2991, NH); B3, *Lessertia amajubica*, pressed fruit in side view (Ngwenya 2991); B4, *Lessertia excisa*, mature fruit in side view (Zeyher 15507, NBG); B5, *Lessertia excisa*, young fruit in side view (Stirton 6074, PRE); B6, *Lessertia harveyana*, mature fruit in side view (Pienaar 561, PRE); B7, *Lessertia stricta*, mature fruit in side view (Dieterlen 95, NH). Scale bars: 5 mm.

Additional specimens seen

KWAZULU-NATAL.—2730 (Vryheid): Amajuba Dist., Dannhauser Municipality Area, Mbabane River, Fairbreeze Farm, (–CC), Ngwenya 548 (NH). 2830 (Dundee): Fairbreeze Village, above Mbabane River, (–AD), 25 March 2010, Ngwenya 3454 (NH); Dorenkop Village, ± 120 m from the Steildrift to Dannhauser Road, (–CA), Ngwenya 3464 (NH).

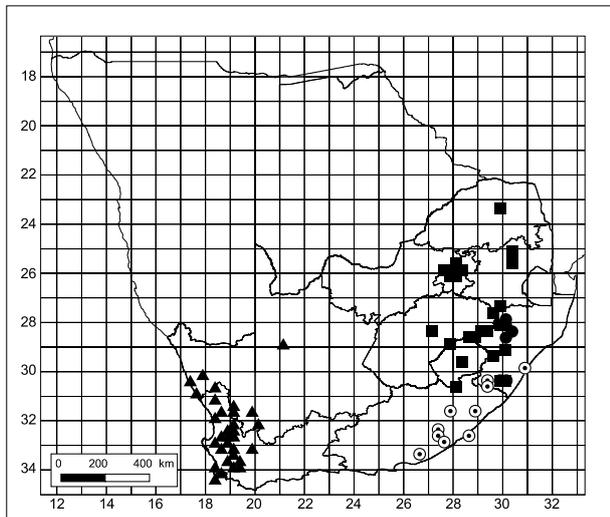


FIGURE 4.—Distribution of *Lessertia amajubica* (●), *L. excisa* (▲), *L. harveyana* (○) and *L. stricta* (■).

ACKNOWLEDGEMENTS

We thank Dr Hugh Glen for translating the diagnosis into Latin. Hester Steyn is thanked for preparing the distribution map. [Editor's note: as from 2012, *Bothalia* only publishes diagnoses in English, in line with the decision taken at the Eighteenth International Botanical Congress, Melbourne, Australia, July 2011 and reflected in the 2012 *International Code of Nomenclature for algae, fungi and plants* (Melbourne Code) that either English or Latin may be used for the diagnosis.]

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TABLE 1.—Major morphological differences between *Lessertia amajubica*, *L. excisa*, *L. harveyana* and *L. stricta*

<i>Characters</i>	<i>Lessertia amajubica</i>	<i>Lessertia excisa</i>	<i>Lessertia harveyana</i>	<i>Lessertia stricta</i>
Inflorescence	Subcapitate	Elongate	Elongate	Elongate
Fruit turgidity	Markedly inflated	Slightly inflated	Slightly inflated	Slightly inflated
Fruit vestiture	Hairy	Glabrous	Glabrous	Glabrous
Fruit shape	Narrowly subfalcate	Broadly subfalcate	Obliquely depressed-ovate	Obliquely obovoid-oblong
Calyx lobe shape	Triangular-oblong	Broadly triangular	Narrowly triangular	Broadly triangular
Calyx hairs	White	Black	White	White
Indumentum	Densely strigose	Copious hairs	Glabrescent	Glabrescent
Leaf length	35–45 mm	40–80 mm	15–25 mm	40–75 mm
Leaflet length	3–7 mm	4–12 mm	7–11 mm	7–15 mm
Pedicle length	1–3 mm	1–2 mm	3–4 mm	5–7 mm