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# Two new species of *Fuirena* (Cyperaceae) from Somalia

KAARE ARNSTEIN LYE

## RÉSUMÉ

LYE, K. A. (1996). Deux espèces nouvelles de *Fuirena* (Cyperaceae) de Somalie. *Candollea* 51: 1-5. En anglais, résumés anglais et français.

Deux espèces nouvelles, *Fuirena boreocoerulescens* Lye, proche du complexe *F. coerulescens* d'Afrique du Sud, et *F. striatella* Lye, proche de *F. wallichiana* Kunth d'Inde, sont décrites. Ces deux espèces ont des aires de distribution restreintes dans les montagnes du nord de la Somalie, entre 1350 et 1500 m d'altitude.

## ABSTRACT

LYE, K. A. (1996). Two new species of *Fuirena* (Cyperaceae) from Somalia. *Candollea* 51: 1-5. In English, French and English abstracts.

*Fuirena boreocoerulescens* Lye, related to the South African *F. coerulescens*-complex, and *F. striatella* Lye, related to *F. wallichiana* Kunth from India, are described as new. Both species have very restricted distributions in the mountains of Northern Somalia at altitudes ranging from 1350 to 1500 m.

**KEY-WORDS:** CYPERACEAE — *Fuirena* — Somalia — Africa — Taxonomy.

Due to the publication of Cyperaceae for "Flora of Somalia" (ed. M. Thulin), it is necessary to publish two new species of *Fuirena*.

***Fuirena boreocoerulescens* Lye, spec. nova, Fig. 1A-F & 2.**

**Type: Somalia. Sanaag region:** Markat, 48°30'E & 10°59'N, in clay flush, 1460 m, 12 Aug 1957, J. G. Newbould 883 (K, holo).

*Herbae perennes. Rhizoma horizontaliter repens lignosum crassum in intervallis brevibus culmos florentes emittens. Culmus 20-40 cm altus rigidulus trigonus dense pubescens. Spiculae 6-10 mm longae et 4-5 mm latae oblongo-ellipticae multiflorae. Squamae 2.0-2.5 mm longae pubescentes dense imbricatae; apice mucronatae. Setae hypogynae 3. Squamellae hypogynae 3 membranaceae. Nux 1.0-1.2 mm longa.*

Slender perennial with a horizontally creeping rhizome 2-3 mm thick with culms at about 5 mm intervals, rarely crowded. Culms 20-40 cm long and 1-2 mm thick (but sometimes 0.6-0.9 mm thick below the inflorescence); triangular, minutely pubescent with mostly adpressed hairs (most densely hairy below the inflorescence); the hairs about 0.1 mm long only. Leaves 4-6 and spaced all along the culm; the lowermost with a short triangular limb only, other with well developed blades; the largest blade 10-20 cm long and 3-5 mm wide, minutely short hairy on margin at least above, becoming glabrescent with age; sheaths glabrous, the lowermost brownish, the other green; ligule 1-2 mm long, cylindrical, glabrous, pale but with orange or reddish brown minute gland-dots. Inflorescence a terminal cluster of 3-10 crowded spikes subtended by 2-3 leaf-like involucre bracts

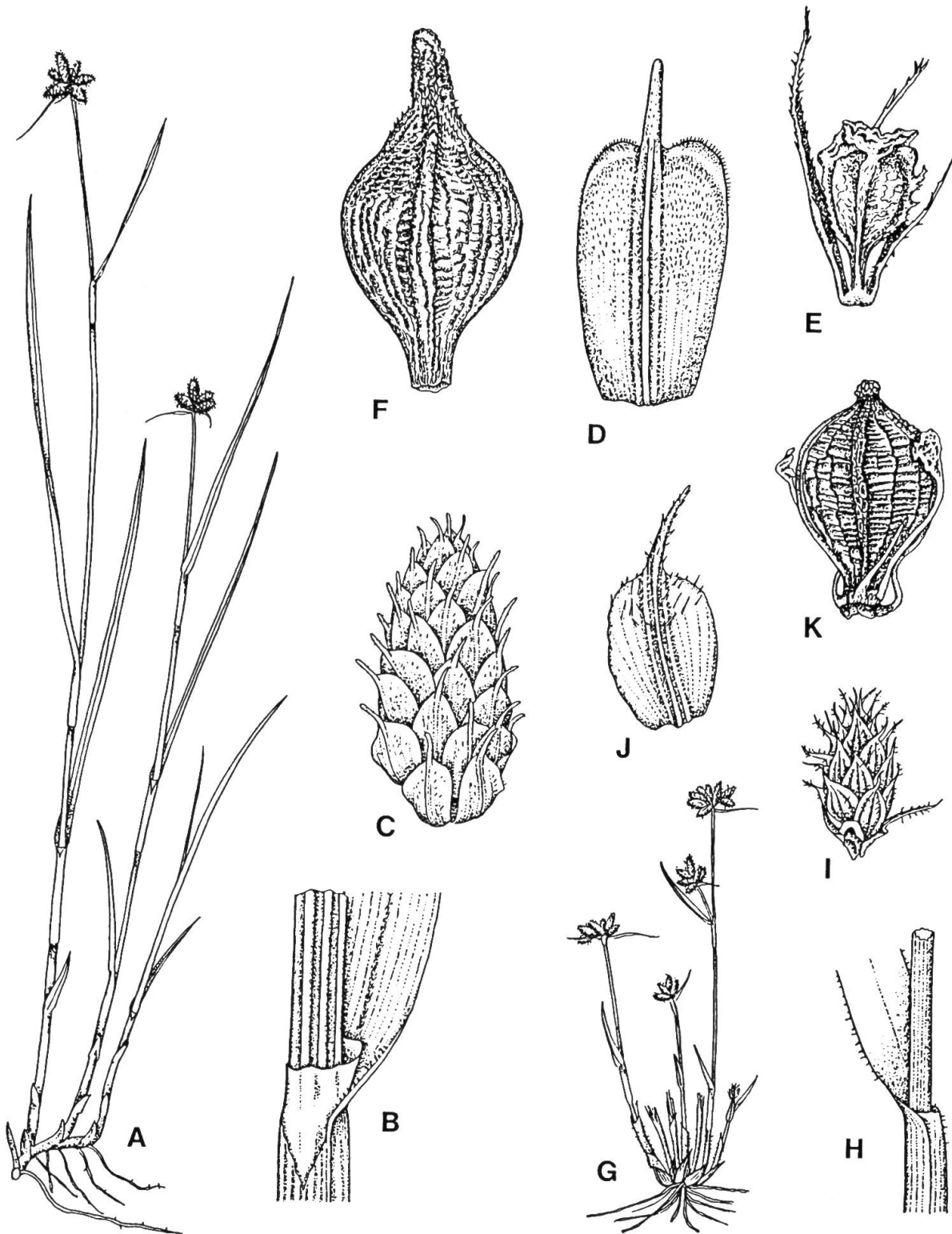


Fig. 1. — A-F: *Fuirena boreocoerulescens* Lye, from *Newbould 883*. A: habit  $1/2\times$ ; B: part of culm with base of leaf-blade with ligule  $5\times$ ; C: spikelet  $5\times$ ; D: glumes  $15\times$ ; E: perianth  $15\times$ ; F: nutlet  $15\times$ . G-K: *F. striatella* Lye, from *Newbould 861*. G: habit  $1/2\times$ ; H: part of culm with base of leaf-blade with ligule  $5\times$ ; I: spikelet  $5\times$ ; J: glume  $15\times$ ; K: nutlet with perianth  $15\times$ . — Drawn by Gerd Mari Lye.

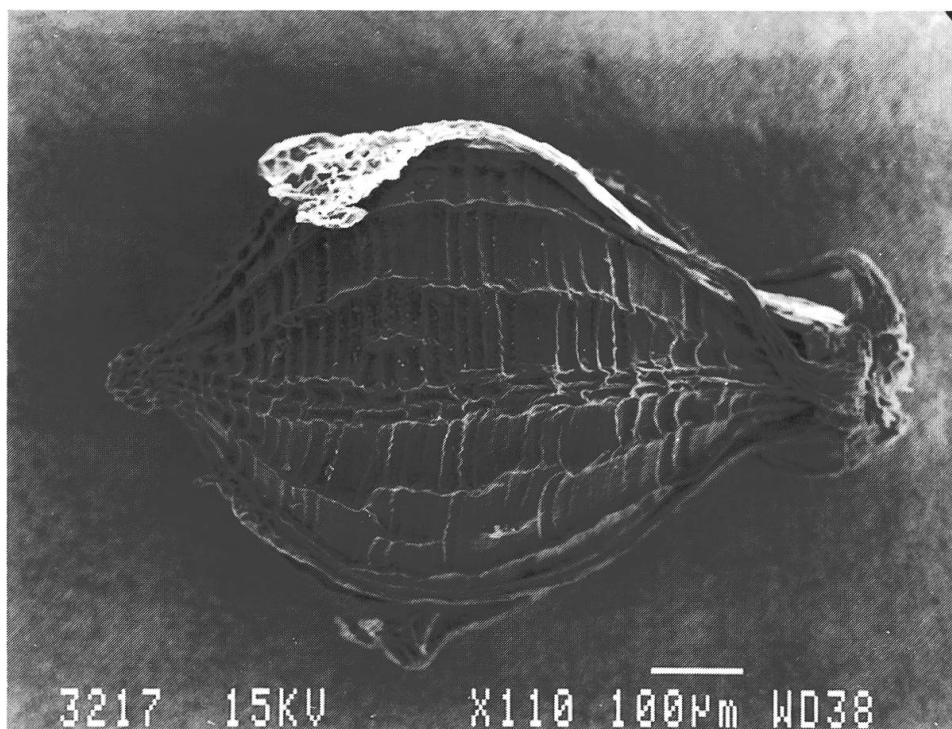
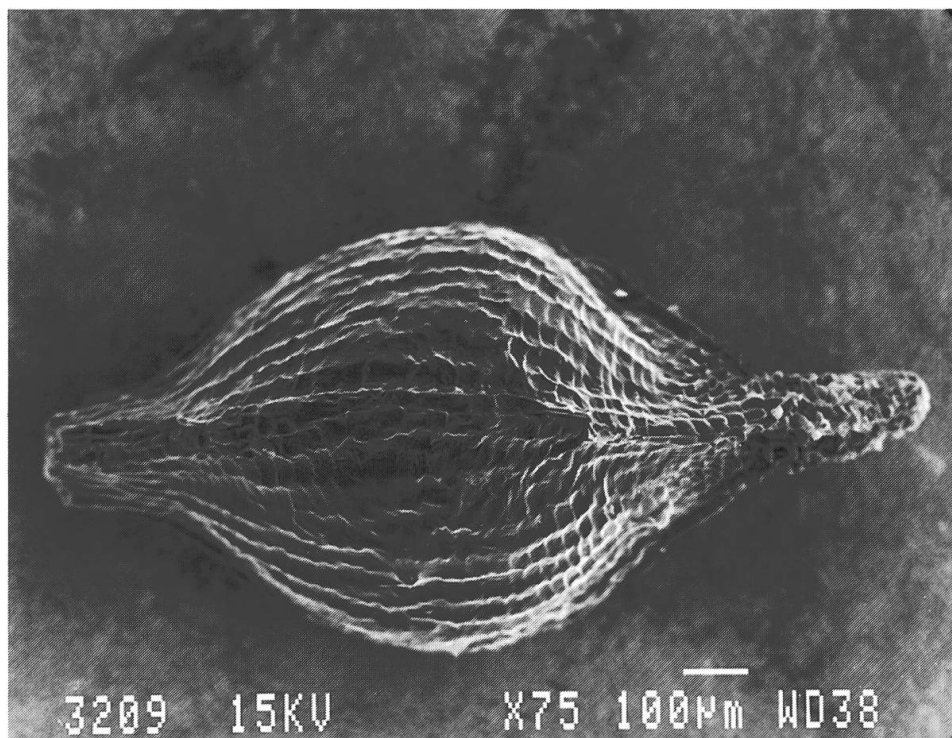


Fig. 2. — *Fuirena boreocoerulescens* Lye. Achene, scale 0.1 mm. SEM photograph from the holotype *Newbould 883*.

Fig. 3. — *Fuirena striatella* Lye. Achene, scale 0.1 mm. SEM photograph from the holotype *Newbould 861*.

0.5-3 cm long. Spikes 6-10 mm long and 4-5 mm wide, oval-elliptic with obtuse apex and with 40-60 densely imbricate glumes. Glumes 2.0-2.5 mm long (excluding the 0.7-1 mm long mucro) and 1.2-1.5 mm wide, rectangular, light reddish brown below, greyish above, but often with reddish brown lines, minutely short-hairy both on surface and margin; the midrib 3-nerved, slender, but thickened at apex and excurrent into a thick brown straight hairy mucro. Perianth segments 6; the three outer light reddish brown, hairy, filiform or somewhat flattened in the lower middle part, 1-2 mm long and of very unequal length; the three inner (or at least one) with a well developed obovate stalked light reddish brown blade irregularly thickened and crisped above; the midrib prominent, usually excurrent into an about 0.5 mm long filiform hairy awn; the margin short-hairy or more commonly with hairy lobes or thickenings. Stamens 3; filaments about 2 mm long, flattened, light reddish brown; anthers about 1.5 mm long and 0.3 mm wide, linear, light reddish brown with a short darker connective. Style 1.5-2 mm long with 3 long very hairy branches. Achene 1-1.2 mm long and about 0.7 mm wide, light reddish brown, triangular-oval with cuneate base and tip; the apex glabrous or slightly hairy; the surface cells prominent, isodiametric to rectangular with darker cell walls.

In open grassy area on clay and in clay flush, 1350-1500 m. Endemic to the Sanaag region in northern Somalia, but closely related species occur in South Africa (*Fuirena coerulescens* — complex).

*Other specimens examined.* — **Somalia. Sanaag region:** Escarpment SE of Laasqoray, near Ragad, 48°29'N & 11°00'N, open grassy area on clay on limestone with evergreen bushland with *Buxus* and *Cadia*, 1350 m, 16 Jan 1995, *M. Thulin, A. Dahir & A. Hassan 9085* (K, UPS).

***Fuirena striatella* Lye, spec. nova, Fig. 1 G-K & 3.**

**Type: Somalia. Sanaag region:** Ragad, 48°30'E & 10°57'N, clay flush, 1370 m, 11 Aug 1957, *J. G. Newbould 861* (K, holo).

*Herbae annuae, pubescentes. Culmus 2-10 cm altus trigonus vel teres glabrescens. Spiculae 4-5 mm longae et 2-3 mm latae ovatae multiflorae. Squamae 1.5 mm longae pubescentes dense imbricatae; apice mucronatae (mucro ad 1.0 mm longa). Setae hypogynae 3. Squamellae hypogynae 3 minutae. Nux 0.8-1.0 mm longa.*

A small tussocky annual with few-many crowded culms. Culms 2-10 cm long and about 1 mm thick, but perhaps much longer when not heavily grazed, often almost terete with longitudinal ridges, glabrous or with a few stiff hairs. Leaves 3-5; the lowermost without or with very short blade; sheaths light reddish brown, brownish or green, densely short-hairy with spreading hairs, but uppermost sheaths usually glabrescent; ligule about 1 mm tall, densely short-hairy to glabrous; blades probably to 20 cm or more long and 2-5 mm wide, rather thick, hairy on margin and sometimes on upper surface also. Inflorescence a terminal cluster of 3-10 crowded sessile or subsessile spikelets, sometimes with an additional stalked spikelet-cluster from the uppermost sheath of the stem. Spikes 4-5 mm long and 2-3 mm wide, oval with obtuse apex, with 20-40 densely imbricate glumes. Glumes about 1.5 mm long (excluding the up to 1 mm long mucro), oval-elliptic, reddish brown to greyish, hairy particularly near margin and on the excurrent greenish midrib. Perianth-segments usually six, whitish; the three outer filiform, often curved and only 0.2-0.3 mm long; the three inner about 0.8 mm long, filiform below, but ending in a minute irregular or anchor-like lamina only about 0.2 mm wide. Achene 0.8-1 mm long and about 0.5 mm wide, obovate, obtusely triangular, light reddish brown with longitudinally raised ribs and narrow rectangular surface cells between the ribs.

In clay flush with heavily grazed vegetation, 1350-1400 m. Endemic; only known from the type from the Sanaag region in Northern Somalia. Its nearest relative, *F. wallichiana* Kunth, occurs in India.

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