A new species of Cyperus subg. Pycreus (Cyperaceae) from Somalia

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Abstract

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Cyperus micropelophilus is described as a species new to science, illustrated, and compared to *C. pelophilus* and *C. pseudohildebrandtii*.

The genus *Cyperus* is one of the largest and most difficult genera in tropical Africa. In the arid and semi-arid regions of Somalia it is represented by more than eighty species (Lye 1995).

In many regional floras (Clarke 1901, Chermezon 1937, Hooper & Napper 1972, Koyama 1978, 1985, Adams 1994), *Cyperus* subg. *Pycreus* (P. Beauv.) C. B. Clarke (1884) is treated as a separate genus *Pycreus* P. Beauv. (Palisot de Beauvois 1816). However, when studied on a world-wide basis it is evident that this genus is heterogeneous and of polyphyletic origin, as was shown for *Mariscus* by Lye (1992), and that it is, in the narrower sense, better considered as a subgenus of *Cyperus,* as was done by Kükenthal (1936), Kern (1974), Haines & Lye (1982) and Tucker (1983). DeFilipps (1980), on the other hand, regarded *Pycreus* as merely a section of *Cyperus.* Agreement is not expected until more extensive molecular data become available.

In Somalia, *Cyperus* subg. *Pycreus* is represented by four taxa; these are the pantropical *C. macrostachyos* Lam., the tropical African *C. pumilus* var. *patens* (Vahl) Kük., the otherwise SW Asian *C. dwarkensis* Sahni & Naithani, and a recently discovered endemic of S Somalia, *C. micropelophilus*; the latter species, without validation of its name already included in the author's treatment of the *Cyperaceae* in the "Flora of Somalia" (Lye 1995: 145), is formally described here.

Cyperus micropelophilus Lye, **sp. nova** – Fig. 1A-C, 2.
Holotype: Somalia, Bay region, Bur Akaba inselberg, 2°48′ N, 44°05′ E, 20.6.1983, *J. B. Gillett & C. F. Hemming 24892* (K).

Herba annua. Culmus 5–20 cm altus. Anthela simplex laxa 2–8 radiata. Spiculae 2–10 mm longae et 1–2 mm latae, 10–25 florae. Squamae 1.1–1.3 mm longae. Nux 0.6 mm longa.

Tufted slender annual with few to numerous culms. Culms 5–20 cm long and about 1 mm thick, triangular, glabrous, with 2–3 leaves in lower half. Leaf blades 5–15 cm long and 1–3 mm wide,

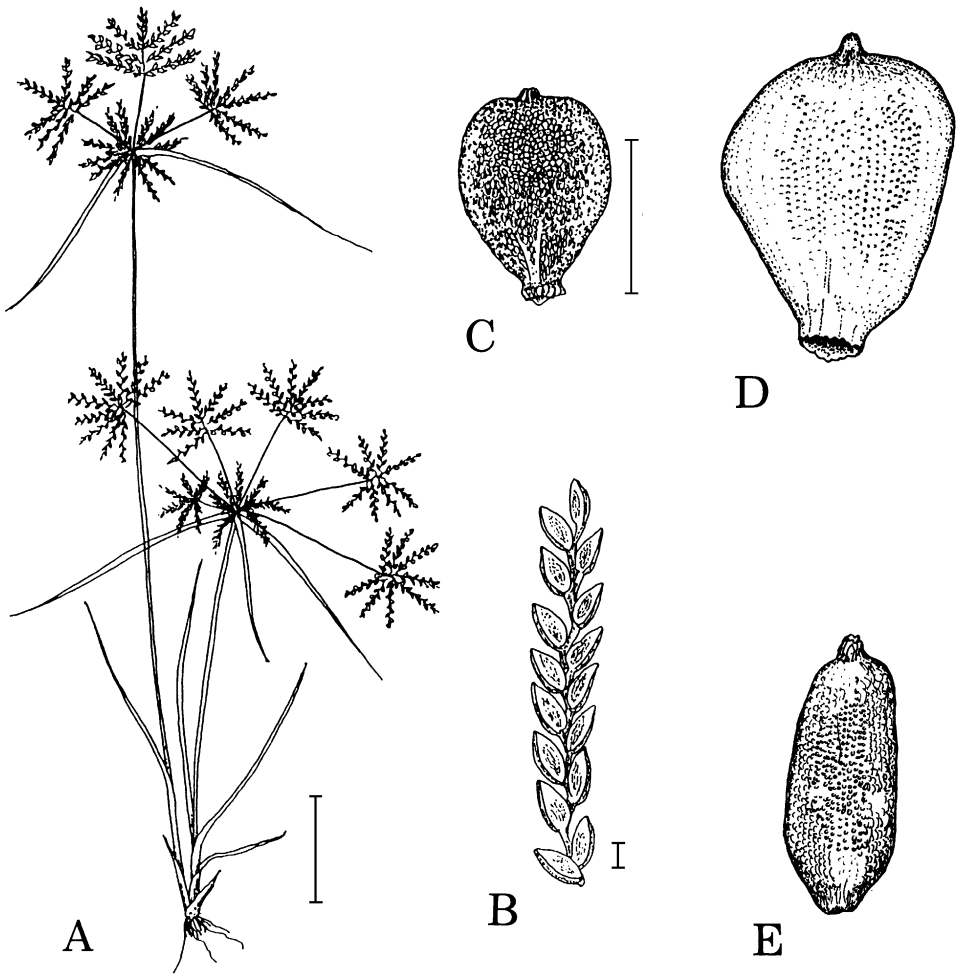

Fig. 1. A-C: *Cyperus micropelophilus* – A: habit,B: spikelet, C: nutlet; A-C from the holotype; D: *Cyperus pelophilus* – nutlet, from *Lye 5594*; E: *Cyperus pseudohildebrandtii* – nutlet, from *Drummond & Hemsley 1166*. – A: scale = 2 cm, B: scale = 1 mm, C-E: to the same scale = 0.5 mm. – Drawn by Gerd Mari Lye.

Tab. 1. The differentiating characters between *Cyperus micropelophilus* and related species.

	C. micropelophilus	*C. pelophilus*	*C. pseudohildebrandtii*
Glumes:			
size [mm]	1.1–1.3	1.7–2.0	1.2–1.5
colour	reddish brown	golden brown	reddish brown
apex	obtuse	acute	obtuse
Nutlets (Fig. 1C-D):			
size [mm]	0.6 × 0.5	1.0 × 0.8	0.9 × 0.4
shape	compressed obcordate	compressed obcordate	subterete cylindrical
symmetry	symmetrical	oblique	symmetrical

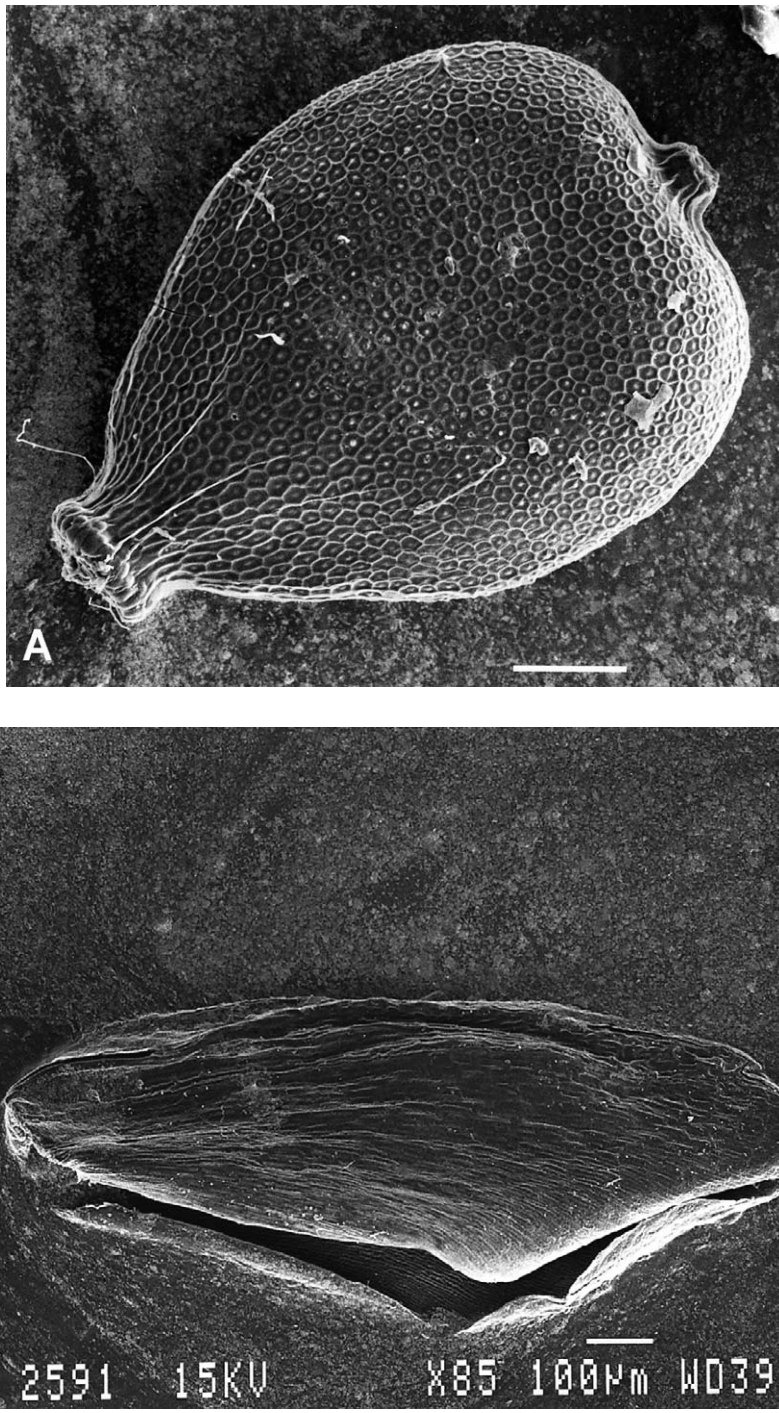

Fig. 2. *Cyperus micropelophilus* – A: nutlet; B: glume. – SEM photographs from the holotype, scale = 1 mm.

flat, scabrid at least on margin; sheaths rather loose, grey to purple. Inflorescence lax, 2–5 cm wide, consisting of one central sessile cluster of spikelets and 2–8 stalked clusters of spikelets; the largest peduncle 2–5 cm long. Spikelets 2–10 mm long and 1–2 mm wide, linear, reddish brown with 10–25 closely overlapping glumes. Glumes (Fig. 2B) 1.1–1.3 mm long, ovate, reddish brown with green midrib ending below the obtuse apex. Nutlet (Fig. 1C, 2A) about 0.6 mm long and 0.5 mm wide, obovate to squarish, flattened, dark reddish brown, minutely papillose.

Distribution and habitat: Seasonally damp habitats on inselberg, 200–350 m. Very rare. Endemic to S Somalia. Only known from the type collection.

This Somalian species is somewhat intermediate between *Cyperus pelophilus* Ridl. and *C. pseudohildebrandtii* Kük., which are both not distributed in Somalia. The differentiating characters are given in Tab. 1.

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References

Adams, C. D. 1994: *Pycreus* P. Beauv. – Pp. 440–442 in: Davidse, G., Sousa, M. & Chater, A. O. (ed.), Flora mesoamericana **6.** – México.

Chermezon, H. 1937: Cypéracées. – In: Humbert, H. (ed.), Flore de Madagascar, 29e famille. – Tananarive.

Clarke, C. B. 1884: On the Indian species of Cyperus. – J. Linn. Soc., Bot. **21:** 1–202.

— 1901: *Cyperaceae.* – Pp. 266–384 in: Thiselton-Dyer, W. T. (ed.), The flora of Tropical Africa **8.** – London.

DeFilipps, R. A. 1980: *Cyperus.* – Pp. 284–288 in: Tutin, T. G., Heywood, V. H., Burges, N. A., Moore, D. M., Valentine, D. H., Walters, S. M. & Webb, D. A. with assist. of Chater, A. O. & Richardson, I. B. K. (ed.), Flora europaea **5.** – Cambridge, etc.

Haines, R. W. & Lye, K. A. 1983: The sedges and rushes of East Africa. – Nairobi.

Hooper, S. S. & Napper, D. M. 1972: *Cyperaceae.* – Pp. 278–349 in: Hepper, F. N. (ed.), Flora of West Tropical Africa, ed. 2, **3(2).** – London.

Kern, J. H. 1974: *Cyperaceae.* – Pp. 435–753 in: Steenis, C. G. G. J. van (ed.), Flora malesiana, ser. 1, **7(3).** – Leyden.

Koyama, T. 1978: *Cyperaceae.* – Pp. 191–371 in: Li, H.-L., Liu, T.-S., Huang, T.-C., Koyama, T. & DeVol, C. E. (ed.), Flora of Taiwan **5.** – Taipei.

— 1985: *Cyperaceae.* – Pp. 125–405 in: Dassanayake, M. D. & Fosberg, F. R. (ed.), A revised handbook to the flora of Ceylon **5.** – New Delhi.

Kükenthal, G. 1936: *Cyperaceae-Scirpoideae-Cypereae*. – Das Pflanzenreich **101.** – Leipzig.

Lye, K. A. 1992: The history of the genus *Mariscus (Cyperaceae).* – Lidia **3:** 37–72.

— 1995: *Cyperaceae.* – Pp. 98–147 in: Thulin, M. (ed.), Flora of Somalia **4.** – Kew.

Palisot de Beauvois, A. M. F. J. 1816: Flore d'Oware et de Bénin, en Afrique **2.** – Paris.

Tucker, G. C. 1983: The taxonomy of *Cyperus (Cyperaceae)* in Costa Rica and Panama. – Syst. Bot. Monogr. **2.**

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