

## A new record of *Vertigo substriata* (Jeffreys, 1833) in Hungary

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**Abstract:** *Vertigo substriata* - as a refugial relict species- has a highly fragmented distribution In Hungary. Similarly to *Vertigo alpestris* it is one of the most endangered *Vertigo* species in the country due to habitat requirements and forest management. Both species are recommended to be monitored and protected by nature conservation authorities

**Key words:** *Vertigo* species, *Vertigo substriata* refugial relict, ecological requirements, endangerea special

Szigethy (1973) made a thorough revision of the *Vertigo* species in Hungary. She found that six species were present in the recent fauna *Vertigo* (*Vertigo*) *pusilla* O.F. Müller, 1774; *Vertigo* (*Vertilla*) *angustior*, Jeffreys, 1830; *Vertigo* (*Vertigo*) *antivertigo* Draparnaud, 1801; *Vertigo* (*Vertigo*) *moulinsiana* Dupuy, 1849; *Vertigo* (*Vertigo*) *pygmaea* Draparnaud, 1801; *Vertigo* (*Vertigo*) *alpestris* Alder, 1830 and deleted *Vertigo* (*Vertigo*) *substriata* (Jeffreys, 1833) as its recent occurrence was not confirmed at that time. Since Szigethy's basic work some new localities, which prove the species' recent existence in Hungary, have been found. Most of them are situated in the Bükk and Medves mts (Varga, A. 1979, 1980; Domokos, pers. comm.) but Erőss has found it also in the Börzsöny mts at four localities (1981; pers. comm).

During an excursion in the Bükk Mountains in Hungary in June 1992 the senior author made a new record of *V. substriata*. One single adult specimen was found (Bükk mts., Répáshuta NE, valley of Pénzpaták, near the road from Répáshuta to Bükkszentkereszt, 560 m a.s.l., UTM: DU62), near a path in the deciduous forest close to the road (11. June, 1992. leg. T. von Proschwitz)

*V. substriata* is very rare in Hungary with isolated localities in the northern border areas. Here it reaches a part of its south-eastern limit (Pintér et al. 1979; Fehér, Z.–Gubányi, A. 2001). The species is a woodland inhabitant with very special ecological requirements. It lives along mountain streams, in shaded moss cover, mostly in alder woods among fallen leaves. Such habitats are strongly endangered by forest management.

The species has a boreo-alpine total distribution (cf. distribution map in Kerney et al. 1983) and occurs as a refugial relict in Hungary. In the strongly man-influenced woodlands on the European Continent it is a rather rare element, whereas on the Scandinavian peninsula, with its still relatively unaltered forests, it is a common and wide-spread species (von Proschwitz, T. 1993).

Although two of the *Vertigo* species (*V. angustior* and *V. moulinsiana*) present in Hungary are listed among the Annex II. species of the EU Habitat's Directive (<http://europa.eu.int>), the most threatened one in Hungary might be *V. substriata*, which is not mentioned there. Although *V. alpestris* is also a rare species with fragmented distribution (Fehér, Z.–Gubányi, A. 2001). We have to pay attention to the conservation of both species' habitats.

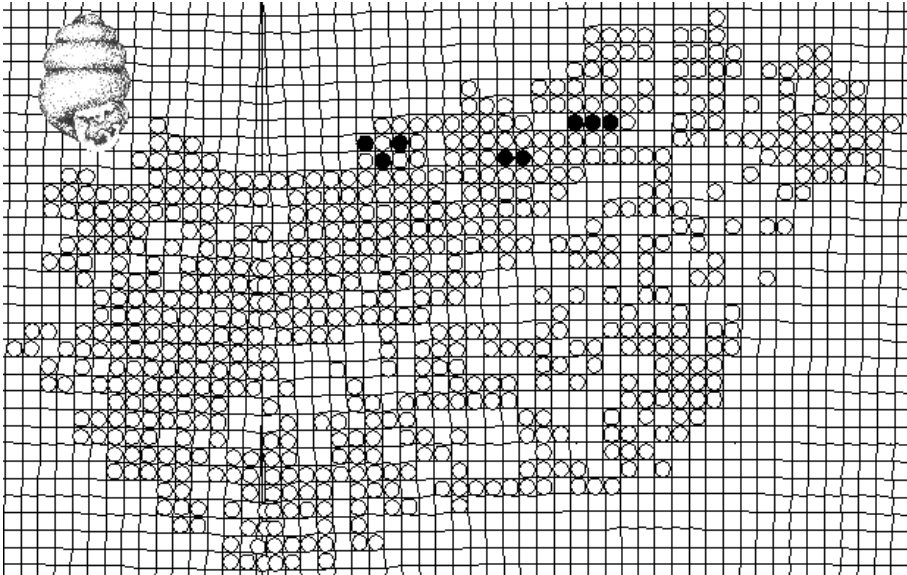


Fig 1. Known distribution of *Vertigo (Vertigo) substriata* in Hungary (black dots – *V. substriata* occurrence; empty circles – malacological data exists). (The map was modified by Zoltán Fehér after Fehér & Gubányi 2001)

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### Összefoglalás

Szigethy (1973) revíziós munkájában a *Vertigo* genus 6 fajának recens jelenlétét látta bizonyítottan Magyarországon *Vertigo (Vertigo) pusilla* O.F. Müller, 1774; *Vertigo (Vertilla) angustior*, Jeffreys, 1830; *Vertigo (Vertigo) antivertigo* Draparnaud, 1801; *Vertigo (Vertigo) moulinsiana* Dupuy, 1849; *Vertigo (Vertigo) pygmaea* Draparnaud, 1801; *Vertigo (Vertigo) alpestris* Alder, 1830. Jelen ismereteink szerint ez a szám hétre bővül mivel a *Vertigo (Vertigo) substriata* (Jeffreys, 1833) korábban csak fosszilis példányai mellett több élő állapotú előfordulási adat is ismert az utóbbi évekből. Ezek a populációk a Bükk ill. a Börzsöny hegységéből, patakmenti, az erdőművelés által erősen veszélyeztetett élőhelyekről kerültek elő. Az Észak-Európában általánosan előforduló faj nálunk éri el déli elterjedési határát, előfordulása szigetszerű, itt refugialis reliktumnak tekinthető. A Magyarországon élő *Vertigo* fajok közül kettő szerepel az EU Élőhelyvédelmi Irányelv Annex II.fajlistáján (*V. angustior*, *V. moulinsiana*), de igazán veszélyeztetettnek Magyarországon a génusból a *V. substriata* tekinthető. Ugyancsak fragmentált élőhelyű és ritka fajnak tekinthető a *V. alpestris*. A természetvédelem fontos és sürgős feladata a fajok elterjedésének pontos feltérképezése és élőhelyeinek lokális védelme.

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