

## A New *Smilax* L. Species from the Upper Oligocene of Vértesszőlős (Hungary)

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**Abstract** — *Smilax tataensis* sp. n. is described from the layers of Upper Oligocene in the environs of Vértesszőlős (Baromállás). It is represented by two specimens in the flora; one of them is with counterproof. The new species is near to *Smilax grandifolia* (UNG) HEER. With 8 figures and 1 map.

From the flora association collection from the hill, called Baromállás hegy between Vértesszőlős and Tatabánya, a new *Smilax* species was discovered (HABLY 1976). The deposits are embedded in clayey sandstone and, are slightly red owing to limonitization.

### SMILACACEAE

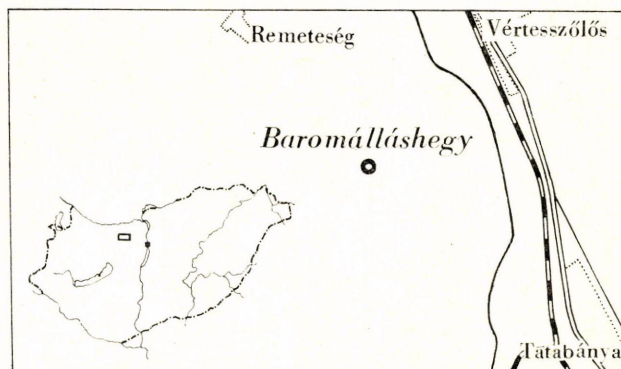
#### *Smilax tataensis* sp. n. (Figs. 1, 7, 8)

**Holotypus:** No. 76.4.230. In collectione Musei Tataensis nominatia de Kuny Domokos, Hungaria. **Paratypus:** No. 76.4.231., 76.4.232. In collectione Musei Tataensis nominatia de Kuny Domokos, Hungaria.

**Locus typicus:** Collis Baromállás, regio Tatabánya et Vértesszőlős, Hungaria (Map 1). — **Stratum typicum:** Oligocen superior (egerien).

**Derivatio nominis:** Post locum depositionis.

**Diagnosis** — *Folium sine petiolo, forma eius fere ovata, triangularisve, apice acuto, basi cordata. Longitudo maxima folii quam metiri possumus, 14,5 cm,*



Map 1. Schematic map of the locality of Baromállás-hegy near Vértesszőlős and Tatabánya.

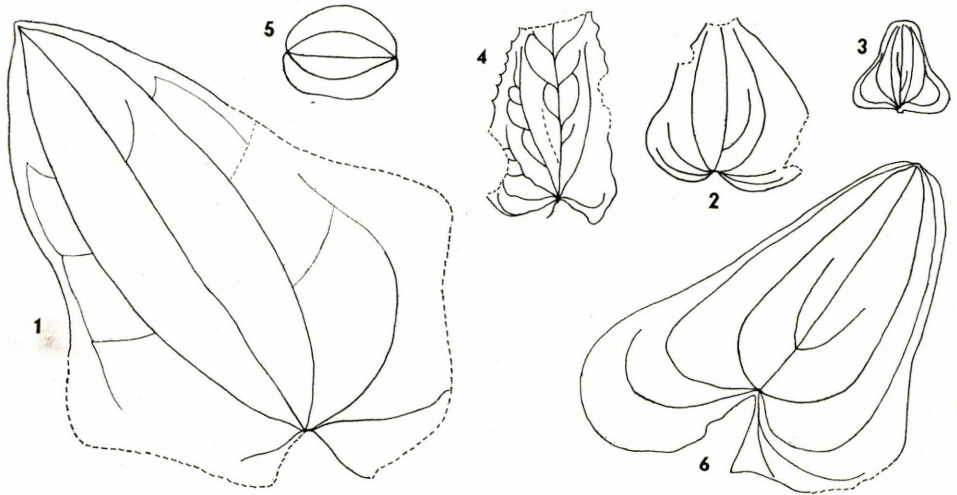
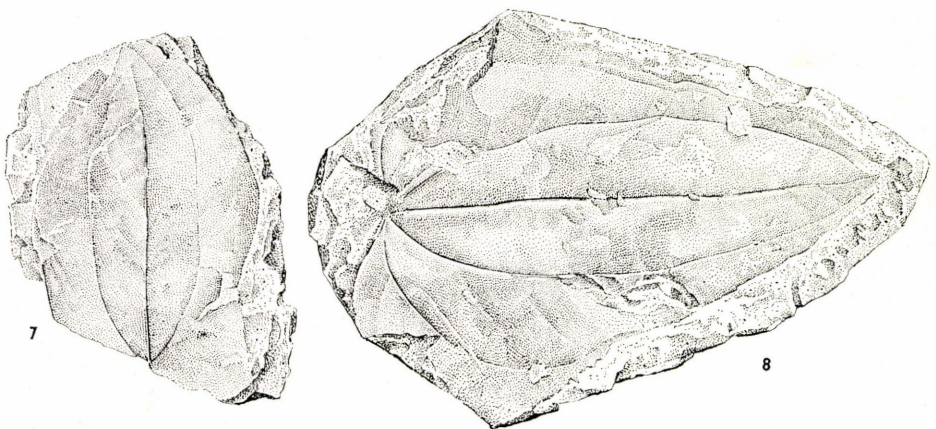


Fig. 1. *Smilax tataensis* sp. n. No. 76.4.230. — Fig. 2. *Smilax grandifolia* (UNG) HEER. — Fig. 3. *Smilax obtusifolia* HEER. — Fig. 4. *Smilax praeaspera* ANDR. — Fig. 5. *Smilax borsodense* ANDR. — Fig. 6. *Smilacites grandifolia* UNG.

latitudoque eius maxima 8.3 cm. Folium in parte superiore tertia 6.2 cm latum, margo eius integerrimus. Nervi septemque ex eodem loco oriuntur. Nervus medius recte usque ad apicem decurrit, duo alii utrinque sub angulo  $46^{\circ}$  gr. arcuato emissi et medio recurvati in apice se conjungunt, ellipsem regularem conformantes. Duo nervi marginales sub angulo  $106^{\circ}$  gr. excurrunt et secum nervis secundariis et internis nervis primariis emissis conjungunt. Solum unus nervus secundarius tenuissimus e nervo medio exoriens videri potest.

The species shows most similarity with *Smilax grandifolia* (UNG) HEER (HEER 1855) (Fig. 2.), however, the two primary veins embrace an ovate form and not a regular ellipsoidal one, and also the length-width ratio differs considerably.

Their shape is not entirely similar either since the narrowing down of the



Figs. 7–8. *Smilax tataensis* sp. n.: 7 = No. 76.4.232., 8 = No. 76.4.230.

upper third of *Smilax grandifolia* (UNG) HEER is not of such a large extent as in *S. tataensis*: *S. grandifolia* of the Tertier has been obtained from several habitats (HEER 1855, STAUB 1864, KNOBLOCH 1958, GIVULESCU 1973). The form of *Smilacites grandifolia* UNG. (UNGER 1847) (Fig. 6) shows a certain similarity to *S. tataensis*, the venation are, however, entirely different. The primordary veins accompanying the main vein embrace an ovate form, while the further veins run parallel with the margin of the leaf.

As regards *S. obtusifolia* HEER (HEER 1855) (Fig. 3) even its shape is different, since the peak of *S. obtusifolia* is not an acute one, and the venation also shows a considerable difference which feature is the most essential one. In *S. obtusifolia* all the 7 veins take a course towards the apex, the marginal ones near the edge strongly hollow out and run parallel with the border of the leaf.

ANDREANSZKY described two new *Smilax* species from Hungary (ANDREANSZKY 1956, 1959): *S. borsodense* (Fig. 5.) and *S. praeaspera* (Fig. 4.), both considerably differing from *S. tataensis*.

The new species was recovered in two specimens from the flora of Vértesszőlős. The paratype is with a counterproof. The length of the latter is 9.0 cm, its width is 6.2 cm in the upper third of the blade. The course of the right-side vein alongside the main vein is  $43^\circ$ , that of the outer vein is  $124/84^\circ$ . A steeper course is characteristic of the left-side veins.

According to Table 1. *Smilax tataensis* show dissimilarities from the other four species in two exomorphic characters: 10 and 13; and in three quantitative characters: 3, 4 and 5.

As we can seen in the Table 2. common for the every earlier and here described species is the character number 14, therefore it is a generic character up to date. In the character number 1 and 6 four species show similarities, the character numbers 9, 11 and 12 are common in three species, while character numbers 2 and 8 are common only in two species.

#### References

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Table 1. Similarities and dissimilarities between the leaves of five *Smilax* species

Sign of species	Number of character				
	a <i>S. tataensis</i>	b <i>S. praeaspera</i>	c <i>S. borsodense</i>	d <i>S. grandifolia</i>	e <i>S. magna</i>
1. form	ovate	ovate	elliptic	wide ovate	ovate
2. max. width	8.3 cm	3,5 cm	9.0 cm	4.4 cm	8.5 cm
3. max. length	14.5 cm	5.0 cm	7.5—8.0 (11) cm	4.4 cm	12.4 cm
4. length/width	1.75	1.2	1.2	1	1.4
5. width in the upper third	6.2 cm	—	—	2.7 cm	4.5 cm
6. margin	entire	toothed	entire	entire	entire
7. angle of main vein and primordary vein	46°	60°	35°	5°	67°
8. angle of main vein and the outer primordary vein	106°	15°	18°	125°	5°
9. No. of the primordary veins	7	5	5	7—9	7
10. form enclosed by the two inner primordary veins	regular elliptic	veins run in all directions	elliptic	ovate	ovate
11. apex	acute	—	—	acute	acute
12. basis	auriculate	cordate	cordate	auriculate	auriculate
13. wide lower ear	starts at the half of the blade	no lower ear	no lower ear	no lower ear	starts in the lower quarter of the blade
14. symmetry	asymmetrical	asymmetrical	asymmetrical	asymmetrical	asymmetrical
15. age	Upper Oligocene (egerian)	Lower Sarmatian	Sarmatian	Tertier	Middle Miocene

Table 2. Similar leaf characters for the five *Smilax* species

Sign of species Number of character	a	b	c	d	e
14	+	+	+	+	+
1	+	+		+	+
6	+		+	+	+
9	+			+	+
11	+			+	+
12	+			+	+
2	+				+
8	+			+	

