

Novitates Gabonenses 38. Two new species of *Dactyladenia* (Chrysobalanaceae) from Gabon

F.J. BRETELER

Herbarium Vadense,
Foulkesweg 37, 6703 BL Wageningen, The Netherlands.
frans.breteler@algem.pt.wau.nl

KEY WORDS

Dactyladenia,
Chrysobalanaceae,
Gabon,
Myrmecophily.

ABSTRACT

Dactyladenia floretii and *D. jongkindii* are described from Gabon and illustrated. Both species are myrmecophytic. A key is provided to distinguish the new species from their apparent closest relatives.

RÉSUMÉ

Novitates Gabonenses 38. Deux nouvelles espèces de Dactyladenia (Chrysobalanaceae) du Gabon.

MOTS CLÉS

Dactyladenia,
Chrysobalanaceae,
Gabon,
Myrmécophilie.

Dactyladenia floretii et *D. jongkindii* du Gabon sont décrits et illustrés. Les deux espèces sont des myrmécophytes. Une clé est établie pour distinguer ces espèces nouvelles de celles dont elles semblent affines.

When describing the new species *Dactyladenia ndjoleensis* (BRETELER 1999) the possibility was raised that more new species might be discovered in Lower Guinea. This paper describes two new *Dactyladenia* from Gabon, probably the center of botanical richness within that region. Both species are distinguished from all other members of the genus by their stipules, which are transformed into pouches that are inhabited by small ants. Initially it was assumed that all the material exhibiting such stipules belonged to a single new species only (BRETELER & NZABI 1995), but recently acquired specimens from southern Gabon clearly indicate that two species are involved.

Dactyladenia floretii Breteler, sp. nov.

Dactyladeniae jongkindii Breteler *maxime simile, sed bracteolis minoribus 3-palmatilobatis ad invicem 5-palmatilobatis et pedicello infimo multo brevi differt; a speciebus aliis congeneribus stipulis saccatis differt.*

TYPUS. — Breteler, Dibata, Mayombo & Moussavou 14490, Gabon, near Gamba, fl., fr. July (holo-, WAG; iso-, G, LBV, MO, P).

Shrub, lianescent shrub, or liana. Main stem up to 8 cm diam. Branches hispid mixed with short erect hairs or with short erect hairs only, rarely with hispid indumentum only. Stipules saccate, shortly stipitate, slightly curved or straight, ovoid-ellipsoid in outline, (5-)8-20 × (2-)6-8 mm,

glabrous or with some arachnoid hairs sometimes mixed with some hispid hairs, margin distinctly and densely pubescent. Leaves : petiole \pm terete, 2-4(-5) mm long, hairy as branchlets; lamina coriaceous to papyraceous, oblong-elliptic, ovate-elliptic to oblong-obovate, sometimes narrowly so, (6-)10-25(-27) \times (2-)4-7(-8) cm, 2-4(-5) times as long as wide, narrowly and usually deeply cordate at base, acute to shortly and acutely acuminate at apex, the acumen up to 0.5(1.5) cm long; glabrous above usually with some erect hairs or an arachnoid remnant on the impressed midrib, glabrous or hispid beneath especially so on midrib and main laterals, glabrescent or not, the (8-)10-14(15) pairs of main lateral nerves and tertiary venation plane or slightly prominent above, usually prominent beneath; glands \pm flat, present only beneath, at some distance alongside the midrib and some more dispersed ones, more densely concentrated on the leaf apex and near base. Inflorescence a simple, \pm erect raceme, up to 7 cm long, usually axillary, sometimes terminal, few- to many-flowered, puberulous; peduncle with a few empty bracts; bracts ovate-triangular, soon reflexed, 4-5 mm long, arachnoid-hairy and with puberulous midrib beneath, glabrous above, the margin with 1-2 glands on each side, puberulous; lower pedicel (2)4-7 mm long, puberulous. Bracteoles \pm inserted at the top of the lower pedicel, deeply 3-palmatilobate, 1-2 mm long, puberulous, lobes gland-tipped. Upper pedicel 1.5-3 mm long, puberulous; receptacle tube (11-)16-20 mm long, gibbous at base, puberulous, sometimes almost glabrous outside, inside with some hispid hairs at mouth. Sepals ovate-oblong to elliptic, 5-8 \times 2.5-4 mm, with acute to emarginate apex, tomentose inside as well as on the outside parts covered in bud, puberulous to almost glabrous outside; the outer sepals sometimes with a few flat glands. Petals white, early caducous, thin, oblong-elliptic, 10-15 \times 5-8 mm, with a short, glabrous claw, up to 1 mm long. Stamens 20-28, 4-4.5 cm long, glabrous, filaments united for ca. 2/3 of their length; anthers ca. 0.6 mm long. Style slightly longer than the stamens, glabrous, with a small stigma; ovary long-velutinous at apex. Fruit ovoid, narrowly so or not, rounded at both ends, 3.5-6 \times 2-2.5 cm, velutinous and with some longer hispid hairs. — Figs. 1, 2.

PARATYPES. — GABON: *Breteler 9457*, Rabi-Kounga, ster. Mar. (WAG); *Breteler & Jongkind 10219*, eod. loc., ster. Oct. (WAG); *Breteler, Dibata, Mayombo & Moussavou 14435*, Gamba, fl. July (LBV, P, WAG); *J.J. de Wilde & van der Maesen 10907*, Rabi-Kounga, fr. Jan. (WAG); *Floret & Louis 1419*, Mviadi, NW of Kango, fl. Sept. (P, WAG); *Louis 2212*, Mayumba, fl. Oct. (WAG); *Wieringa 1130*, Gamba, ster. June (WAG); *Wieringa & van de Poll 1320*, eod. loc., fl. July (WAG).

NOTE. — This species is named after J.-J. FLORET, the first who recognized that the material he collected with A.M. LOUIS represented a new species.

Dactyladenia jongkindii Breteler, sp. nov.

Dactyladeniae floretii Breteler *maxime simile, sed bracteolis majoribus 5-palmatilobatis ad invicem 3-palmatilobatis et pedicello infimo multo longiore differt; a speciebus aliis congeneribus stipulis saccatis differt.*

TYPUS. — *Breteler & Jongkind 10412*, Gabon, 5-15 km NNW of Ndjolé, fl. Nov. (holo-, WAG; iso-, BR, G, K, LBV, MO, P).

Shrub to treelet, 3-6 m tall. Branches hispid mixed with a puberulous indumentum, glabrescent with age, the same indumentum present on petioles and stipules; young vegetative parts occasionally also covered by a web of white arachnoid hairs. Stipules saccate, \pm ovoid in outline, (6-)10-15(-18) mm long, 4-5 mm in diam., rather sharply narrowed at base, gradually tapering at apex, on distal side from petiole with 1-4 long-stalked glands. Leaves : petiole subterete, 3-5 mm long; lamina oblong to obovate-oblong, 14-25 (-30) \times 5-10 cm, 2.5-3 times as long as wide, narrowly cordate at base, acutely acuminate at apex, the acumen 0.5-1.5 cm long; glabrous above except for the slightly impressed hairy midrib, sparsely short to long-hairy beneath, mainly on the midrib and the (10-)12-15 pairs of main laterals, these plane to slightly prominent above, more distinct and prominent beneath; glands flat to slightly impressed, small, beneath only, some alongside the midrib, others more dispersed, usually more densely concentrated near base and on the acumen. Inflorescence a suberect, simple raceme, 10-15 cm long, many-flowered, puberulous; basal bracts empty, entire to pinnatifid with

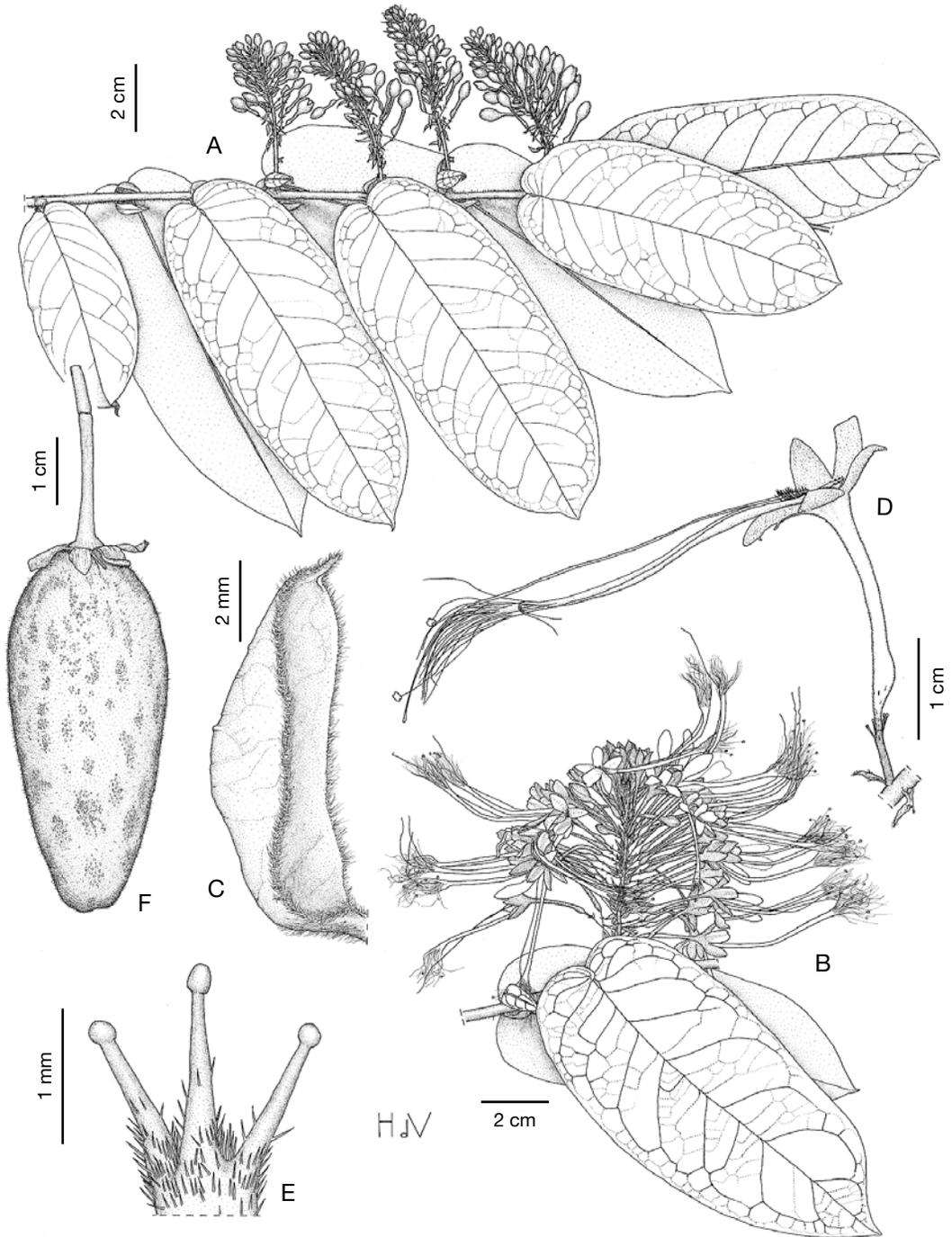


Fig. 1. — *Dactyladenia floretii*: A, leafy branch with erect inflorescences; B, inflorescence; C, stipule; D, flower; E, bracteole; F, fruit. (A, C-E, Breteler et al. 14435; B, F, Breteler et al. 14490). Drawing by H. de VRIES.

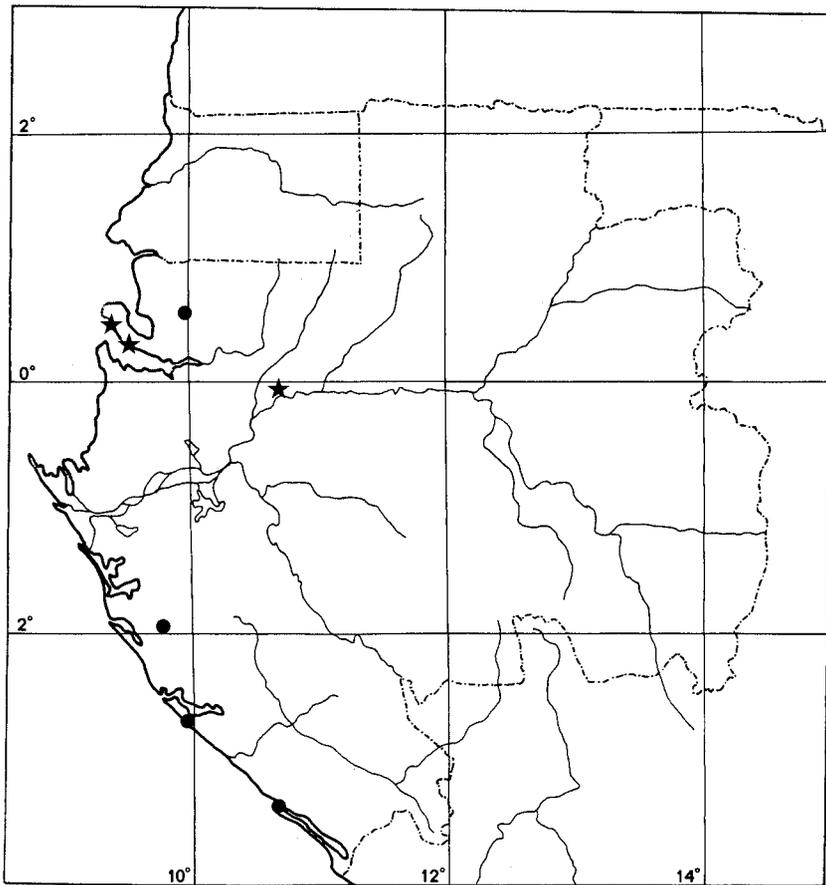


Fig. 2. — Distribution of *Dactyladenia floretii* (●) and *D. jongkindii* (★).

stalked glands near base, higher bracts with sessile glands, narrowly triangular, $\pm 6 \times 2$ mm, soon reflexed, pubescent beneath, \pm glabrous above; lower pedicel 10-16 mm long, puberulous. Bracteoles subopposite to alternate, inserted 2-4 mm below apex of lower pedicel, deeply 5-palmatilobate, 4-6 mm long, lobes gland-tipped, puberulous in basal part; upper pedicel 2-3 mm long, puberulous; receptacle tube 15-17 mm long, gibbous at base, puberulous outside, glabrous inside except for some stiff hairs at mouth. Sepals spreading to reflexed, ovate-elliptic to oblong-obovate, $5-8 \times 3-4$ mm, tomentose inside and on the outside parts covered in bud, puberulous with some hispid hairs outside; outer sepals with up to 4 long-stalked glands on the margin. Petals early caducous, thin, white,

oblong-elliptic to obovate, $11-15 \times 6-7$ mm, glabrous, shortly clawed. Stamens 30-33, 5-6 cm long, glabrous, white; filaments united for ca. $3/4$ of their length; anthers ellipsoid, ca. 0.6 mm long. Style slightly longer than stamens, glabrous, stigma small; ovary velutinous, ca. 1 mm long. Fruits unknown. — Figs. 2, 3.

PARATYPES. — Gabon: *Breteler & Lemmens* 8410, near Libreville, ster. Oct. (WAG); *J.M. & B. Reitsma* 2745, N of Malibé, ster. Dec. (WAG).

NOTE. — This species is named after C.C.H. JONGKIND, with whom the author collected the type specimen.

By the shape of their leaves, especially the cordate base, the simple racemes, and the glandular,

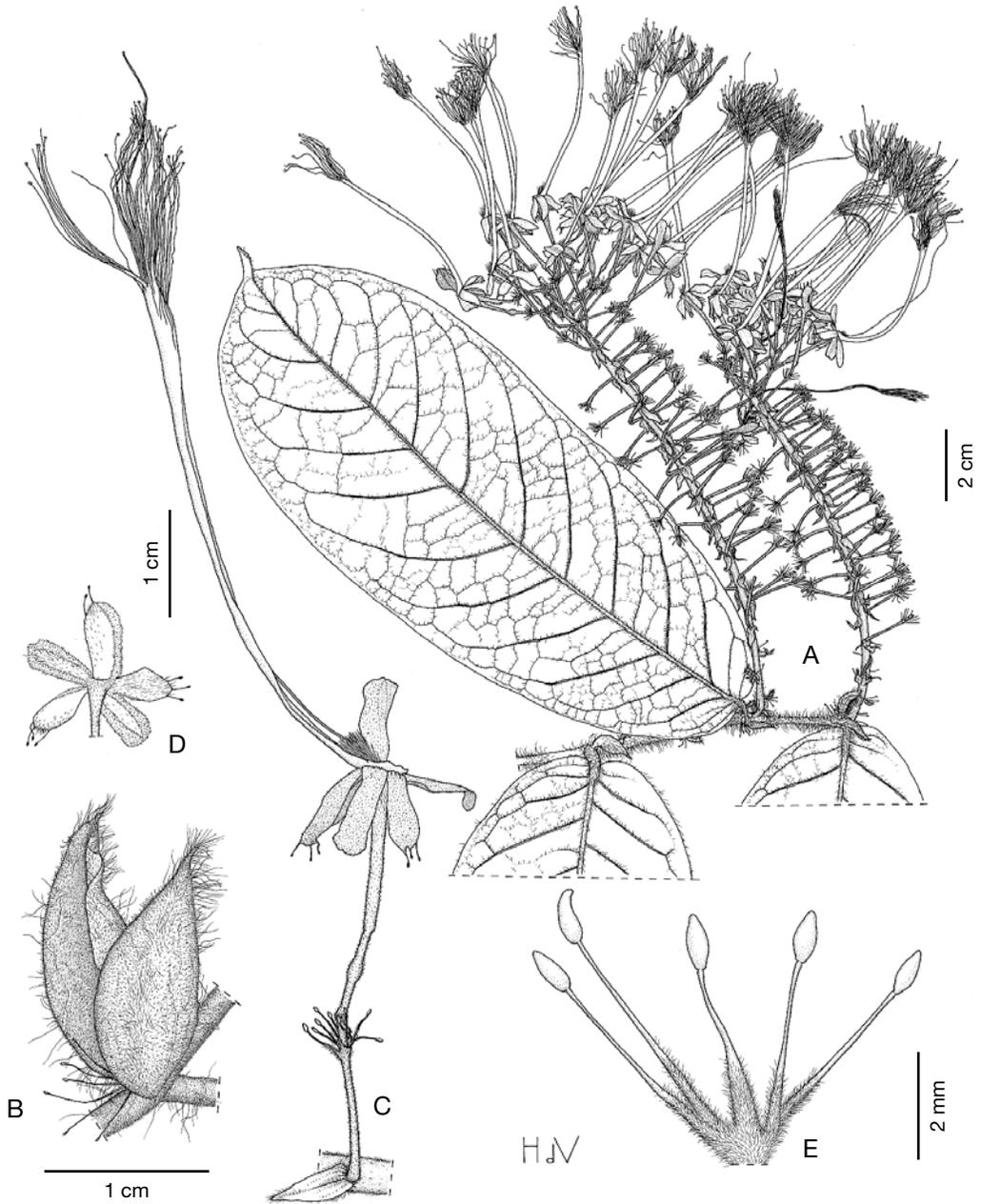


Fig. 3. — *Dactyladenia jongkindii*: **A**, flowering branch; **B**, stipules; **C**, flower; **D**, calyx; **E**, bracteole. (A, C-E, *Breteler & Jongkind 10412*; B, *Breteler & Lemmens 8410*). Drawing by H. de VRIES.

deeply lobed bracteoles, the two new species resemble *D. bellayna* (Baill.) Prance & F. White, *D. campestris* (Engl.) Prance & F. White, and *D. icondere* (Baill.) Prance & F. White. The latter three species are, according to the key by which

they are separated in LETOUZEY & WHITE's treatment of the genus (as *Acioa*) in the Flore du Gabon (1978: 8), closely related. Collectively they may be distinguished from the two new species by the following key:

1. Stipules ± flat, without inrolled margins; lower pedicel glabrous, (10-)15-18(-22) mm long; receptacle glabrous **D. bellayana, D. campestris, D. icondere**
- 1'. Stipules saccate; lower pedicel puberulous, (2-)4-16 mm long; receptacle puberulous, when sparsely so or nearly glabrous then bracteoles 3-palmatilobed 2
2. Stipules with distinct, densely pubescent margins, without stalked glands at base (Fig. 1C); lower pedicel 2-7 mm long; bracteoles 3-lobed, 1-2 mm long **D. floretii**
- 2'. Stipules without densely pubescent margins, ± evenly hairy, with stalked basal glands (Fig. 3B); lower pedicel 10-16 mm long; bracteoles 5-partite, 4-6 mm long **D. jongkindii**

Acknowledgements

I kindly acknowledge the help of R.H.M.J. LEMMENS with the translation of the diagnoses into Latin. I am grateful to H. de VRIES for the nice drawings and to J.-J. FLORET in putting his collection of one of the two new species at my disposal.

REFERENCES

BRETELER F.J. & NZABI Th. 1995. — Novitates Gabonenses 23. *Delpydera* (Sapotaceae), its taxon-

omy and myrmecophily. *Bull. Mus. Natl. Hist. Nat., B, Adansonia* 1-2: 29-38.

BRETELER F.J. 1999. — Novitates Gabonenses 34. — *Dactyladenia ndjoleensis* (Chrysobalanaceae), a new species from Gabon. *Syst. Geogr. Pl.* 69: 111-114.

LETOUZEY R. & WHITE F. 1978. — Chrysobalanacées: 3-138, in AUBRÉVILLE A. & LEROY J.-F. (eds.), *Fl. Gabon* 24. Muséum National d' Histoire Naturelle, Paris.

*Manuscript received 11 February 2000;
revised version accepted 21 March 2000.*