Two new *Plectranthus* species (Lamiaceae) and new distribution records from the Pondoland Centre of Plant Endemism, South Africa

T.J. EDWARDS*

Keywords: Lamiaceae, new species, *Plectranthus* L'Hér., Pondoland Centre of Plant Endemism, South Africa

ABSTRACT

Two newly discovered species of *Plectranthus* L'Hér. are described from the Pondoland Centre of Plant Endemism, on the eastern seaboard of South Africa. *P. brevimentum* and *P. stylesii* are exceedingly narrow endemics known only from their type localities. The known distribution ranges of two other narrow endemics of the region, *P. ernstii* and *P. praetermissus*, are expanded with new distribution records.

INTRODUCTION

The genus *Plectranthus* L'Hér. shows high levels of diversity along the eastern seaboard of South Africa. Speciation in the Pondoland Centre of plant diversity is especially pronounced and is probably the product of stable forest refugia which existed in the deep gorges that slice through the weather-resistant sandstones of the Msikaba Group [South African Committee for Stratigraphy (SACS) 1980]. Their stability is probably mediated by the maritime climate. These gorges are flanked by seasonal sourveld grasslands of high productivity (and the correlated incidence of seasonal fire). Part of the diversity of herbaceous forest species is driven by the truncation of forest habitat and ensuing allopatric speciation which contributes to one of the most important centres of plant diversity and endemism in Africa (Davis et al. 1994). The inability of many *Plectranthus* species to escape these enclaves is the product of desiccation intolerance, susceptibility to fire and the lack of long distance dispersal. This suite of limitations makes the subgenus *Plectranthus* a prime candidate for allopatric speciation and consequently the concentration of neo-endemic species in the Pondoland Centre is not surprising (Van Jaarsveld & Edwards 1991, 1997; Van Wyk & Smith 2001).

*Plectranthus brevimentum* T.J. Edwards, sp. nov., accedit *Plectranthus hilliardiae* labio corollae brevi postico et labio corollae antico obtrullato, tubo corollae moderate elongato, compreso laterali. Differ glandibus plurimis multicellulosius rubropunctatis in partibus omnibus, tubo corollae multo breviore, floribus bicoloribus, albis et magenteis. TYPE.—Eastern Cape, 3129 (Port St Johns); Msikaba River Gorge, ± 4 km from mouth, (+BA), initially collected by D. Styles, ex hort. *Edwards* 3259 (NU holotype; PRE isotype). Semisucculent, erect, decumbent or scendent herb, 0.1-0.5 m tall. Stems purple to dark green, sparsely branched, densely strigose; trichomes purple; capitae glands red or colourless, sessile. Leaves semisucculent, obovate, 30-65 × 10-30 mm, dark green; midrib densely strigose, rubro-punctate, colourless glands near midrib and margins; apex round to notched; base cuneate; margin rubro-strigose, serrate in upper two thirds, teeth in 6 or 7 pairs; petiole purple, 8-12 mm long. Synflorescence terminal, 100-170 mm long, paniculate to secund; cymes 3-flowered; verticels often alternately 3- and 6-flowered; rachis rubro-strigose; lower bracts persistent, elliptical, 8-12 × 4-6 mm, upper bracts lanceolate, 3-4 × 0.5-1.0 mm, rubro-punctate above, rubro-strigose and rubro-punctate below; margins entire, rubro-ciliate; pedicels purple, 4-5 mm long. Calyx green to purple, sparsely rubro-strigose and rubro-punctate; upper sepal ovate, 4.0-4.5 × 2.5-3.0 mm; lower sepal fused, 5 mm long, lobes lanceolate, 3 mm long; tube 2-3 mm long. Corolla 25-30 mm long; tube laterally compressed, 10-12 × 3.5-4.0 mm, white with dense erect glandular trichomes; upper lip 4-lobed, obtrullate 9-10 × 11-12 mm, white with 2 deep magenta central nectar guides, sparsely glandular-strigose outside, lateral auricles 4 mm long; lower lip navicular, 4 mm long, dark pink, sparsely glandular. Stamens 4; filaments free, 2-3 mm long, adnate to corolla throat. Style white, filiform, 13 mm long; stigma purple, shortly bifid, upper lobe 1.0-1.5 mm long, lower lobe 0.5 mm long. Nutlets glabrous. Flowering time: January to March. Figure 1.

This species is only known from material collected by David Styles during a joint botanical expedition to the Lupatana River Gorge in the Eastern Cape (Figure 2). Vegetative material was grown at the University of KwaZulu-Natal Botanical Gardens from which the flowering type specimens were derived.

Plants occur in steep sandstone gorges and flower in late summer. The short lower lip, from which the specific epithet is derived, and the broadly obtrullate upper lip are distinctive characteristics (Figure 1) seen also in *Plectranthus hilliardiae* Codd.

*Plectranthus stylesii* T.J. Edwards, sp. nov., similis *P. verticillato* sed plantae erectae caulisibus rigidis crassis, foliis multo maioribus, et corolla ad faucem manifeste contracta. TYPE.—Eastern Cape, 3129 (Port St Johns); Msikaba River Gorge, ± 4 km from mouth, (+BA), initially collected by D. Styles, ex hort. *Edwards* 3259 (NU holotype; E, GRA, K, NH, PRE isotype). Semisucculent, erect, decumbent or scendent herb, 0.4-0.6 m tall. Stems rigid, 10-15 mm thick below, ini-
tially pale green becoming dark purple; sericeous, rubro-punctate; nodes prominently ciliate. Leaves semisucculent, round to ovate, 50–80 × 40–80 mm, base obtuse to cordate, adaxial surface sparsely rubro-punctate, sessile colourless glands dense, filiform trichomes erect; abaxial surface densely rubro-punctate, filiform trichomes erect; midrib purple; margin serrate in upper two thirds, teeth in 5–8 pairs; petiole purple, 15–25 mm long, rubropunctate. Synflorescence terminal, 150–250 mm long; cymes 3-flowered; basal branches 2–4, verticels often secund, alternately 3- and 6-flowered; rachis strigose, rubro-punctate; bracts persistent, lanceolate, 4–5 × 1–2 mm, glabrescent above, sparsely strigose and rubro-punctate below; margins entire, ciliate; pedicels purple, 3–4 mm long. Calyx green to purple, rubro-punctate; upper sepal ovate, 3–4 × 3–5 mm; lower sepals partially fused, 4 mm long, lateral lobes subulate, 1 mm long, posticus lobes 2–3 mm long; tube 1–2 mm long. Corolla 9–11 mm long, white, with dense, erect, glandular trichomes outside; tube laterally compressed, 8–9 × 3.5–4.0 mm, broadest in the proximal third, throat constricted, 2 mm wide; upper lip 4-lobed, obovate 8–9 × 7–8 mm, white with pale mauve nectar guides, sparsely rubro-punctate outside, lateral auricles 4 mm long; lower lip navicular with inrolled sides, 4–5 × 2 mm, white, densely rubro-punctate outside. Stamens 4; filaments free, 2.5–3.0 mm long, adnate to corolla throat; anthers 1 mm long, purple, connective rubro-punctate. Ovary 4-lobed, glabrous; style white, filiform, 8–9 mm long; stigma shortly bifid. Nutlets ovoid, 1.0–1.25 × 0.8–1.0 mm, glossy, pale to dark brown. Flowering time: March to May. Figure 3.

Plectranthus stylesii strongly resembles P. verticillatus but is distinguished from this procumbent species by its thick, rigid, erect stems and bushy habit; plants grow up to 0.6 m tall without support from adjacent vegetation. The leaves of P. stylesii are much larger (50–80 × 40–80 mm) than those of P. verticillatus (16–40 × 12–40 mm). The corolla of the new species is distinctly constricted at the throat, whereas that of P. verticillatus is only slightly narrowed.

Plectranthus stylesii is known only from the Msikaba River Gorge (Figure 2) where it grows in rocky forested habitats.
Plectranthus ernstii

Plectranthus ernstii Codd was described in 1982 from material collected at Oribi Gorge (Van Jaarsveld 3812) and the species was presumed to be an endemic to that gorge system, rather like P. orbilensis Codd. This assumption seemed plausible due to the succulent, aerial stems of the species which appear to be susceptible to burning. Recent collections, however, extend the known distribution of P. ernstii to Umamvuna Gorge (Potgieter 85) and to Msikaba River (Edwards 3221). It seems probable that the species occurs in the intervening gorge systems as well (Figure 4).

Material examined

KWAZULU-NATAL.—3030 (Port Shepstone): Mtamvuna Nature Reserve, (–CC), ex hort. T. Edwards s.n. Potgieter 85 (NU), Oribi Gorge, view site at Fairacres Farm, (–CA), Potgieter 84 (NU); Van Jaarsveld 3876 (PRE).

EASTERN CAPE.—3129 (Port St Johns): Msikaba River, ± 1 km upstream from the mouth in peripheral forest, (–BA), Edwards 3221 (NU).

Plectranthus praetermissus

Plectranthus praetermissus Codd was described in 1979 after a number of localized collections had been made in the moist subtropical forests which surround Port St Johns. Recently, large populations of P. praetermissus were recorded from the Sakombe Forest near Mbotyi (Edwards & Potgieter 3248) (Figure 4). Here the species occurs in shallow lithosols in south-facing scarp forest in seasonally dry niches.
ACKNOWLEDGEMENTS

Thanks go to Dirk Belstedt and Neil Crouch for co-funding parts of this fieldwork and for their indefatigable interest in the flora of the eastern seaboard of South Africa. Many other people assisted in joint expeditions during which these discoveries were made, including Hildegard Crous, Trish Hutton-Squire, Christina Potgieter, Edna van den Berg and Liesel van der Walt. Thanks to Alan Paton and Ernst van Jaarsveld for their suggestions. The line drawings were done by Linda Davis. Mike Lambert is thanked for his continued assistance with the Latin translations.

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