

A NEW SPECIES OF *ERAGROSTIS* (CHLORIDEAE) IN THE *E. CURVULA* ALLIANCE

Eragrostis comptonii De Winter, sp. nov., *E. planiculmi* affinis sed culmis teretibus gracilibus nervosis, non complanatis, caespite basin systemate ramoso rhizomatium brevium, inflorescentia apertiori, ramulis ultimis patentibus, spiculis (2)3 vel 4(5)-floris differt. Gregi *E. curvulae* affinis, ut ab hybridis putativis inter taxa duo indicatum.

TYPE. — Swaziland, 2631 (Mbabane), hill NE of Mbabane, alt. 4000' (555,2 m), 13.3.1957, *Compton 26766* (PRE, holo.; NBG, Swaziland Herbarium, iso.).

This species is named in honour of Prof. R.H. Compton who has contributed more than any other person to the expansion of the knowledge of the flora of Swaziland, and by whom the type specimen as well as several other specimens of this new species was collected.

Perennial up to 1,1 m high (usually about 700 mm), forming dense, fine-leaved tufts from a system of short, branched, knotty rhizomes, densely clothed by short cataphylls. Culms thin to very slender, 1,0 to 1,5 mm in diameter, glabrous, strictly erect, wiry. Nodes (4–)8 or 9 per culm, hidden by the leaf sheaths. Internodes 3 or 4, basal ones very short (4–6 mm) increasing abruptly in length upwards, the upper about 100 mm long, glabrous. Leaves 4–9, borne mainly on the culms. Leaf sheaths increasing in length upwards on the culm, much longer than the internode it subtends, glabrous. Collar inconspicuous, the blade rather gradually merging into the

sheath. Auricles very finely scabrid on the margin, pallid or purplish. Ligule a very short fine line of bristly hairs. Leaf blades up to 500 mm long, usually 300–400 mm; when expanded up to 4 mm wide at the base; mostly convolute, the rolled leaf very narrow, ending in a filiform apex; glabrous and smooth abaxially, very finely and densely scabrid adaxially; primary nerves up to 11, alternating with (2)3 or 4 secondary nerves; strongly raised adaxially and scabrid with very fine spines. Inflorescence a diffuse open panicle, with green or purplish, filiform, glabrous or finely scabrid branches; branches patent, the spikelets borne terminally and discretely (not clustered). Spikelets borne on filiform pedicels (3)4–8 mm long; (2)3 or 4(–6)-flowered. Glumes somewhat unequal to subequal; 1-nerved, firmly membranous, boat-shaped, lanceate in outline, $\pm 1,5$ mm long; apex acute. Lemmas gunmetal-grey, 1,25–1,50 mm long, 3-nerved, boat-shaped, broadly ovate in outline with a subacute apex. Palea $\pm 1,25$ –1,50 mm long, greyish, submembranous, bicarinate, the keels curved. Lodicules 2, $\pm 0,3$ mm long, fleshy, truncate. Stamens 3; anthers ± 1 mm long, linear, yellow. Pistil $\pm 0,8$ mm long; ovary ovoid; styles 2; stigmas narrowly and sparsely plumose. Caryopsis ovoid to ovoid-oblate, 0,8–1,0 mm long, dark chestnut-brown, semitranslucent; embryo nearly half the length of the grain, broadly oblong in outline; hilum basal, punctiform.

SWAZILAND. — 2631 (Mbabane): Malolotja Nature Reserve, 10.3.1986 (–AA), *Braun 60* (PRE); 22 km NE of Mbabane on road to Mapalaleni (–AA), *De Winter 9816* (cult. in PHBG) (PRE); hill NE of Mbabane, 2.3.1959 (–AC), *Compton 28551* (PRE); hill NE of

Mbabane, shade of rocks, 20.2.1958 (–AC), *Compton 27551* (PRE); hill NE of Mbabane, 5.4.1965 (–AC), *Compton s.n.*; 7 km NE of junction of Mbabane-Manzini roads on the Tea Road, 12.6.1985 (–AC), *De Winter 9877* (cult. in PNBG) (PRE).

The presently known distribution of the species is limited to Swaziland in the vicinity of Mbabane. Its ecology is poorly known. Judging from the notes on specimens it tends to favour somewhat shady places such as at the foot of rocks or on forest margins.

There are strong indications from studies of populations in the field that *E. comptonii* hybridizes with *E. curvula sens. lat.* The presence of short knotty rhizomes in 'typical' specimens of *E. comptonii*, a feature which is relatively rare in the genus and always absent in *E. curvula*, first drew attention to the existence of this species. Many of the specimens collected near the type locality are intermediate between the two species. This may be part of the explanation for the occurrence of forms of *E. curvula* with thin wiry very erect culms which occur in the Mbabane area in Swaziland. The habitats favoured by *E. comptonii*, seem to be partially shady, relatively moist and relatively stable, whereas the putative hybrids are found in disturbed areas, as is usual for most populations of *Eragrostis curvula sens. lat.* More intensive investigations into the variable populations of *E. curvula* in the eastern highlands are needed, particularly concerning certain *E. curvula* forms which have lax open inflorescences. *Eragrostis planiculmis* Nees, a species known to hybridize with *E. curvula sens. lat.*, has lax, open, nebulous inflorescences with slender spikelets and very robust flattened culms unlike those of the putative hybrids. The distribution of the aberrant forms, moreover, is discordant with the wider area of overlap of the distribution of *E. curvula sens. lat.* and *E. planiculmis*. *E. planiculmis* is therefore an unlikely candidate parent.

Another species regarded as a putative parent which could have contributed to the lax open inflorescences of *E. curvula sens. lat.* by hybridization, namely *E. chloromelas*, has a present day distribution which makes the possibility of a link with the eastern highland forms very remote.

Before the discovery of *E. comptonii* the origin of these forms with lax inflorescences and wiry culms was therefore, very puzzling. *E. comptonii*, on the other hand, possesses all the features necessary to explain both the distribution and the particular pattern of variability of *E. curvula sens. lat.* in certain parts of the eastern highlands. The hypothesis that *E. comptonii* played a role in the establishment of *E. curvula* types with wiry culms and open inflorescences in the Mbabane and adjacent areas of the eastern highlands should be tested experimentally.

Examples of putative hybrids between *E. curvula sens. lat.* and *E. comptonii* are *De Winter 9813*, *9811* and *9812*. The first closely resembles *E. comptonii* but lacks rhizomes, whereas *9811* and *9812* are progressively more like *E. curvula*. *Dlamini s.n.*, collected on 5.4.1965, also has intermediate characters.

The description of this species forms part of the study of the *Eragrostis curvula* complex, which is being undertaken by the author and a number of collaborators.

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