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Three Grasses New to Turkey

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Abstract: Studies on herbarium material of grasses recently collected in Turkey revealed the existence of three taxa hitherto not reported from this country: *Bromus tomentellus* Boiss. subsp. *nivalis* (Bornm.) H. Scholz & Byfield, subsp. et stat. nov., *Microstegium vimineum* (Trin.) A. Camus as a probably introduced plant, and *Poa asiae-minoris* H. Scholz & Byfield, sp. nova, described here as a species new to science.

Key Words: Gramineae, new records, Turkey.

Türkiye İçin Yeni Üç Gramineae Türü

Özet: Son yıllarda Türkiye'den toplanan Gramineae örneklerinin tayinleri sırasında, bugüne kadar Türkiye'den henüz kaydedilmemiş üç taksonun varlığı ortaya çıkarılmıştır. *Bromus tomentellus* Boiss. subsp. *nivalis* (Bornm.) H. Scholz & Byfield, subsp. et stat. nov., muhtemelen tabiileşmiş yabancı bir ot olarak *Microstegium vimineum* (Trin.) A. Camus, ve bilim için yeni bir tür olan *Poa asiae-minoris* H. Scholz & Byfield, sp. nova.

Anahtar Sözcükler: Gramineae, yeni kayıtlar, Türkiye.

Introduction

Through the courtesy of Professor Asuman Baytop (University of İstanbul), the senior author had the opportunity to study some grasses collected by A. J. Byfield and colleagues in Turkey during 1994 and 1995. Careful examination of this and other material - supported by literature studies - resulted in the recognition of three new members of the Turkish flora, the topic of the following short tripartite account.

Results

1. A new subspecies for Turkey:

Bromus tomentellus Boiss. subsp. *nivalis* (Bornm.) H. Scholz & Byfield, subsp. et stat. nov. (sect. *Pnigma* Dum.), Figure 1.

Basionym: *B. tomentellus* Boiss. var. *nivalis* Bornm., Bull. Herb. Boiss. Ser. 2, 8: 825. 1909 ("1908")

HOLOTYPUS: "Persia borealis: m. Elburs, in jugo Kendewan, 3000 m, 23.6.1902, Bornmüller Iter Persicum alterum, J. & A. Bornmüller 8390 (B)

TURKEY: N. E. Anatolia. A9 Çoruh: 23 km from Şavşat to Ardahan, before Çam pass, 2350 m, alpine pasture grassland on igneous rocks, abundant, 4.vii.1994, A. J. Byfield & D. Pearman B 1289 (ISTE 67154)

The Turkish material matches very well the holotype of *Bromus tomentellus* subsp. *nivalis* from the Elburs Mountains in N. Iran. The original description that reads "paniculae brevis pauci-(2-4)-spiculatae spiculis breviter pedunculatis solitariis, ceterum vaginis radicalibus reticulatim fibrosis, indumento velutino ut in typo", unequivocally characterizes this alpine taxon: panicle short and poor-flowered, basal leaf-sheaths decaying into a fibrous reticulum (1). However, Bornmüller does not mention the short subapical lemma awn, which in length does not exceed 2/3 of the lemma body, in contrast to the usually longer awn nearly as long as the lemma body in subsp. *tomentellus* (2), a taxon widespread at lower alpine-montane altitudes of Turkey. The pubescent leaf indumentum consisting of very short fine hairs and scattered longer hairs is substantially alike in the

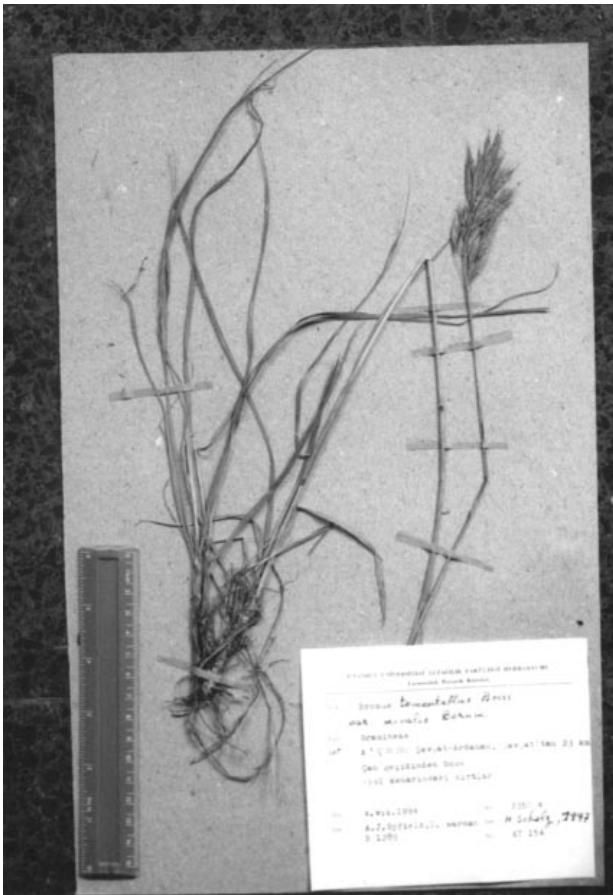


Figure 1. *Bromus tomentellus* Boiss. subsp. *nivalis* (Bornm.) H. Scholz et Byfield, whole plant [ISTE 67154].

specimens of subsp. *nivalis* from both Turkey and Iran. Flora Iranica (3) does not cite either the Bornmüller number or Bornmüller's name. Turkish material of *B. tomentellus* subsp. *nivalis* is shown in Figure 1.

Distribution of subspecies: N. E. Anatolia, Iran. Irano-Turanian element. In Turkey, a subspecies of dry montane pasture on acid rocks, and currently known from one locality. It is not known to be under threat (IUCN threat category: Lower Risk (least concern).

2. A new genus and species record from Turkey:

Microstegium vimineum (Trin.) A. Camus in Ann. Soc. Linn. Lyon 68: 201 (1921). (Sect. *Microstegium*)

Basionym: *Andropogon vimineus* Trin.

Synonym: *Pollinia imberbis* Nees

TURKEY: N. E. Anatolia. A7 Giresun: Espiye River, immediately e. of the town of Espiye, wet, seasonally-

flooded river margin on gravels & sands, 5 m, 11.x.1994, A. J. Byfield B 1334 (ISTE 67575)

The genus and species, here recorded for the first time from Turkey, belong to the tribe *Andropogoneae* Dum. subtribe *Saccharinae* Griseb. In this country the most widely-known subtribe representatives include the genera *Imperata* Cyr. and *Saccharum* L., both strongly stout perennials with more or less compound dense silky panicles. *Microstegium vimineum*, however, is a weak-stemmed annual with loosely pilose narrow digitate or solitary spicate racemes. The whole plant, from material collected in Turkey, is reproduced in Figure 2.

It seems very unlikely that the riverside habitat of the Turkish plant indicates a natural occurrence. Outside the main distribution area of *Microstegium*, covering, with

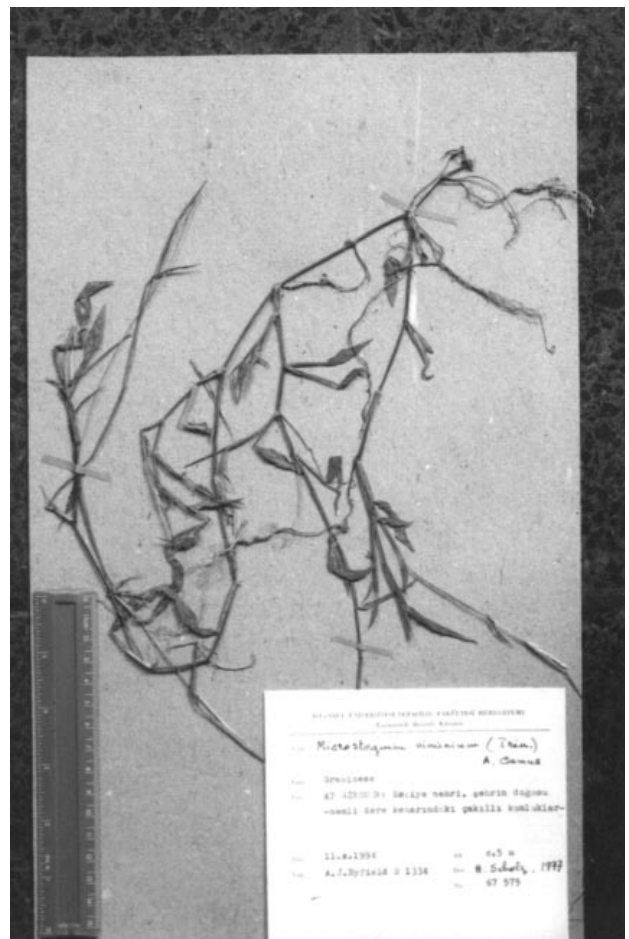


Figure 2. *Microstegium vimineum* (Trin.) A. Camus, whole plant [ISTE 67575].

about 15-20 species, Japan, S. China and S. Asia, *M. vimineum*, described from Nepal, has occasionally been reported as a weedy adventive in many other countries adjacent to Turkey, e.g., in Transcaucasia (4, 5). Thus it is equally reasonable to assume an alien status of this species also for Turkey.

3. A new species from Turkey:

Poa asiae-minoris H. Scholz & Byfield. sp. nov.
(Sect. *Homalopoa* Dum.), Figures 3-4.

HOLOTYPE: N. W. Anatolia; rare. A3 Bolu: Abant Lake, S. W. end of lake, 1450 m, wet peat fen, extremely local, 14.vi.1995, A. J. Byfield & R. Fitzgerald B 2351 (ISTE 69705)

Poa remota Forselles affinis sed spiculis (4-)5-floribus 5-6 mm longis, lemmatibus dorso scabriusculioribus nervibus medianis ad 1/3 sparsim hirsutis, internodis culmi ac vaginis ac basis foliorum laminae breviter pubescentibus distincta.

Different from the closely related *Poa remota* Forselles by (4-)5-flowered spikelets 5-6 mm long, more scabrous on the lemma back but sparsely hairy along the lower 1/3 of the midnerve, and by finely pubescent culm internodes, leaf-sheaths and basal parts of leaf-blades (especially on collar). *Poa remota* has quite glabrous (sometimes somewhat rough) shoots, the scabrosity of lemmas is not very pronounced, and its spikelets are only (2-)3(-4)-flowered and smaller. *P. asiae-minoris* and *P. remota* have in common very loose panicles with long spreading (later drooping) branches, naked below, and a thin wooly fleece at the lemma callus.

Critically, one has to assess the greater flower numbers and spikelet dimensions reported by some Flora writers for *Poa remota*, e.g. spikelet (2-)3-4 flowered and 6-7 mm long (6). Studies on a considerable number of herbarium specimens originating from European localities (in B) failed to confirm these statements, but nevertheless in its south-eastern distribution range, in the Caucasus and in Transcaucasia, populations of *P. remota* perhaps exhibit greater spikelets and flower numbers and in this respect may in part come near to *P. asiae-minoris* and deserve subspecific status. In former times, *P. remota* also was often confused with *P. chaixii* Vill. with larger spikelets, compared with typical *P. remota*. Turkish material of *P. asiae-minoris* is reproduced here as Figures 3 & 4.

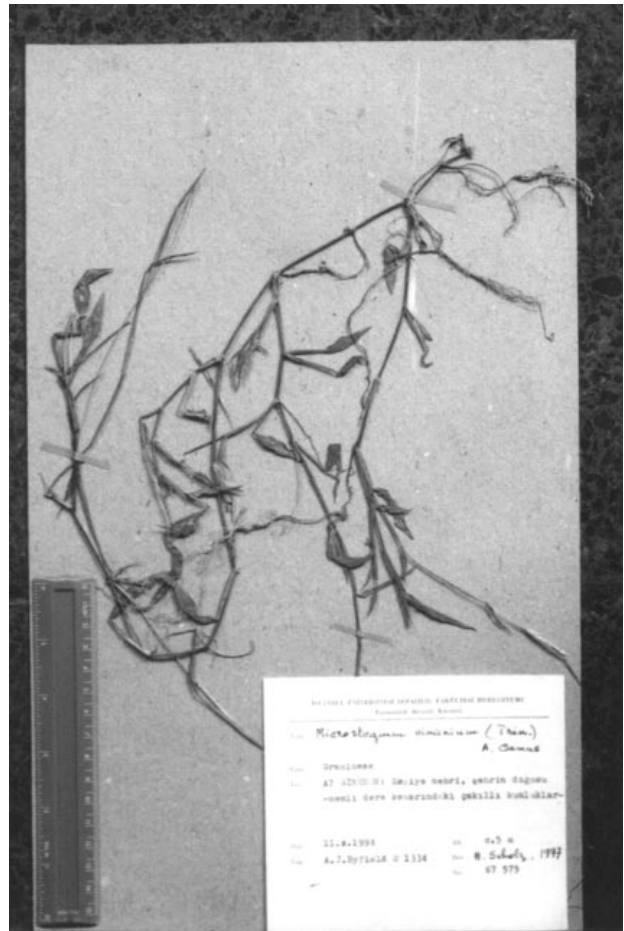


Figure 3. *Poa asiae-minoris* H. Scholz & Byfield. A, habit, x 0.65; a, culm internode, x 20; b, ligule, x4; c, spikelet, x 12; d, floret, x 18 [holo. ISTE 69705].

Besides *Poa chaixii*, the new species is now the second representative of *Poa* sect. *Homalopoa* (together with about 5 Eurasian species) in Turkey, where *P. remota*, described from Sweden, is absent (see distribution maps in 6 & 7). More information on *P. asiae-minoris* is urgently required.

Endemic. Euro-Siberian element? Currently known from only one locality, where it is extremely local, restricted to a very small part of the calcareous peat fen at the south-west corner of Abant Lake. This fen is of considerable nature conservation importance, with locally and nationally rare plant species such as *Carex diandra* Schrank, *C. lasiocarpa* Ehrh., *Dactylorhiza incarnata* (L.) Soo subsp. *incarnata*, *D. nieschalkiorum* H. Baumann et Künkele, *Lathyrus palustris* L. subsp. *palustris*,



Figure 4. *Poa asiae-minoris* H. Scholz & Byfield, whole plant [ISTE 69705]

Ranunculus lingua L., *Senecio paludosus* L., *Sium latifolium* L. and *Thelypteris palustris* Schott. The site lies within a Nature Park, but increasing pressure from tourism may pose a threat in future (IUCN threat category Lower Risk (near threatened)).

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