

Studies in Cyperaceae in southern Africa: II. A new species of *Fuirena* Rottb.

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Fuirena tenuis P.L. Forbes, a new species which has been found at a high altitude in the eastern Cape Province and Lesotho, is described and illustrated.

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Fuirena tenuis P.L. Forbes, 'n nuwe spesie van 'n hoë terrein in Oos-Kaap en van Lesotho, word beskryf en geïllustreer.

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Description

Fuirena tenuis P.L. Forbes, sp. nov. a *F. coerulescenti* Steud. rhizomate tenui, glumis sparse puberulis, achenio trabeculato stipitato longirostri, distinguenda.

Rhizoma elongatum tenue 1,0–1,5 mm diametro, culmis usque ad 10 mm sepositis. *Culmi* usque ad 160 mm alti, ca. 1,0 mm diametro, 3-angulati, glabri vel ad apices spatio brevissimo puberuli. *Foliorum vaginae* glabrae vel longitudinaliter a hiatu inter insertiones marginum laminarum versus nodum puberulae; *ligulae* puberulae glabrescentesve; *laminae* usque ad 100 mm longae, 2,0 mm latae, erectae vel suberectae, plerumque V-formatae transverse sectae, glabrae vel marginibus carinisque apices versus puberulis, raro nervo medio adaxialiter hispidulo-puberulo. *Inflorescentia* pseudolateralis capitata, e spiculis paucis constans; bractea ima erecta, spiculas superans, ad basin brevissime vaginans vel evaginans. *Spiculae* usque ad 8,5 mm longae, 3,0 mm latae (aristis exclusis), anguste ovoideae vel ellipsoideae, apice acuto. *Glumae* sparsim et minute puberulae, omnes fertiles vel duae basales steriles quarum infima longiaristata, secunda mutica; glumae fertiles ca. 4,0–4,5 mm longae (aristis inclusis), subcarinatae 3-nerves, aristis subterminalibus rectis 0,6–1,0 mm longis. *Verticillus hypogynus exterior* e setulis 3 retrorse glochideis constans. *Verticillus hypogynus interior* e squamellis 3, achenio circa aequilongis, constans. *Squamellarum ungues* breves glabri; *laminae* ellipticae, nervo medio prominenti glebuloso, margine lobato glebuloso, ala fimbriata submarginali in pagina interiore affixa; *aristae* retrorse glochideae. *Stamina* 3; antherae lineares 2,0–2,4 mm longae. *Achenium* stipitatum longirostre, circa 2 mm longum (rostrum et stipite inclusis), late ellipsoideum trigonum trabeculatum, cellulis extimis transverse elongatis (rostrum angulis stipite exclusis).

TYPE. — Cape Province, southwest outskirts of Barkly East, *Acocks 20146* (PRE, holotype; K, isotype).

Rhizome elongate, slender, 1,0–1,5 mm in diameter. *Culms* up to 10 mm apart on rhizome, up to 160 mm high, ca. 1,0 mm in diameter, 3-angled, glabrous or with small puberulous area at apex. *Leaf sheaths* glabrous or with longitudinal puberulous band from gap between insertion of leaf blade margins towards node; *ligules* puberulous to glabrescent; *leaf blades* up to 100 mm long, 2 mm wide, erect or suberect, usually V-shaped in transverse section, glabrous or with short hairs on distal part and rarely on adaxial side of midrib. *Inflorescence* a pseudolateral head of few spikelets,

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lowest bract erect, overtopping spikelets, shortly vaginant or evaginant at base. *Spikelets* up to 8,5 mm long, 3,0 mm wide (awns excluded), ovoid or ellipsoid, apex acute. *Glumes* sparsely and minutely puberulous, all fertile or two basal sterile, lowest of which long-awned, upper mucous; fertile glumes 4,0–4,5 mm long (awn included), subcarinate; awn

straight. *Outer hypogynous whorl* comprising 3 retrorsely barbed bristles. *Inner hypogynous whorl* comprising 3 stipitate aristate scales approximately equal to nutlet in length. *Scale claw* short, glabrous; *blade* elliptic with projecting glebulose midrib, lobed glebulose margin and sub-marginal fimbriate wing inserted on inner surface; *awn*

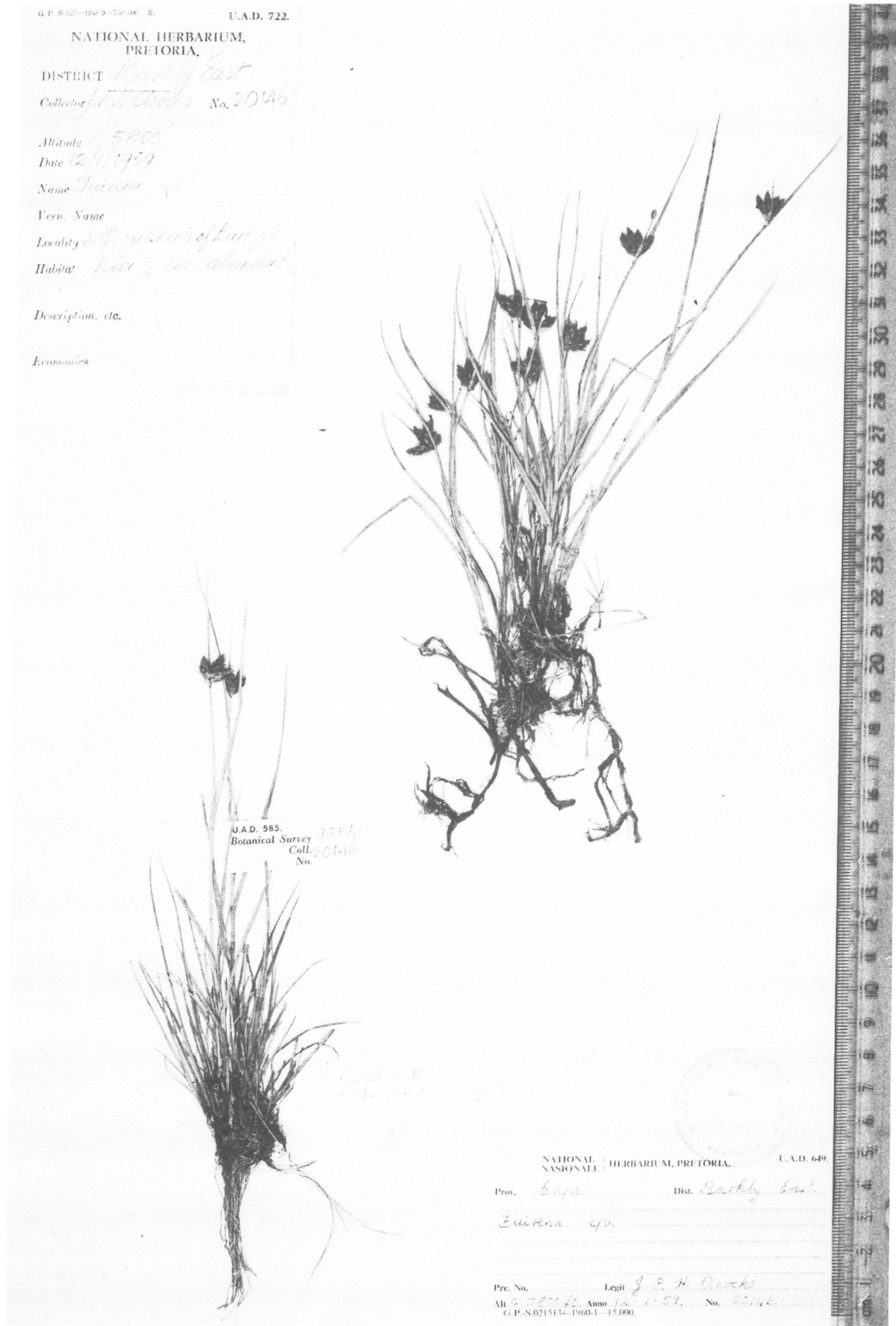


Figure 1 *Fuirena tenuis*, holotype, Acocks 20146 (PRE).

retroscly barbed. *Stamens* 3; anthers linear, 2,0–2,4 mm long. *Nutlets* ca. 2 mm long (beak and stalk included), broadly ellipsoid, trabeculate, trigonous, narrowing at base to stalk ca. 0,3 mm long and at apex to slender terete epapillate beak ca. 0,5 mm long. *Pericarp epidermal cells* over broad faces of nutlet arranged in longitudinal rows, transversely elongate, with rippled anticlinal walls (Figure 1).

Distribution

Only two gatherings of *F. tenuis* have been located so far. Both were collected above 1 500 m in the inland part of the south-eastern region of southern Africa (Figure 2). The collector's notes on the type material state 'Vlei, loc. abundant', but although vleis in the vicinity of Barkly East have been diligently searched both by the author and by others on her behalf, *F. tenuis* has not been found there again.

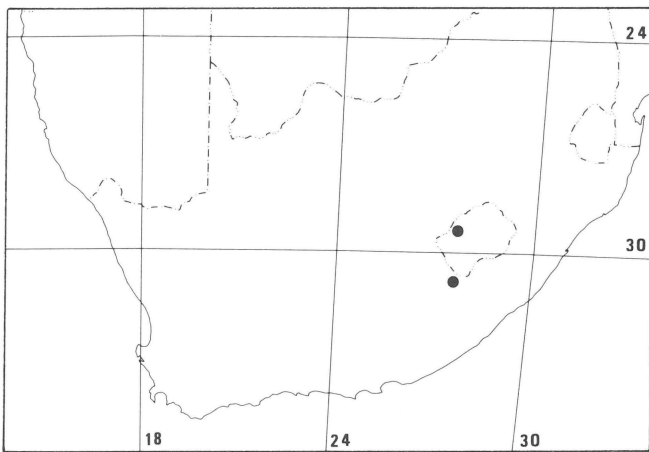


Figure 2 The known distribution of *Fuirena tenuis*.

Specimens examined

LESOTHO. — 2927 (Maseru): Roma Valley (–BC), Schmitz 4059 (PRE).

CAPE PROVINCE. — 3027 (Lady Grey): Outskirts of Barkly East (–DC), Acocks 20146 (K, PRE).

Discussion

Fuirena tenuis possesses several distinctive characters and character combinations. Although little material is available, there can be no doubt that specific status is justified. Its epithet refers to the rhizomes (Figure 3) which are more slender in this species than is usual in the genus. The subglabrous glumes (Figure 4A) are also unusual. Among

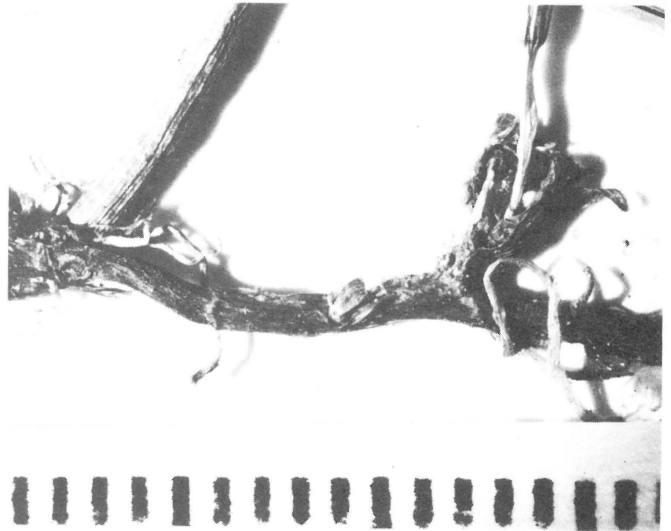


Figure 3 Portion of rhizome of *Fuirena tenuis* (Schmitz 4059). Each scale division = 1 mm.

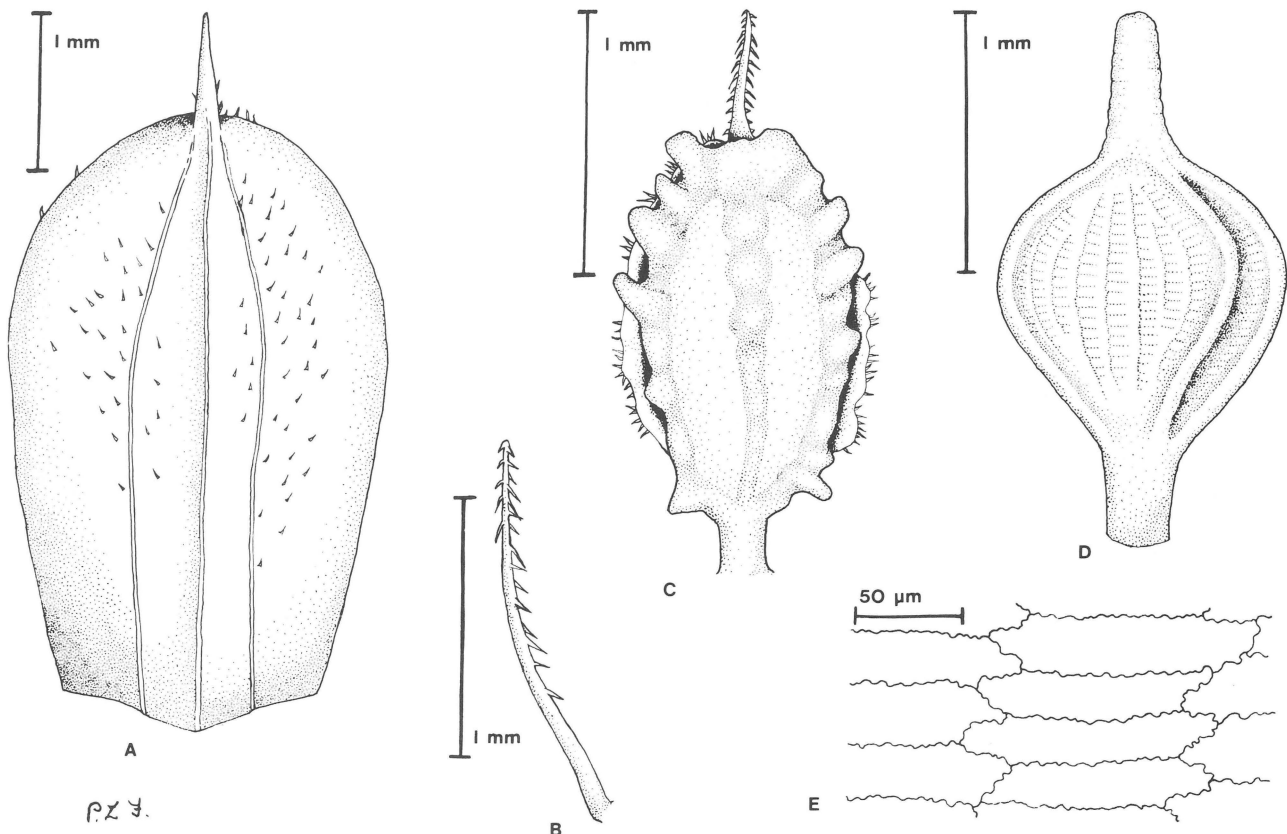


Figure 4 *Fuirena tenuis*. A. Glume (Schmitz 4059); B. Hypogynous bristle (Acocks 20146); C. Hypogynous scale (Acocks 20146); D. Nutlet (Schmitz 4059); E. Pericarp epidermal cells (Schmitz 4059).

the other African taxa of *Fuirena* there is a tropical variant of *F. pubescens* (Poir.) Kunth which has a similar short sparse glume indumentum, and the anomalous species *F. abnormalis* C.B.Cl. which has glabrous glumes. The remaining African species of *Fuirena* have densely hairy glumes.

There is no variation in the hypogynous whorls (Figures 4B, 4C) of the two available specimens and the winged scales are quite distinctive. Because hypogynous segments are very variable in other species of *Fuirena*, however, it is not yet possible to assess the value of the scale structure as a means by which this species can be distinguished. More material will have to be collected first.

Fuirena tenuis resembles *Fuirena hirsuta* (Berg.) P.L. Forbes and *F. zambesiaca* Lye in having a stalked long-beaked nutlet with transversely elongate pericarp epidermal cells (Figures 4D, 4E). This similarity is unlikely to cause confusion about the identity of these species, however, as they can be separated from each other quite easily by other more conspicuous features such as habit and the nature of the indumentum. In addition, the nutlets of *F. tenuis* have a distinctly trabeculate texture and are 2,0–2,2 mm long while those of the other two species are hardly trabeculate and are 1,0–1,5 mm long.

The species closest to *F. tenuis* is probably *F. coerulescens* Steud. Both are rhizomatous perennials and have leaf blades with midribs. They also have in common, hairs on the vegetative parts which are very short and usually confined to small isolated areas. In both species the hairs on the glumes are also very short, but this indumentum is much more dense in *F. coerulescens* than in *F. tenuis*. Scanning electron microscopy of the surface of the leaf blades of *F. tenuis* has shown that on both sides there are small projecting nodules overlying the anticlinal walls of the epidermal cells below. These nodules are similar to those on the surface of the leaf blades of *F. coerulescens* (Forbes 1973).

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Reference

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