

Festuca saxatilis — a new species of the Czechoslovak flora

Festuca saxatilis — nový druh československé květeny

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Festuca saxatilis SCHUR is given as a new species of the Flora of Czechoslovakia. It was found on NE Slovakia, in the Bukovské vrchy Mts. Its morphological characters and distribution are briefly discussed.

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In 1973, I collected an interesting specimen of pruinose *Festuca* just on the borderline between Czechoslovakia and the USSR, on Stinka Mt. in the Bukovské vrchy Mts. (Nízké Poloniny Mts.). This plant grows on small outcrops of calcium-rich sandstone. During the following years I determined this species as *F. saxatilis* SCHUR.

Festuca saxatilis SCHUR 1866, Enum. Pl. Transsylv. 791

Syn.: *F. valesiaca* GAUD. subsp. *saxatilis* (SCHUR) ALEXEEV 1972, Vestn. Mosk. Univ. Biol. Počvoved. 5 : 49

F. rupicola HEUFF. subsp. *saxatilis* (SCHUR) RAUSCHERT 1960, Feddes Repert, 63 : 276; The same combinations (isonyms) were later made by CVELEV (Bot. Žurn. 56/9 : 1255, 1971) and BELDIE (Fl. Rep. Soc. Rom. 12 : 552, 1972).

F. ovina subsp. *sulcata* var. *genuina* subvar. *saxatilis* (SCHUR) HACK. 1882, Monogr. Festuc. Europ. 106

F. rupicola var. *saxatilis* (SCHUR) NYÁR. 1966, Not. Bot. Cluj 62

During the determination, I have found discrepancies in the description of this species. The main differential characters are summarized in the Tab. 1. In addition, the values measured on the SCHUR's type specimen stored in herbarium of the University at Lvov (LW) and of the specimens collected on Stinka Mt. are given in this table. Most remarkable are the facts given for this species in two basic monographs about grasses in the USSR (CVELEV 1976, PROKUDIN et al. 1977). The first author writes that the leaves are almost already green. On the other hand PROKUDIN writes that the leaves are pruinous and rarely green. According to personal communication of professor MALINOVSKIJ from Lvov, *F. saxatilis* has coloured (pruinous) leaves and spikelets. The main characters differentiating *F. saxatilis* from other narrow-leaved *Festuca* species from the sect. *Festuca* (*F. rupicola*, *F. pseudodalmatica* KRAJINA, *F. trachyphylla* (HACK.) KRAJINA) are following: leaves pruinous, smooth lamost to the apex, and long almost to the panicle; sclerenchyma strands are usually 3 thicker (as by *F. rupicola*) and sometimes two small near the leaf margin (cf. Fig. 1).

BELDIE (1972) distinguished two varieties and seven forms inside his

F. rupicola subsp. *saxatilis*. Var. *saxatilis* and var. *dacica* BELDIE differ in quantitative characters; this can partly explain the differences given in different papers.

F. saxatilis belongs to the group of narrow-leaved species of sect. *Festuca*. The closely related species is *F. rupicola*; *F. saxatilis* is very often included in it as subspecies. Both are hexaploid species with $2n = 42$ (cf. PROKUDIN et al. 1974). The same chromosome number was counted by A. KRAHULCOVÁ on the plant from the new locality on the borderline with USSR.

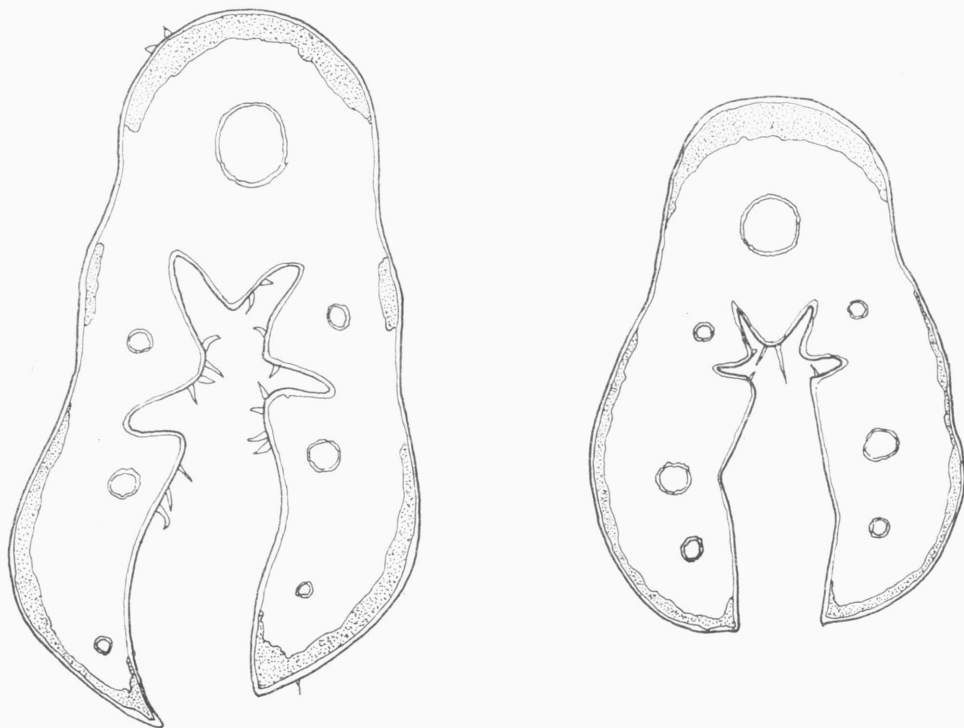


Fig. 1. — Cross section of innovative leaves of *Festuca saxatilis*.

Obr. 1. — Průřez inovačními listy druhu *Festuca saxatilis*. (del. V. Hadincová)

DISTRIBUTION

The new locality is the westernmost one in the Carpathians. The species was described from the Rumanian Carpathians, and it is also known from the Carpathians in the territory of the USSR — Černá gora, Čivčiny (DEYL 1934, MALINOVSKIJ 1962, ČOPIK 1976). It means there is a large disjunction almost through the whole Ukrainian Carpathians. It is probably caused by the absence of suitable, lime rich substrate. Similar disjunction is known at *Viola dacica*.

With regard to the total distribution area, the data in the literature are contradictive. They are also given in the Table 1. It seems the species is with certainty distributed in the Eastern and Southern Carpathians. The distribution in other mountain ranges is probably strongly dependent on the

Tab. 1. — Comparison of important characters of *Festuca saxatilis* given in papers of different authors. — Srovnání důležitých znaků druhu *Festuca saxatilis* uváděných v pracích jednotlivých autorů.

	PROKUDIN et al. 1977	MARKGRAF-DAN- NENBERG 1980	ALEKSEEV 1973	CVELEV 1974	CVELEV 1976	PAWLUS 1985	Typus	Stinka Mt.
leaf colour	pruinous, rarely green			green	green			pruinous
diameter of innovative leaf [mm]	(0.4–)0.5–0.6 (0.8)	(0.4)0.5–1		(0.5)0.6–0.9(1)			0.7–0.9	0.7–0.9
sclerenchyma strands	5		3–7				3–5	5
veins	5(6)	5–7(9)	5–7(9)		5	5–7(9)	7	7
length of lower glume [mm]							4–4.1	2.6–2.7
length of upper glume [mm]							5.1–5.3	3.6–4.2
length of lemma (+awn) [mm]							8–8.1	7.1–8.2
length of lemma [mm]	3–5(6)	5.9–6		(4.5)4.7–5.5 (6)		5.9–6	5.7–5.8	4.7–5.4
length of awn [mm]	(1)2(3)						1.8–3	2.4–2.8
length of spikelet [mm]	(5)7–10(14)	8.5–9.2		(5.5)6.5–8.5 (9)		8.5–9.2	8.6	9–9.3
distribution	Alps S&E Carpathians Caucasus	S&E Carpathians		Carpathians Alps Caucasus	Alps Carpa- thians Cauca- sus Balkans Iran Asia Minor	S&E Carpa- thians		

taxonomic concept of it. E.g. MARKGRAF-DANNENBERG (1985) did not report this species from Turkey — from this area it is given by CVELEV (1976).

ECOLOGY

In the Ukrainian Carpathians, *F. saxatilis* occurs on lime rich substrates in altitudes above 1400—1600 m (PROKUDIN et al. 1974, ČOPIK 1976). New locality is situated at the altitude of 1050—1070 m; the species grows on small rocks, which cannot be a relic habitat of it. However, there are tall rocks on the eastern slopes of Stinka Mt. (in the USSR), which could be the relic locality of *F. saxatilis*. It is not known whether this species occurs there.

Acknowledgement

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SOUHRN

Na vrcholu Stinky nad Zbojem v Bukovských vrších (Nízkých Poloninách) byl nalezen druh *Festuca saxatilis* SCHUR. Jde o nejzápadnější známou lokalitu tohoto druhu v Karpatech. Od příbuzných druhů se *F. saxatilis* liší ojiněnými a hladkými listy, které dosahují téměř kvetoucí laty. Ostatní znaky jsou uvedeny v tabulce, průřez listu je na obrázku.

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