

THREE NEW SOUTHWEST ASIATIC GRASSES

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ABSTRACT. Three new species of *Poa* are described: *P. davisii* Bor and *P. pseudobulbosa* Bor from Turkey; *P. moabitica* Bor from Palestine.

***Poa davisii* Bor, sp. nov.**, *P. masenderanae* Freyn & Sint. affinis, sed ab ea spiculis, glumis lemmantibus paleisque multo longioribus, callo lana copiosa instructo, paleae carinis semipilosis recedit.

A perennial forming loose tufts, rhizomatous. Culms somewhat decumbent at the base, up to 35 cm tall, slender, smooth and glabrous, striate. Leaf-blades rather soft, linear-acuminate, up to 10 cm long, 1-2 mm wide, flat, smooth and glabrous, the basal very narrow involute-filiform; sheaths clasping, smooth and glabrous, striate; ligule membranous, rounded above, 1-1.5 mm long.

Inflorescence a rather loose panicle, up to 9 cm long, 2 cm wide; branches very short, at the most 1.5 cm long, few spiculate. Spikelets shortly pedicellate, about 5 mm long, cuneate, mostly 2-, rarely 3-4-flowered; lower glume oblong acuminate, 3-nerved, 4-4.5 mm long, keeled, scabrid on the keel; upper glume similar but somewhat broader, 3-nerved, slightly curved on the back; lowest lemma oblong-acute when flattened, hyaline at the tip above a narrow yellowish band, 4.5 mm long, 5-nerved, densely ciliate on the lateral and keel nerves, appressed pubescent between the nerves in the lower half; keels of the palea long-ciliate in the lower half; wool on the callus copious; rachilla produced, terminal segment 2 mm long; anthers 2 mm long.

TURKEY C4. Antalya: Ak Dag (south of Geyik Dag), 2300 m, shady cliffs near little lake, *Davis* 14391 (holo. E; iso. K); *ibidem*, shady rocks, *Davis* 14342.

***Poa pseudobulbosa* Bor, sp. nov.** basi leviter crassa, lemmatibus omnino glabris, lana nulla, foliorum laminis turionum filiformibus distincta.

A perennial grass, without rhizomes. Culms caespitose, slightly thickened at the base, covered below with the scarious remains of old sheaths, slender, very smooth and glabrous, erect, simple, up to 45 cm tall. Leaf-blades both on the culms and innovation shoots very short, up to 2.5 cm long (exceptionally 6 cm), 1-1.5 mm broad, folded or rolled, smooth below; sheaths lax and scarious below, tightly clasping above, smooth and glabrous, ligule short, 0.5-0.75 mm long. Panicle few-spiculate, with short ascending branches, very narrow, 4-7 cm long, 10 mm wide; branches often carrying a single spikelet.

Spikelets 1-3-flowered, 4.5-7 mm long, rachilla joints long, visible from the side, glabrous, conspicuous, produced and tipped with a

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vestigial floret; lower glume 2.5–3.5 mm long, 1-nerved, lanceolate-acute, glabrous, hyaline on the margins; upper glume broadly elliptic-acute, 3-nerved, glabrous, hyaline on the margins and at the tip, scaberulous on the keel; lowest lemma broadly oblong-acute when flattened, 4.5–5 mm long, 5-nerved, completely glabrous without a trace of wool, hyaline on the margins and at the tip (very rarely the central nerve produced as a short mucro); palea shorter than the lemma, scabrid on the keels; anthers 1.5 mm long. TURKEY C4. Antalya: NW side of Ak Dag (S of Geyik Dag), by the little lake, 2200–2300 m, shady rocks, *Davis* 14342a (holo. E; iso. K); Geyik Dag, E side, 2450 m, steep valley side, *Davis* 14557.

Poa moabitica Bor, sp. nov. ab aliis speciebus hujus generis ligula truncata dorso dense breviterque lanata conspicua.

A perennial rhizomatous grass. Culms, including the inflorescence, up to 110 cm tall, 6 mm in diameter below, smooth and glabrous, even at the nodes, shining, erect, simple. Leaf-blades linear, flat, contracted at the tip into a sharp point, up to 25 cm long, 9 mm wide, smooth and glabrous on both surfaces, scabrid on the margins particularly towards the tip; sheaths long, the upper tightly clasping, the lower falling from the basal internodes, smooth and glabrous, striate; ligule 1 mm long, truncate, covered on the dorsal surface with an extremely short, furry indumentum. Inflorescence a very large panicle up to 35 cm long, 5 cm wide; axis smooth and glabrous, noded; nodes about 10 cm apart at the base, gradually decreasing in length towards the apex; at each node arise whorls of branches in fours or fives, some long (10 cm) others short (5 mm), which branch and re-branch, carrying the shortly pedicelled spikelets.

Spikelets 3–4-flowered, 4–4.5 mm long, elliptic in outline; glumes almost equal, the upper slightly longer and broader, 1.75–2 mm long, the lower 1–, the upper 3-nerved; lowest lemma 2.5 mm long, 5-nerved, the intermediate lateral nerve not particularly marked, glabrous on the dorsal surface, scaberulous on the nerves, particularly on the keel; callus with a few short strands of wool: anthers 1.5 mm long.

PALESTINE: Moab, *W. A. Hayne* s.n. (holo. K).

The solitary sheet in Herb. Kew. was received from the Rev. H. E. Fox in 1873, and bears a label "Plants of the Holy Land. Collected by W. A. Hayne". William Amehurst Hayne made an expedition to Palestine in 1872, and having traversed the plains of Moab, descended to the shores of the Dead Sea. During his journey he made a collection of plants and wrote a narrative account of his travels and description of the vegetation, which was published in the *Journal of Botany* 10: 289–295 (1872). Individual plants are mentioned but no systematic list appears to have been published, and Hayne died in Sicily in 1873, at the early age of twenty six.

While on the plateau of Moab he was struck by the profusion of grasses and it is likely that the specimen described above was collected there. It has not been collected in the intervening years.