

New taxa of *Montenegrina* O. BOETTGER, 1877 (Gastropoda: Pulmonata: Clausiliidae) from Albania and the neighbouring regions

Z. Eröss*, Z. Fehér** & M. Szekeres***

Abstract

Mainly from material recently collected by expeditions of the Hungarian Natural History Museum, the following new species taxa are described: *Montenegrina drimmeri* FEHÉR & SZEKERES sp.n., *M. minuscula* ERÖSS & SZEKERES sp.n., *M. apfelbecki caesia* FEHÉR & SZEKERES ssp.n., *M. a. csikii* ERÖSS & SZEKERES ssp.n., *M. a. okolensis* SZEKERES ssp.n., *M. a. wagneri* SZEKERES ssp.n., *M. dofleini plenostoma* FEHÉR & SZEKERES ssp.n., *M. ersekensis nobilis* ERÖSS & SZEKERES ssp.n., *M. fuchsi muranyii* FEHÉR & SZEKERES ssp.n., *M. helvola magna* FEHÉR & SZEKERES ssp.n., *M. irmengardis edmundi* SZEKERES ssp.n., *M. i. flava* ERÖSS & SZEKERES ssp.n., *M. i. remota* FEHÉR & SZEKERES ssp.n., *M. i. rugosa* FEHÉR & SZEKERES ssp.n., *M. i. timeae* ERÖSS & SZEKERES ssp.n., *M. janinensis ampla* FEHÉR & SZEKERES ssp.n., *M. j. soosi* ERÖSS & SZEKERES ssp.n., *M. laxa disjuncta* FEHÉR & SZEKERES ssp.n., *M. l. errans* ERÖSS & SZEKERES ssp.n., *M. l. kontschani* ERÖSS & SZEKERES ssp.n., *M. perstriata callistoma* FEHÉR & SZEKERES ssp.n., *M. p. gracilis* ERÖSS & SZEKERES ssp.n., *M. p. nana* FEHÉR & SZEKERES ssp.n., *M. p. steffeki* ERÖSS & SZEKERES ssp.n., *M. sattmanni costulata* ERÖSS & SZEKERES ssp.n. and *M. s. fusca* FEHÉR & SZEKERES ssp.n. The systematic position and zoogeographical significance of the new taxa are discussed.

Key words: Clausiliidae, Aloiinae, *Montenegrina*, new species, new subspecies, Albania.

Zusammenfassung

Aus Materialien, die kürzlich bei Expeditionen des Ungarischen Naturwissenschaftlichen Museums gesammelt wurden, werden folgende neue Arttaxa beschrieben: *Montenegrina drimmeri* FEHÉR & SZEKERES sp.n., *M. minuscula* ERÖSS & SZEKERES sp.n., *M. apfelbecki caesia* FEHÉR & SZEKERES ssp.n., *M. a. csikii* ERÖSS & SZEKERES ssp.n., *M. a. okolensis* SZEKERES ssp.n., *M. a. wagneri* SZEKERES ssp.n., *M. dofleini plenostoma* FEHÉR & SZEKERES ssp.n., *M. ersekensis nobilis* ERÖSS & SZEKERES ssp.n., *M. fuchsi muranyii* FEHÉR & SZEKERES ssp.n., *M. helvola magna* FEHÉR & SZEKERES ssp.n., *M. irmengardis edmundi* SZEKERES ssp.n., *M. i. flava* ERÖSS & SZEKERES ssp.n., *M. i. remota* FEHÉR & SZEKERES ssp.n., *M. i. rugosa* FEHÉR & SZEKERES ssp.n., *M. i. timeae* ERÖSS & SZEKERES ssp.n., *M. janinensis ampla* FEHÉR & SZEKERES ssp.n., *M. j. soosi* ERÖSS & SZEKERES ssp.n., *M. laxa disjuncta* FEHÉR & SZEKERES ssp.n., *M. l. errans* ERÖSS & SZEKERES ssp.n., *M. l. kontschani* ERÖSS & SZEKERES ssp.n., *M. perstriata callistoma* FEHÉR & SZEKERES ssp.n., *M. p. gracilis* ERÖSS & SZEKERES ssp.n., *M. p. nana* FEHÉR & SZEKERES ssp.n., *M. p. steffeki* ERÖSS & SZEKERES ssp.n., *M. sattmanni costulata* ERÖSS & SZEKERES ssp.n. and *M. s. fusca* FEHÉR & SZEKERES ssp.n. Die systematische Stellung und die tiergeographische Bedeutung der neuen Taxa werden erörtert.

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Introduction

Although recent publications (NORDSIECK, 1996; WELTER-SCHULTES, 1996; ERŐSS et al., 1999) have contributed significantly to our knowledge of the Clausiliidae fauna of Albania, the data are still more fragmentary than those available from any other countries of the Balkans. During the past couple of years new field collections, especially those of five expeditions by the Hungarian Natural History Museum between 2002 and 2004, provided a surprisingly rich material of clausiliids. Based on these samples, we present descriptions of new species and subspecies belonging to the genus *Montenegrina* O. BOETTGER, 1877, and discuss the systematic position and zoogeographical significance of these taxa.

A large number of new *Montenegrina* forms have been described since the last attempts to define species boundaries within this genus (NORDSIECK, 1972 and 1974). The diversity of the species taxa and the ambiguity of assigning some new subspecies to the presently recognized species highlight the need for a thorough revision of the whole genus, which hitherto has been classified only on the basis of shell characters. Presently such a wide-scoped study, requiring further material and a more complex approach, would be premature. Nevertheless, we intend to attain this goal in the future, and the present work is a step in this direction.

Geographical names, except those from Greece and Macedonia, are given in their full form, according to the present Albanian usage. In these contexts the common names of geomorphological objects are translated as follows: liqeni = lake, lumi = river, përroi = stream, burimi = spring, ura = bridge, mali = mountain, maja = peak, qafa = mountain pass, shkëmbi = cliff. Further details regarding the localities and their description are given in FEHÉR et al. (2004). In order to better assess the size distribution in the type series, in addition to the minimum and maximum measurements the descriptions also give mean and standard deviation values of the shell sizes determined from random samples.

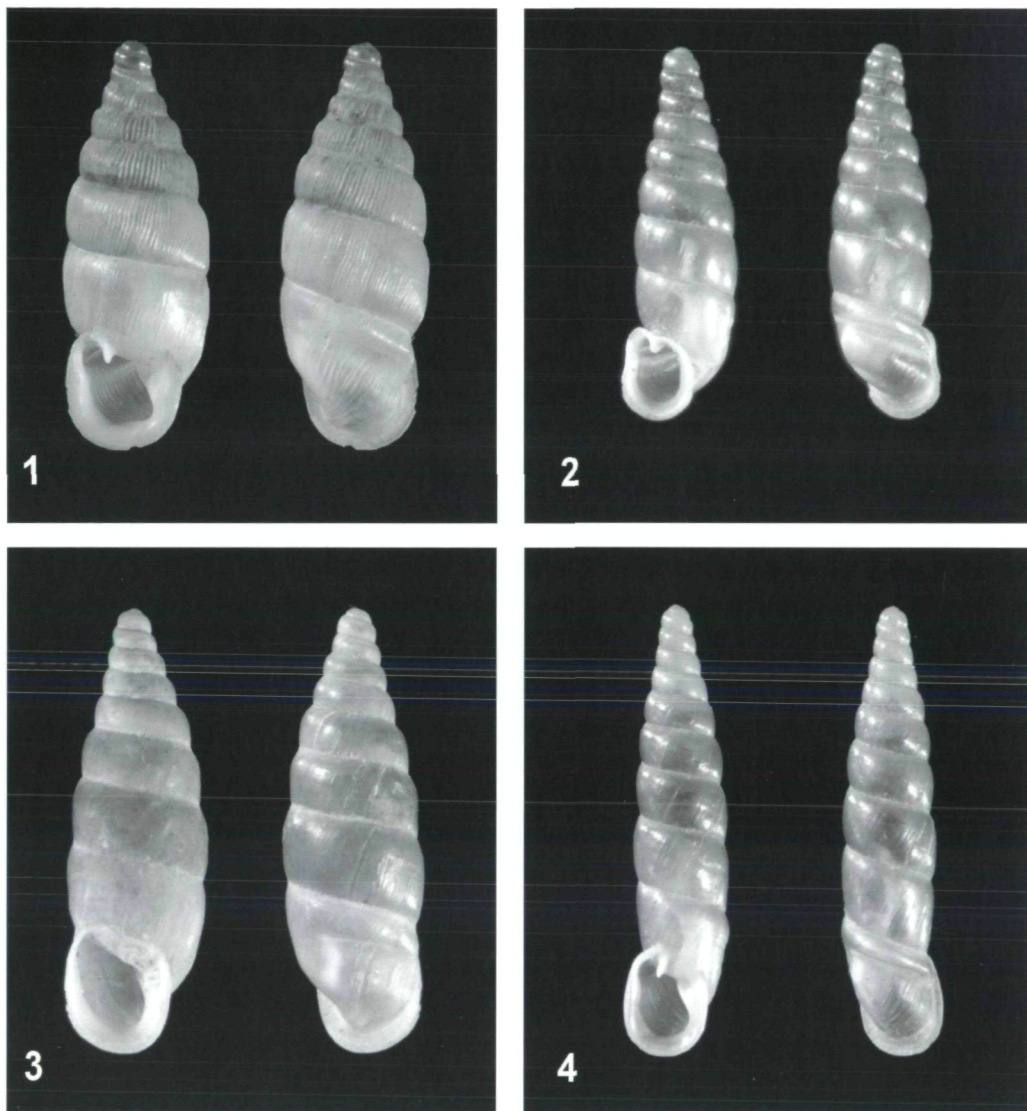
The material used in this study is deposited in the following public collections: Haus der Natur, Cismar (HNC), Hungarian Natural History Museum, Budapest (HNHM), Nationaal Natuurhistorisch Museum, Leiden (RMNH), Natural History Museum, London (BMNH), Naturhistorisches Museum, Wien (MHMW), Senckenberg Naturmuseum und Forschungsinstitut, Frankfurt am Main (SMF). Further material can be found in the collections of Z. Erőss, Budapest (ER), A. Hunyadi, Budapest (HU), J. Šteffek, Banská Štiavnica (ST), P. Subai, Aachen (SU) and M. Szekeres, Szeged (SZ).

Systematic part

Montenegrina drimmeri FEHÉR & SZEKERES sp.n. (Fig. 1)

Type material: Holotype HNHM 94829, paratypes HNHM 94830/18, NHMW 103271, RMNH 100312, SMF 328075, ER/18 and SZ/4 (leg. Z. Erőss & Z. FEHÉR, June 26, 2003).

Type locality: Albania, Lunarë, at the bridge of the Lumi i Lunarës, 22 km W of the bridge over the Lumi i Drinit të Zi along the Peshkopi to Burrel road, 730 m, UTM DM30.



Figs. 1 - 4: (1) *Montenegrina drimmeri* FEHÉR & SZEKERES sp.n., holotype HNHN 94829, 12.6 × 4.5 mm; (2) *Montenegrina minuscula* ERÖSS & SZEKERES sp.n., holotype HNHN 94831, 9.9 × 2.7 mm; (3) *Montenegrina apfelbecki caesia* FEHÉR & SZEKERES ssp.n., holotype HNHN 94835, 14.3 × 4.5 mm; (4) *Montenegrina apfelbecki csikii* ERÖSS & SZEKERES ssp.n., holotype HNHN 94837, 16.8 × 3.5 mm.

Diagnosis: Shell small, ventricose, costate, light-coloured. Neck inflexed, with double crest. Peristome wide, attached. Lunella dorsolateral, fused to basalis, separate from plica superior.

Description: The small, inflated shell is almost colourless, it consists of $8\frac{1}{2}$ to $9\frac{1}{3}$ whorls. The whorls are emerged, glossy, evenly costate from the apical part to the neck.

The neck is deeply inflexed, with strong basal and somewhat weaker peripheral crests. The peristome is thin, wide-rimmed, at its upper part it is fused to the adjacent whorl. There is a slight overlap between the ends of lamellae superior and spiralis. The lamella inferior lies deep in the peristome. The lamella subcolumellaris is bent at an angle, its outer end is not, or only barely visible through the aperture. The plica principalis ends above the short, dorsolateral lunella, from which it remains separated. The lunella is fused to the basalis, but stands separate from the short plica superior. The clausilium is not visible through the peristome. Shell height 11.1 - 15.4 mm (mean 12.8 mm, S.D. 1.10, $n = 25$) shell width 3.8 - 4.7 mm (mean 4.3 mm, S.D. 0.26, $n = 25$), aperture height 3.3 - 3.5 mm, aperture width 3.2 - 3.4 mm.

Etymology: This species is named after László Drimmer, a dedicated malacologist and a much-valued friend.

Remarks: The combination of shell features at *Montenegrina drimmeri* sp.n. distinguish it clearly from other species of the genus. All shells of the type material show a distinct albino character.

***Montenegrina minuscula* ERŐSS & SZEKERES sp.n.** (Fig. 2)

Type material: Holotype HNHM 94831, paratypes BMNH 20050214/2, HNC 63178/2, HNHM 94832/229, NHMW 103272/2, RMNH 100319/2, SMF 328076/2, ER/229 and SZ/9 (leg. Z. Erőss & Z. FEHÉR, June 26, 2003).

Type locality: Albania, 3 km W of Qafa e Murrës, 31 km W of the bridge of the Lumi i Drinit të Zi along the Peshkopi to Burrel road, 980 m, UTM DM31.

Diagnosis: Shell very small, elongated, smooth. Neck deeply inflexed, with strong double crest. Peristome detached. Lunella lateral, short, diffuse, separated from basalis.

Description: The yellowish-corneous shell is very small, consists of $8\frac{3}{4}$ to $9\frac{2}{3}$ whorls. The bulging whorls are entirely smooth. The neck is also smooth, with well-developed basal and peripheral crests, its strong neck inflexion gives the lateral side of the last whorl a concave contour in a front view. The peristome is of normal size, its margins are free. The lamella superior is long, overlapping the parallel running end of the spiralis. The lamella inferior is well developed, but barely visible from the front. Lying deep, the lamella subcolumellaris can be observed through the aperture only at an angle. The strong plica principalis reaches well beyond the short, slanted lunella of diffuse margins. The lateral lunella is separated from the short and frequently missing basalis. The plica superior is mostly missing or very short. If present, it is fused to the upper edge of the lunella. The clausilium is not visible through the aperture. Shell height 9.1 - 11.5 mm (mean 10.2 mm, S.D. 0.61, $n = 25$), shell width 2.3 - 2.9 mm (mean 2.6 mm, S.D. 0.15, $n = 25$), aperture height 2.1 - 2.6 mm, aperture width 1.6 - 2.2 mm.

Further material: Albania, 1 km N of Kurbnesh, bank of the Lumi i Urakës, 810 m, UTM DM22, leg. Z. Erőss & Z. FEHÉR, June 27, 2003; Albania, 2 km N of Kurbnesh, near a spring at the bank of the Lumi i Urakës, 810 m, UTM DM22, leg. Z. Erőss & Z. FEHÉR, June 28, 2003.

Remarks: At the type locality *M. minuscula* sp.n. was collected together with *M. perstriata skipetarica* (Soós, 1924). The new species is much smaller than other species of the genus, except *M. fuchsi* BRANDT, 1961 and *M. janinensis* (MOUSSON, 1859). From

the former it is distinguished by the narrower peristome, finer sculpture and deeper lunella, whereas from the latter it differs by the strong neck crests, free peristome, and the position of the lunella. The nearby occurring *M. apfelbecki* (STURANY, 1907) is larger, with weaker developed, dorsolateral lunella and only weak basal crest over the neck.

***Montenegrina apfelbecki caesia* FEHÉR & SZEKERES ssp.n.** (Fig. 3)

Type material: Holotype HNHM 94835, paratypes BMNH 20050215, HNC 63179, HNHM 94836/53, NHMW 103273, RMNH 100313, SMF 328077, ER/61 and SZ/4 (leg. Z. Erőss & Z. FEHÉR, October 20, 2002).

Type locality: Albania, N side of Qafa e Tërthorës, 11 km from Bogë toward Theth, 1800 m, UTM CM99.

Diagnosis: Shell dark-coloured, tumid, with smooth, emerging whorls. Neck smooth, inflexed, with well-formed basal crest. Aperture without lamella superior. Lunella dorsal to dorsolateral, no basalis or plica superior. Differs from *M. a. apfelbecki* by the ventricose shell, attached peristome and reduced clausiliar apparatus.

Description: The violet-brown shell of $8\frac{1}{2}$ to $9\frac{1}{3}$ whorls is small and inflated. The whorls are bulgy and smooth from the apex to the neck. The neck is inflexed, with a strong basal crest. The peristome is wide, oval, its upper part is fused to the whorl above it. The lamella superior is absent, the spiralis is deep and weak. Due to their reduction, the lamellae inferior and subcolumellaris are visible only at an oblique view through the aperture. The more dorsal than dorsolateral lunella is straight, short and wide, with diffuse outline. The short plica principalis ends above the lunella. No basalis or plica superior are recognisable. The reduced clausilium is partly visible through the aperture. Shell height 12.2 - 16.3 mm (mean 13.6 mm, S.D. 1.06, $n = 25$), shell width 3.9 - 4.8 mm (mean 4.3 mm, S.D. 0.20, $n = 25$), aperture height 3.4 - 3.5 mm, aperture width 3.2 - 3.5 mm.

***Montenegrina apfelbecki csikii* ERŐSS & SZEKERES ssp.n.** (Fig. 4)

Type material: Holotype HNHM 94837, paratypes BMNH 20050216, HNC 63180, HNHM 94838/33, NHMW 103274, RMNH 100316, SMF 328078, ER/37 and SZ/4 (leg. Z. Erőss & Z. FEHÉR, June 25, 2003).

Type locality: Albania, Bicaj, gorge of the Përroi i Tershanës, 500 m, UTM DM54.

Diagnosis: Shell light-coloured, glossy, widest at its basis. Neck inflexed, with basal crest. Peristome wide, attached. Lunella dorsolateral, connected to basalis. Plica superior mostly absent. Differs from *M. a. apfelbecki* by the attached peristome and deeper lunella, from *M. a. caesia* ssp.n. by the shell shape and fully developed lamellae.

Description: The brown and glossy shell is elongated, conical, consists of $8\frac{1}{2}$ to $9\frac{1}{3}$ whorls. Except for the finely wrinkled neck, the emerging whorls are completely smooth. The neck is inflexed, the basal crest is well developed. The large peristome is somewhat angular at its basis, its upper margin is attached to the shell. The lamella superior is weak, inwards it does not overlap with the spiralis. The lamella inferior ends low in the aperture, the subcolumellaris is not visible in a front view. The dorsolateral lunella is very close or connected to the plica superior, and mostly fused with the well-

developed basalis. Attached to the lunella, the plica superior is mostly residual, but occasionally can also develop a forepart. Only part of the clausilium is visible through the aperture. Shell height 14.4 - 19.2 mm (mean 16.6 mm, S.D. 1.26, $n = 25$), shell width 3.3 - 3.9 mm (mean 3.7 mm, S.D. 0.17, $n = 25$), aperture height 4.3 - 4.5 mm, aperture width 2.9 - 3.4 mm.

Etymology: The new subspecies is named after Ernő Csiki, an outstanding entomologist who collected rich zoological material in northern Albania between 1916 and 1918.

***Montenegrina apfelbecki okolensis* SZEKERES ssp.n.** (Fig. 5)

Type material: Holotype NHNM 94839 (collected in July, 1996, ex L. Náдай).

Type locality: Albania, "Theth valley" [Maja e Jezerces region, NE of Okol], UTM CM99/DM 09.

Diagnosis: Shell dark brown, glossy, elongated, with rounded neck and attached peristome. Lamella superior absent, other lamellae strongly reduced. Only dorsolateral lunella and short plica principalis present, clausilium reduced. Differs from the closely related *M. a. caesia* ssp.n. by the elongated shell, darker colour, and more reduced clausiliar structure.

Description: The dark brown, glossy shell of $9\frac{1}{2}$ whorls is elongated, almost cylindrical below the apical whorls. The emerging whorls are smooth over the entire shell. The neck is lightly inflexed, rounded at its basis, with only a weak basal crest. The peristome is oval, simple, its upper rim is fused to the last whorl. The lamella superior is missing, the spiralis is low and lies deep. The lamella inferior is hardly recognisable, the subcolumellaris is not visible through the aperture. On the dorsolateral side the rudimentary lunella is straight and diffuse, it joins the short plica principalis to form a V-like structure. The basalis and plica superior are absent. Part of the reduced clausilium is visible through the aperture. Shell height 13.9 mm, shell width 3.4 mm, aperture height 3.4 mm, aperture width 2.6 mm.

Remark: The collector and the exact position of the type locality could not be identified (see: FEHÉR et al., 2004).

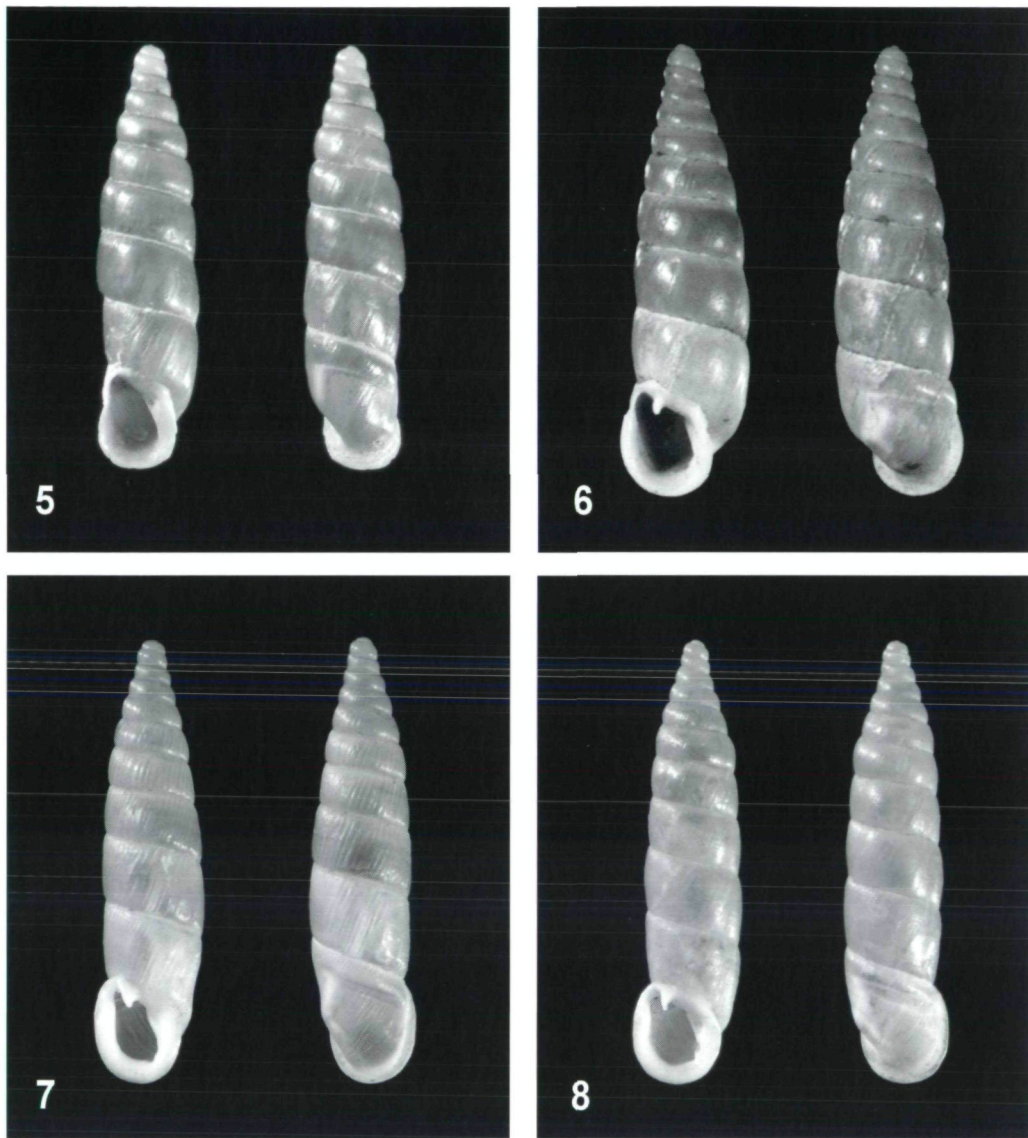
***Montenegrina apfelbecki wagneri* SZEKERES ssp.n.** (Fig. 6)

Type material: Holotype NHMW 103375, paratypes NHMW 47961/2 (leg. A. Fuchs).

Type locality: Albania, "Mal i That" [Maja e Madhe (1796 m), WNW of Peshkopi], UTM DM31/41.

Diagnosis: Shell widest at basis, smooth, with whitish surface. Neck rounded, peristome attached. Lamella superior reduced but present. Lunella dorsolateral, plica principalis separate. Rudimentary basalis is sometimes present. Differs from the similar *M. a. apfelbecki* by the conical shape, weaker basal crest, attached peristome, and the lunella that is separated from the plica principalis.

Description: The small shell is smooth, corneous-brown, consists of 9 to $9\frac{2}{3}$ emerged whorls. Except for a weak basal crest, the smooth neck is fully rounded. The upper rim of the oval peristome is attached to the adjacent whorl. The lamella superior is short, stands widely separated from the deep-lying spiralis. The lamella inferior is weakly



Figs. 5 - 8: (5) *Montenegrina apfelbecki okolensis* SZEKERES ssp.n., holotype HNHM 94839, 13.9 × 3.4 mm; (6) *Montenegrina apfelbecki wagneri* SZEKERES ssp.n., holotype NHMW 103375, 14.5 × 3.9 mm; (7) *Montenegrina dofleini plenostoma* FEHÉR & SZEKERES ssp.n., holotype HNHM 94840, 17.6 × 4.0 mm; (8) *Montenegrina ersekensis nobilis* ERÖSS & SZEKERES ssp.n., holotype HNHM 94844, 22.5 × 5.0 mm.

developed, the subcolumellaris is visible in an oblique view. The plica principalis is short, ends separated above the lunella. The dorsolateral to more dorsal lunella is short and wide, becomes narrower towards its basis. A separated, lump-like basalis can be present. The clausilium is partly visible through the aperture. Shell height 14.1 - 14.5 mm, shell width 3.8 - 3.9 mm, aperture height 3.6 - 3.8 mm, aperture width 2.9 - 3.0 mm.

Etymology: This subspecies is named in honour to Antoni J. Wagner for his contribution to the malacological research of the southern Balkans.

Remarks: So far *M. apfelbecki* was known only from the Mali i Shenjit in northern Albania. The four new subspecies described above give valuable new information regarding the distribution and taxonomic delineation of this species. Common shell features of the *M. apfelbecki* forms are their relatively small size and a tendency for the reduction of the clausiliar apparatus. This can result in an almost straight lunella, the absence or strong reduction of the basalis, and a weakly developed clausilium. The free upper margin of the peristome seems to be characteristic only for the nominate subspecies, but all *M. apfelbecki* forms have conspicuously bulging whorls. Except *M. a. csikii* ssp.n., representatives of this species have been collected at altitudes above 1500 m, which seems consistent with the observed reduction of their clausiliar apparatus.

***Montenegrina dofleini plenostoma* FEHÉR & SZEKERES ssp.n. (Fig. 7)**

Type material: Holotype (leg. Z. Erőss & Z. FEHÉR, October 23, 2002) HNHM 94840, paratypes (same data) BMNH 20050217, HNC 63181, HNHM 94841/20, NHMW 103275, RMNH 100308, SMF 328079, ER/21 and SZ/1, (type locality, leg. Z. FEHÉR, July 23, 1993) HNHM 90882/29 (type locality, leg. Z. Erőss, August 20, 1993) ER/15, (type locality, leg. Z. Erőss & A. Hunyadi, July 20, 2004) ER/11 and HU/11.

Type locality: Albania, 2 km E of Qafa e Thanës, Librazhd to Pogradec road, 860 m, UTM DL64.

Diagnosis: Shell light-coloured, regularly costate. Peristome wide, swollen, attached. Lunella dorsolateral, often connected to the basalis. Differs from other forms of *M. dofleini* (A. J. WAGNER, 1928) by the combination of the strong sculpture and the callous peristome.

Description: The light-corneous shell is spindle-shaped, elongated, consists of $10\frac{1}{4}$ to 11 whorls. Except the apex, all whorls are regularly costate. The neck is lightly inflexed, it has only a weak basal crest. The white peristome is wide and swollen, with attached upper rim. The ends of the lamellae superior and spiralis always overlap. The lamella inferior is weakly emerged, it ends just above the lamella subcolumellaris that is mostly visible in a front view. Lying dorsolateral to more lateral, the lunella is often connected to both the basalis and the plica superior. The clausilium is not, or only barely visible through the aperture. Shell height 14.8 - 18.9 mm (mean 16.7 mm, S.D. 1.15, n = 25), shell width 3.7 - 4.4 mm (mean 4.1 mm, S.D. 0.18, n = 25), aperture height 3.9 - 4.6 mm, aperture width 3.3 - 4.0 mm.

Further material: Albania, 1 km N of Pishkukat, shore of the Liqeni i Ohrit, 700 m, UTM DL64, leg. Z. Erőss & Z. FEHÉR, June 30, 2003; Albania, near Lin, 2 km from the junction toward Përrenjas, UTM DL64, leg. Z. Erőss, August 8, 1993; Albania, shore of the Liqeni i Ohrit near Hudenisht, UTM DL73, leg. Z. Erőss, August 8, 1993.

Remark: *M. d. plenostoma* ssp.n. resembles the two costate subspecies, *M. d. pinteri* NORDSIECK, 1974 and *M. d. occidentalis* NORDSIECK, 1977, from the Lake Ohrid region. Compared to the new form, the former has sharper ribs, the latter darker colour and weaker basalis, and both of these subspecies have only simple peristome, more dorsal lunella, and mostly separated basalis.

***Montenegrina ersekensis nobilis* ERÖSS & SZEKERES ssp.n. (Fig. 8)**

Type material: Holotype HNHM 94844, paratypes BMNH 20050218, HNC 63182, HNHM 94845/26, NHMW 103276, RMNH 100327, SMF 328080, ER/28 and SZ/3 (leg. Z. Eröss & Z. FEHÉR, July 3, 2003).

Type locality: Albania, 4 km S of Borovë, NE of Barmash, 1040 m, UTM DK66.

Diagnosis: Shell large, cylindrical at center, with costate apex. Peristome wide, swollen, attached. Lunella dorsolateral, connected to basalis and mostly also the plica superior. Differs from *M. e. ersekensis* NORDSIECK, 1996 by the larger size, stronger apical sculpture and the strongly swollen peristome.

Description: The large, corneous shell consists of $10\frac{1}{4}$ to $11\frac{2}{3}$ whorls, of which the last four give an almost cylindrical contour. The whorls are emerged, smooth, becoming finely costate toward the apex. The rounded neck with a basal crest is densely costate behind the peristome. The peristome is wide, with a thickened margin that is attached to the whorl above it with a broad callus. Reaching deep, the strong lamella superior has a long overlap with the spiralis. The lamella inferior ends low in the aperture, under it the lamella subcolumellaris forms a strong bend with an end that is mostly visible in a front view. The dorsolateral lunella is short but wide, it is connected to the basalis, and in most cases also to the plica superior. The clausilium is only partly visible through the aperture. Shell height 18.0 - 24.2 mm (mean 20.9 mm, S.D. 1.46, $n = 25$), shell width 4.5 - 5.5 mm (mean 4.9 mm, S.D. 0.23, $n = 25$), aperture height 4.2 - 5.9 mm, aperture width 4.3 - 4.4 mm.

***Montenegrina fuchsi muranyii* FEHÉR & SZEKERES ssp.n. (Fig. 9)**

Type material: Holotype HNHM 94846, paratypes BMNH 20050219, HNC 63183, HNHM 94847/39, NHMW 103277, RMNH 100307, SMF 328081, ER/18 and SZ/4 (leg. K. Harmos & D. Murányi, May 26, 2004).

Type locality: Albania, Mali i Tomorrit, Kalaja e Tomorrit, 1100 m, UTM DL20.

Diagnosis: Shell small, smooth or lightly costate. Neck wrinkled, strongly inflexed, with basal and peripheral crests. Aperture wide, peristome attached. Plica superior and basalis reduced, both separated from dorsolateral lunella. Differs from *M. f. fuchsi* BRANDT, 1961 and *M. f. pallida* FAUER, 1993 by the attached peristome and weaker sculpture, whereas from *M. f. klemmi* BRANDT, 1962 by the always attached peristome, weaker sculpture, and the weaker developed basalis.

Description: The small, yellowish-corneous shell consists of $8\frac{1}{3}$ to 9 bulging whorls. The surface of the whorls varies from smooth to lightly wrinkled. The neck is strongly wrinkled, deeply inflexed, with well-recognisable basal and peripheral crests. The aperture is large, pear-shaped, with a peristome that is always attached to the adjacent whorl. The outer end of the lamella spiralis just reaches or slightly overlaps the inner end of the superior. The lamella inferior ends in a small lump, the subcolumellaris can be viewed only obliquely. Situated dorsolaterally, the lunella joins the plica principalis that reaches beyond it. The forepart of the plica superior is weak, occasionally absent, not connected to the lunella. The weak basalis is occasionally missing; when present it also stands separated from the lunella. The clausilium is not, or only barely visible through the aperture. Shell height 8.9 - 11.9 mm (mean 10.2 mm, S.D. 1.01, $n = 18$), shell width 2.8 -

3.4 mm (mean 3.0 mm, S.D. 0.19, $n = 18$), aperture height 2.5 - 3.0 mm, aperture width 2.0 - 2.4 mm.

Etymology: The new subspecies is named after Dávid Murányi, an entomologist colleague who contributed the type material.

Remark: Kalaja e Tomorrit, representing the northernmost occurrence of *M. fuchsi* forms, is a small, isolated limestone plateau which is separated from the main limestone range of the Mali i Tomorrit by a valley.

***Montenegrina helvola magna* FEHÉR & SZEKERES ssp.n. (Fig. 10)**

Type material: Holotype HNHM 94848, paratypes HNHM 94849/26, NHMW 103278, SMF 328082, ER/2 and SZ/2 (leg. Z. FEHÉR, October 9, 2004).

Type locality: Albania, Ura e Vashës, in the gorge of the Lumi i Matit, at its confluence with the Përroi i Gurri i Bardhit, 350 m, UTM DL29.

Diagnosis: Shell large, smooth, light-coloured. Neck with very strong peripheral crest, peristome free. Basalis short, plica superior mostly separate from lateral lunella. Differs from other subspecies of *M. helvola* (KÜSTER, 1860) by the larger size and the strong, sharp peripheral crest.

Description: The large, greyish-corneous shell of $9\frac{2}{3}$ to $11\frac{1}{2}$ whorls is spindle-shaped. Except the densely costate neck, the whorls are entirely smooth. The neck has equally strong basal and peripheral crests, the latter remaining quite strong and sharp until its end at the peristome. The peristome is wide, it stands far apart from the adjacent whorl. The lamella superior forms a long overlap with the spiralis. The lamella inferior lies deep, it is not, or only slightly visible in a front view. The lamella subcolumellaris cannot be seen without breaking the shell. The lunella is dorsal, perpendicular to the last whorl. It is fused to the short basalis, but mostly separate from the plica superior. The deeply situated clausilium cannot be viewed through the aperture. Shell height 14.5 - 20.6 mm (mean 17.9 mm, S.D. 1.95, $n = 19$) shell width 3.7 - 5.0 mm (mean 4.3 mm, S.D. 0.39, $n = 19$), aperture height 3.7 - 4.3 mm, aperture width 3.3 - 4.0 mm.

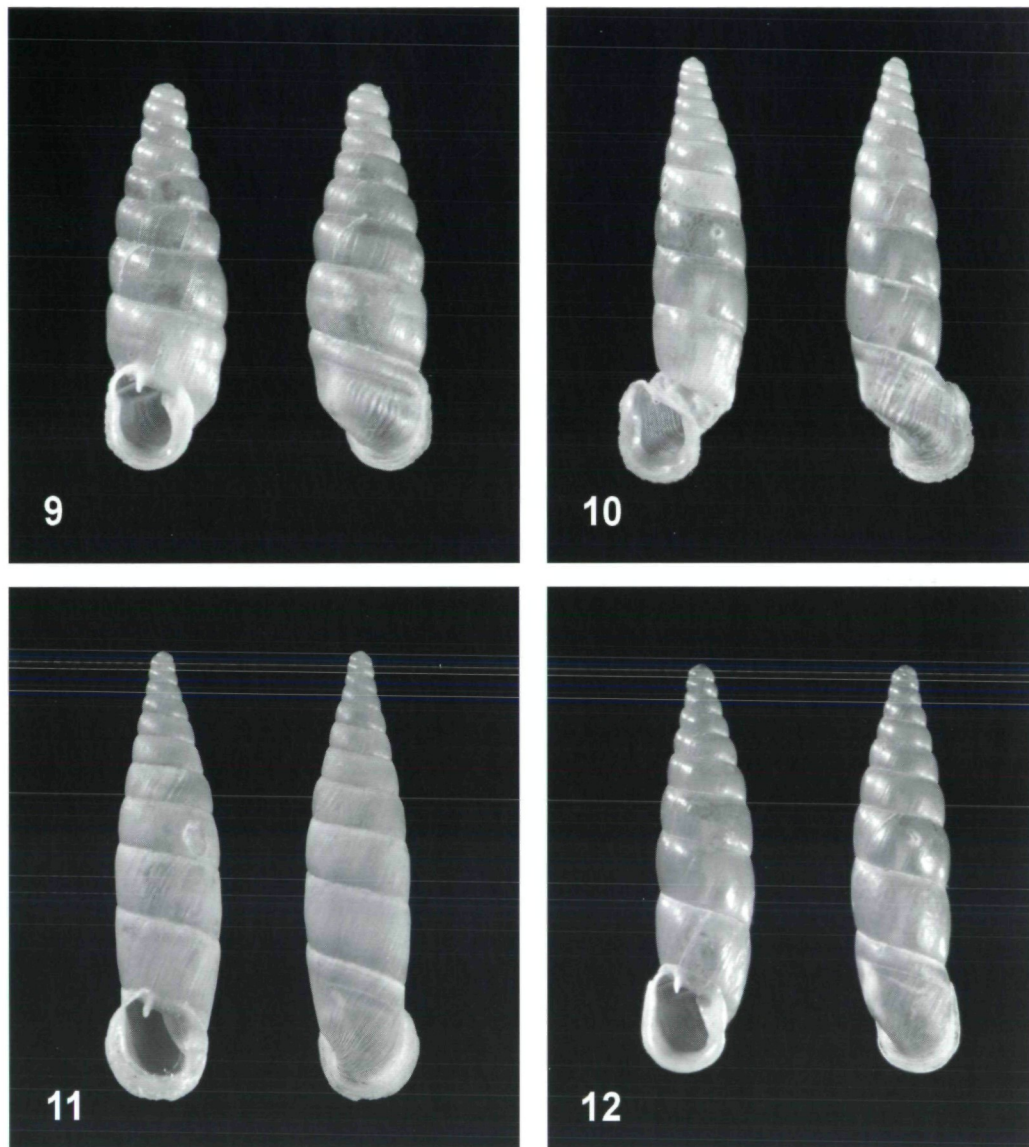
***Montenegrina irmengardis edmundi* SZEKERES ssp.n. (Fig. 11)**

Type material: Holotype (leg. P. Subai & M. Szekeres, May 16, 1997) HNHM 94850, paratypes (same data) BMNH 20050220, HNHM 94851, NHMW 103279, RMNH 100707, SMF 328083, SU/7, SZ/1, (type locality, leg. Z. Erőss & A. Hunyadi, July 18, 2004) HNC 63184, HNHM 94852, ER/27, HU/27 and SZ/2, (Greece, Ipiros, Thesprotia, 8.5 km ESE of Tsamantas, between Lista and the cross-road to Keramitsa, 470 m, UTM DK50, leg. E. & E. J. Gittenberger, May 27, 1991) RMNH 100706/14.

Type locality: Greece, Ipiros, 6 km from Lia toward Lista, NE of Filiates, 460 m, UTM DK50.

Diagnosis: Shell large, striate, with whitish surface. Peristome thick, attached. Lunella dorsolateral, separated from plica superior. Differs from other forms of *M. irmengardis* KLEMM, 1962 by the whitish shell surface and the thickened peristome.

Description: The $10\frac{1}{3}$ to 11 brown, finely striate whorls are separated by a white sutural band. Except the apical part, they are covered with a whitish surface layer. The rounded neck has only weak basal crest, almost no inflection, and a sculpture of stronger



Figs. 9 - 12: (9) *Montenegrina fuchsi muranyii* FEHÉR & SZEKERES ssp.n., holotype HNHN 94846, 10.9×3.4 mm; (10) *Montenegrina helvola magna* FEHÉR & SZEKERES ssp.n., holotype HNHN 94848, 18.7×4.2 mm; (11) *Montenegrina irmengardis edmundi* SZEKERES ssp.n., holotype HNHN 94850, 22.2×5.3 mm; (12) *Montenegrina irmengardis flava* ERÖSS & SZEKERES ssp.n., holotype HNHN 94853, 18.8×4.6 mm.

striae. The yellowish-brown peristome is wide, swollen, almost spherical, with an upper lip melting into the whorl above it. The lamellae superior and spiralis are long, with only a slight overlap between them. A smoothly arched lamella inferior ends at the lower third of the aperture. Under it lies the broadly bent lamella subcolumellaris that is visi-

ble only in an oblique view. The strong, dorsolateral lunella is separated from the plicae principalis and superior, but fused to the basalis. The clausilium plate is almost fully visible through the peristome. Shell height 20.2 - 23.9 mm (mean 22.2 mm, S.D. 1.08, $n = 20$), shell width 4.8 - 6.1 mm (mean 5.4 mm, S.D. 0.28, $n = 20$), aperture height 5.4 - 5.5 mm, aperture width 4.8 - 5.0 mm.

Etymology: *M. i. edmundi* ssp.n. is named after, and dedicated to, Edmund Gittenberger who first collected this form.

Remark: The locality in Thesprotia is very close to, or identical with, the type locality.

***Montenegrina irmengardis flava* ERŐSS & SZEKERES ssp.n. (Fig. 12)**

Type material: Holotype HNHM 94853, paratypes BMNH 20050221, HNC 63185, HNHM 94854/26, NHMW 103280, RMNH 100309, SMF 328084, ER/27 and SZ/3 (leg. Z. Erőss & Z. FEHÉR, July 4, 2003).

Type locality: Albania, Lumi i Devollit gorge at the Gjinikos junction, 25 km W of Maliq along the Korçë to Gramsh road, 750 m, UTM DL50.

Diagnosis: Shell smooth, light-coloured. Peristome simple, attached. Lunella dorsolateral, mostly connected to basalis but separated from plica superior. Differs from other *M. irmengardis* subspecies by the lighter colour and deeper lunella.

Description: The medium-size shell of light corneous colour consists of $9\frac{1}{3}$ to $10\frac{1}{3}$ whorls. The bulging whorls are smooth, becoming lightly costate toward the apex, with a very narrow sutural band between them. The neck is mildly inflexed, costate, with stronger basal and weak peripheral crests. The peristome is simple, somewhat angular at its basis, its upper margin is fused to the last whorl. The lamella superior is very long, reaches well beyond the outer end of the spiralis. The lamella inferior is straight, weakly emerged. Under it the lamella subcolumellaris forms a wide bend, with an end that is mostly visible in a front view. The plica principalis forms an angle with the forepart of the plica superior. In most cases the dorsolateral to almost lateral lunella is connected to the basalis, but separated from the plica superior. The clausilium is partly visible through the aperture. Shell height 17.7 - 20.9 mm (mean 19.2 mm, S.D. 1.00, $n = 25$), shell width 4.1 - 4.7 mm (mean 4.4 mm, S.D. 0.16, $n = 25$), aperture height 4.2 - 5.5 mm, aperture width 3.6 - 4.2 mm.

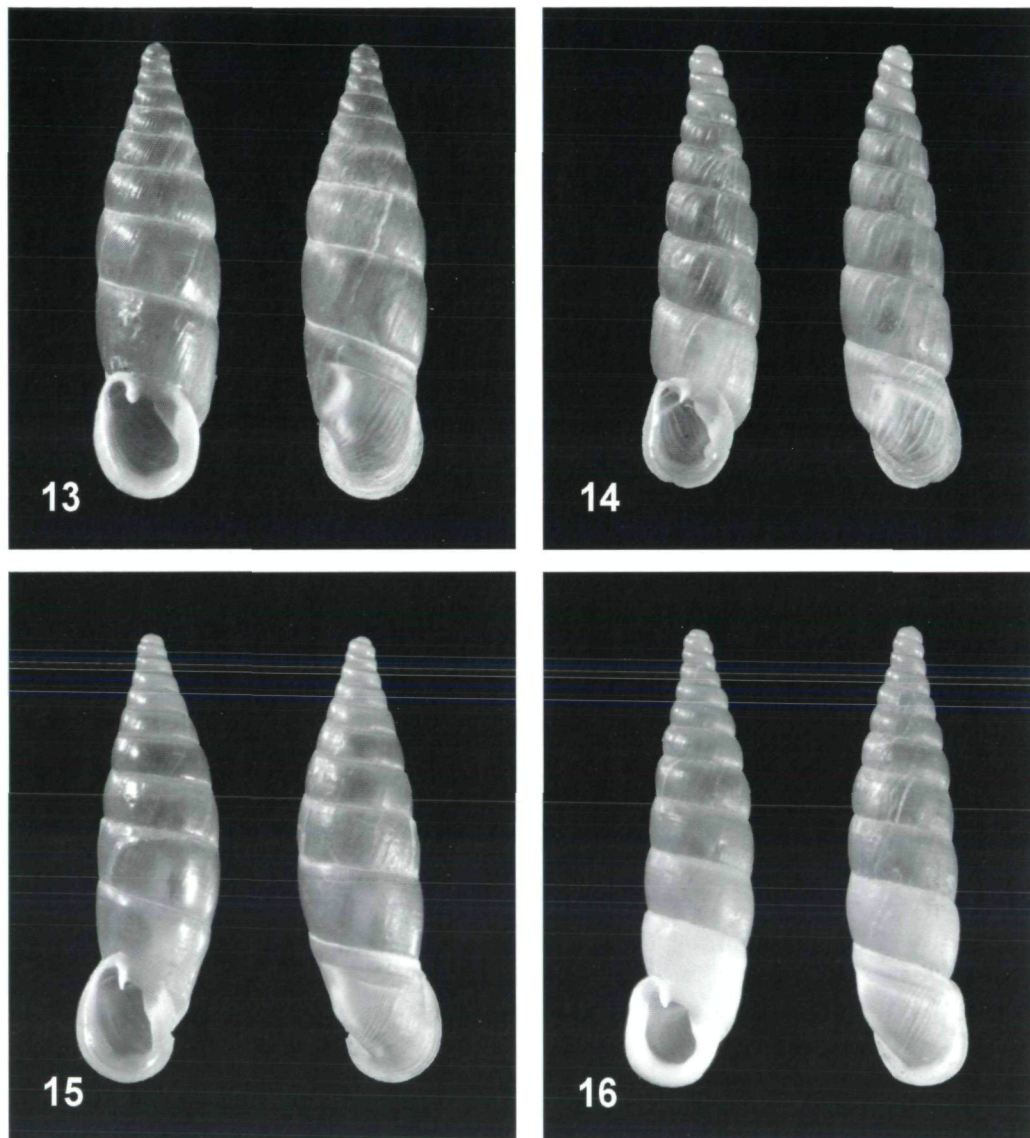
***Montenegrina irmengardis remota* FEHÉR & SZEKERES ssp.n. (Fig. 13)**

Type material: Holotype HNHM 94859 (leg. Z. Erőss & Z. FEHÉR, June 27, 2003), paratypes (same data) HNHM 94860/6, NHMW 103281, SMF 328085, ER/8 and SZ/2, (type locality, leg. Z. FEHÉR, October 8, 2004) HNHM 94861/3, (type locality, leg. Z. Erőss & A. Hunyadi, July 20, 2004) ER/1 and HU/1.

Type locality: Albania, Lumi i Matit gorge 11 km W of the Ulëz junction, along the Burrel to Milot road, 100 m, UTM DM01.

Diagnosis: Shell large, smooth, dark-coloured, with wide, attached peristome. Lunella dorsolateral, fused to basalis. Differs from other *M. irmengardis* subspecies by the strongly inflated shell and the absence of the plica superior.

Description: The relatively large, ventricose shell of $9\frac{1}{2}$ to $10\frac{1}{4}$ whorls is violet-brown. Except for the lightly costate apex the whorls are smooth, separated by a whi-



Figs. 13 - 16: (13) *Montenegrina irmengardis remota* FEHÉR & SZEKERES ssp.n., holotype HNHM 94859, 19.6×5.4 mm; (14) *Montenegrina irmengardis rugosa* FEHÉR & SZEKERES ssp.n., holotype HNHM 94862, 17.4×4.4 mm; (15) *Montenegrina irmengardis timeae* ERÖSS & SZEKERES ssp.n., holotype HNHM 94855, 19.7×5.4 mm; (16) *Montenegrina janinensis ampla* FEHÉR & SZEKERES ssp.n., holotype HNHM 94865, 19.2×4.7 mm.

tish sutural band. The strongly wrinkled neck is not inflexed, only its basal crest is well developed. The aperture is wide, with a light-brown peristome that melts into the adjacent whorl at its upper part. The lamella superior ends before, or just reaches, the start of the spiralis. Descending straight, the lamella inferior ends low in the aperture. The

broadly bent lamella spiralis is well visible in an oblique view. The dorsolateral lunella is connected to both the plica principalis and the basalis. The plica superior is absent. The clausilium plate is almost fully visible through the aperture. Shell height 18.0 - 23.1 mm (mean 20.3 mm, S.D. 1.54, $n = 15$), shell width 4.7 - 5.6 mm (mean 5.3 mm, S.D. 0.25, $n = 15$), aperture height 6.0 - 6.1 mm, aperture width 4.7 - 5.1 mm.

***Montenegrina irmengardis rugosa* FEHÉR & SZEKERES ssp.n.** (Fig. 14)

Type material: Holotype HNHM 94862, paratypes HNHM 94863/3, NHMW 103282, SMF 328086, ER/1 and SZ/1 (leg. Z. FEHÉR, October 10, 2004).

Type locality: Albania, Mali i Tomorrit, 4.8 km NE of Çorovodë towards Radesh, over the gorge of the Përroi i Çorovodës, 480 m, UTM DK38.

Diagnosis: Shell small, with wrinkled surface. Peristome simple, attached. Lunella dorsolateral, often separated from basalis. Differs from the costate *M. i. thysii* LOOSJES & LOOSJES-VAN BEMMEL, 1988 by the smaller size and much weaker sculpture, whereas from other *M. irmengardis* subspecies by the wrinkled shell surface.

Description: The thin, brownish-corneous shell is widest at its basis, consists of $9\frac{1}{3}$ to $10\frac{1}{3}$ whorls. The whorls, covered with broad wrinkles, are separated by an inconspicuous suture. The neck is weakly inflexed, has a strong basal and a weaker peripheral crest and a sculpture of regular, sharp ribs. The simple, oval peristome is attached to the last whorl with its upper rim. The lamella superior is low but long, reaches to, or slightly beyond, the start of the spiralis. Barely emerging into the aperture, the lamella inferior ends low, near the end of the broadly bent subcolumellaris which is usually visible in a front view. The diffuse, dorsal to dorsolateral lunella is mostly attached to the plica principalis and separated from the superior. The plica basalis is also often separated from the lunella. In an oblique view the clausilium plate is fully visible. Shell height 16.0 - 18.7 mm (mean 17.3 mm, S.D. 0.91, $n = 8$), shell width 4.0 - 4.4 mm (mean 4.1 mm, S.D. 0.14, $n = 8$), aperture height 4.2 - 4.7 mm, aperture width 3.1 - 3.5 mm.

Further material: Albania, NE of Radesh, left side of a gorge along the road to Zalosnje, 830 m, UTM DK38, leg. Z. FEHÉR, August 8, 2004.

***Montenegrina irmengardis timeae* ERÖSS & SZEKERES ssp.n.** (Fig. 15)

Type material: Holotype HNHM 94855, paratypes BMNH 20050222/2, HNC 63186/2, HNHM 94856/126, NHMW 103283/2, RMNH 100315/2, SMF 328087/2, ER/127 and SZ/3 (leg. Z. Eröss & Z. FEHÉR, October 26, 2002).

Type locality: Albania, 2 km S of Fshat, toward Gurri i Bardhë, SE of Burrel along the Klos to Elbasan road, left side of the Mat river gorge, 610 m, UTM DL29.

Diagnosis: Shell large, spindle-shaped, light-colored, glossy. Peristome simple, attached. Lunella is dorsolateral to lateral, plica superior usually weak. Differs from *M. i. flava* ssp.n. by the darker, larger, more ventricose shell, as well as the better-developed spiralis and plica superior, whereas from other *M. irmengardis* subspecies by the lighter shell colour and deeper situated lunella.

Description: The large, greyish-corneous shell of $10\frac{1}{3}$ to $11\frac{1}{4}$ whorls has a characteristic smooth, glossy surface. The flat whorls are separated by a very narrow sutural band. The neck has dense, regular ribs, barely recognisable inflection, and a well-deve-



Fig. 17: Distribution of *Montenegrina* forms in the Mali i Tomorrit region: *M. fuchsi muranyii* FEHÉR & SZEKERES ssp.n. (m), *M. irmengardis rugosa* FEHÉR & SZEKERES ssp.n. (r), *M. janinensis ampla* FEHÉR & SZEKERES ssp.n. (a), *M. j. coerulescens* NORDSIECK, 1996 (c), *M. j. tomorosi* BRANDT, 1961 (t). The limestone area is indicated by grey pattern, and its position in Albania is shown in an insert map (grey shading).

loped basal crest. Attached at its upper rim, the simple peristome is oval, often with a slightly angular basis. The lamella superior is very long, it forms a wide overlap with the spiralis. The lamella inferior is weakly emerged, ends close to the spiralis which is visible only in an oblique view. The plica principalis and basalis are connected to the dorsolateral to lateral lunella. The plica superior is usually weak, sometimes absent, always separated from the lunella. The clausilium is not visible through the aperture. Shell height 15.0 - 22.0 mm (mean 18.7 mm, S.D. 1.54, $n = 25$), shell width 4.5 - 5.9 mm (mean 5.1 mm, S.D. 0.32, $n = 25$), aperture height 4.0 - 5.4 mm, aperture width 3.5 - 4.8 mm.

Etymology: The new subspecies is named after the wife of Z. Eröss in appreciation of her support and help.

Further material: Albania, 5.5 km N of Gurri i Bardhë, along the road from Klos to Elbasan, 740 m, UTM DL29, leg. Z. FEHÉR, October 9, 2004; Albania, 6.7 km NE of Gurri i Bardhë, along the road from Klos to Elbasan, 650 m, UTM DL29, leg. Z. FEHÉR, October 9, 2004.

Remark: Earlier *M. irmengardis* was known only from northwestern Greece (Ipiros) and the immediately neighbouring part of southeastern Albania. Some of the new subspecies described above extend the distribution area of this species considerably toward the northwestern direction.

***Montenegrina janinensis ampla* FEHÉR & SZEKERES ssp.n. (Fig. 16)**

Type material: Holotype HNHM 94865, paratypes BMNH 20050223, HNC 63187, HNHM 94866/97, NHMW 103284, RMNH 100318, SMF 328088, ER/4 and SZ/4 (leg. Z. FEHÉR, August 9, 2004).

Type locality: Albania, Mali i Tomorrit, karst sinkhole 1 km S of Maja e Ramiës, 1850 m, UTM DK39.

Diagnosis: Shell medium-sized, smooth, light-coloured. Neck lightly inflexed, at basis fully rounded. Peristome wide, swollen. Lunella dorsolateral, connected to plica superior, mostly separated from basalis. Differs from the closely related *M. j. tomorosi* BRANDT, 1961 by the larger shell, thick peristome and better developed plicae.

Description: The light-corneous, relatively large shell consists of $10\frac{1}{3}$ to $11\frac{1}{3}$ whorls. The whorls are completely smooth, except the neck which is finely and densely striate. The large aperture is surrounded by a wide and thick peristome. The neck is very weakly inflexed, at its rounded basis the basal crest is hardly recognisable. The lamella spiralis starts deeper than the end of the superior. The lamella inferior bends downward before its end, the subcolumellaris can only be seen in an oblique view. Reaching somewhat deeper than the lunella, the plica principalis runs parallel and close to the long but weak plica superior. The wide, diffuse lunella lies dorsolaterally. It is mostly connected to the plicae principalis and superior, but usually separated from the reduced, lump-like basalis. The clausilium is not visible through the aperture. Shell height 15.0 - 20.2 mm (mean 16.9 mm, S.D. 1.16, $n = 25$), shell width 3.8 - 4.9 mm (mean 4.3 mm, S.D. 0.24, $n = 25$), aperture height 3.6 - 4.4 mm, aperture width 3.4 - 4.0 mm.

Further material: Albania, Mali i Tomorrit, karst sinkhole E of Maja e Ramiës, 2050 m, UTM DK39, leg. Z. FEHÉR, August 9, 2004.

Remarks: Our data reveal how the subspecies of *Montenegrina janinensis* (MOUSSON, 1859) are distributed in the Mali i Tomorrit region (Fig. 17). Whereas *M. j. ampla* ssp.n. was found near Maja e Ramiës, samples of *M. j. tomorosi* BRANDT were collected NW of Maja e Kulmakut. The northwestern chain of the mountain, from around Maja e Tomorrit to Çuka Partizan, is inhabited by *M. j. coerulescens* NORDSIECK, 1996. Although the relatively large, fusiform shell of *M. j. ampla* ssp.n. is not characteristic for *M. janinensis* forms, the new subspecies is conditionally classified within this species on the basis of its apparent similarity to *M. j. tomorosi*.

***Montenegrina janinensis soosi* ERŐSS & SZEKERES ssp.n.** (Fig. 18)

Type material: Holotype HNHM 94868, paratypes BMNH 20050224, HNC 63188, HNHM 94869/23, NHMW 103285, RMNH 100317, SMF 328089, ER/22 and SZ/3 (leg. Z. Erőss & Z. FEHÉR, June 25, 2003).

Type locality: Albania, between Kolesjan and Resk, 1 km N of the Ploshtan junction, along the Kukës to Peshkopi road, 750 m, UTM DM44.

Diagnosis: Shell small, conical, light-coloured. Aperture wide, peristome narrow, attached. Plica superior strong, lunella lateral, mostly separated from basalis. Differs from other *M. janinensis* forms by the weak apical sculpture and deeper lunella.

Description: The small, corneous shell of $9\frac{1}{2}$ to 11 whorls is widest at its basis. The flat whorls are smooth, becoming finely wrinkled only over the neck. The lightly inflexed, inflated neck has a stronger basal, and a weaker, wider peripheral crest. The large aperture is surrounded by a narrow peristome that is attached to the whorl above it. The lamellae superior and spiralis widely overlap. The inconspicuous lamella inferior ends low in the aperture, above the end of the subcolumellaris which is mostly visible from the front. The lunella is broad, lateral to somewhat dorsolateral, connected to the plica principalis and mostly also the plica superior, but usually separated from the basalis. The clausilium is not visible through the aperture. Shell height 11.4–14.6 mm (mean 12.7 mm, S.D. 0.78, $n = 20$), shell width 2.7–3.2 mm (mean 3.0 mm, S.D. 0.12, $n = 20$), aperture height 3.0–3.2 mm, aperture width 2.6–3.0 mm.

Etymology: The new subspecies is named after Lajos Soós in recognition of his pioneering research on the Albanian malacofauna.

Further material: Albania, 2.5 km N of Bushticë along the road toward Lusën, in a gorge at Ura e Lapavës (Përroi i Vaut të Çayës), 600 m, UTM DM53 (occurring together with *M. perstriata skipetarica*), leg. Z. Erőss & Z. FEHÉR, June 25, 2003.

Remark: The wide distribution area and diverse shell morphology of the currently recognised *M. janinensis* forms suggest that some of these taxa have been classified with this species mainly on the basis of their small shell size. For instance, *M. j. fagorum* NORDSIECK, 1974 is apparently closest related to the nearby-occurring *M. dofleini kaiseri* BRANDT, 1961, or *M. j. maasseni* GITTENBERGER, 2002 strongly resembles the neighbouring *M. dennisi* GITTENBERGER, 2002. A future re-assessment of the phylogenetic relationships between the *M. janinensis* forms seems necessary, and this could greatly profit from the use of molecular markers that are expected to provide a valuable addition to the limited and sometimes ambiguous shell characters.

***Montenegrina laxa disjuncta* FEHÉR & SZEKERES ssp.n.** (Fig. 19)

Type material: Holotype HNHM 94871, paratypes BMNH 20050225, HNC 63189, HNHM 94872/25, NHMW 103286, RMNH 100326, SMF 328090, ER/24 and SZ/4 (leg. Z. Erőss & Z. FEHÉR, June 26, 2003).

Type locality: Albania, 4 km E of Selishtë, 13 km W of the bridge over the Lumi i Drinit të Zi along the Peshkopi to Burrel road, 760 m, UTM DM40.

Diagnosis: Shell elongated, entirely smooth. Neck with strong double crest, peristome thick, attached. Lamellae superior and spiralis not overlapping. Lunella lateral to ventrolateral, often connected to plica superior. Differs from the similar *M. l. miraka*

NORDSIECK, 1996 by the thickened peristome, stronger neck crests, not overlapping lamellae superior and spiralis, and the frequent fusion of the plica superior with the lunella.

Description: The corneous shell is slender, consists of $10\frac{1}{4}$ to $11\frac{3}{4}$ whorls. The whorls are smooth even at the apex, they are separated by an inconspicuous sutural band. The smooth or finely striate neck is inflexed, both the basal and peripheral crests are well developed. The peristome is quite angular at the basis, its upper margin is fused to the last whorl. The ends of the lamellae superior and spiralis reach close to each other but do not overlap. Slightly arched and swollen, the lamella inferior descends low in the aperture. The lamella subcolumellaris is withdrawn, its end is barely visible in an oblique view. The lunella is lateral to more ventrolateral, strongly swollen. It is connected to the plica superior and the basalis, and often also to the plica superior. The clausilium is not visible through the peristome. Shell height 16.1 - 21.3 mm (mean 18.3 mm, S.D. 1.52, $n = 25$), shell width 3.6 - 4.5 mm (mean 4.1, S.D. 0.29 mm, $n = 25$), aperture height 3.7 - 4.3 mm, aperture width 3.6 - 4.0 mm.

Further material: Albania, Selishtë, 18 km W of the bridge over the Lumi i Drinit të Zi along the Peshkopi to Burrel road, 800 m, UTM DM30, leg. Z. ERÖSS & Z. FEHÉR, June 26, 2003.

***Montenegrina laxa errans* ERÖSS & SZEKERES ssp.n. (Fig. 20)**

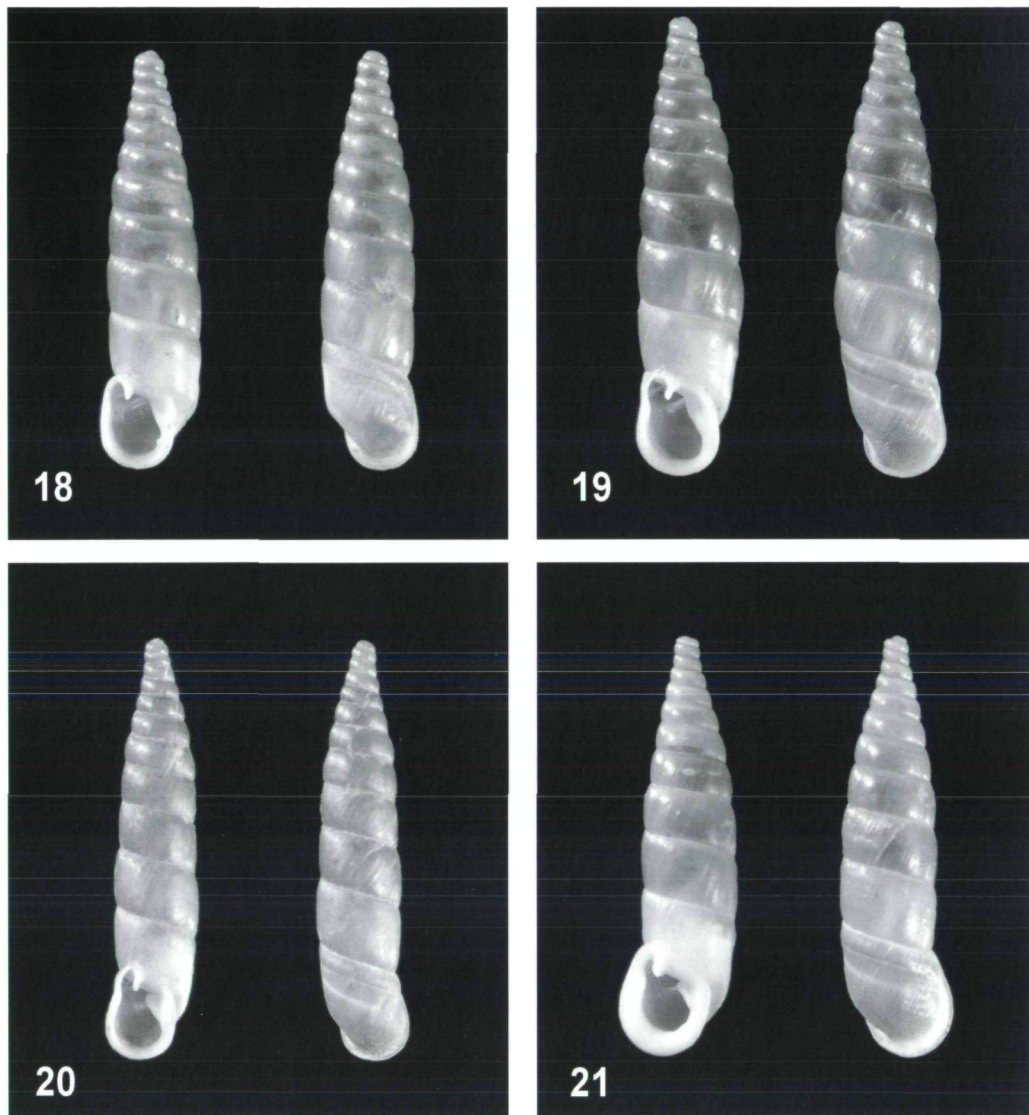
Type material: Holotype HNHM 94874, paratypes BMNH 20050226, HNC 63190, HNHM 94875/66, NHMW 103287, RMNH 100314, SMF 328091, ER/65 and SZ/4 (leg. Z. ERÖSS & Z. FEHÉR, July 2, 2003).

Type locality: Albania, Çervenakë, 6 km from the Lin to Pogradec road toward the TV transmission tower, 1150 m, UTM DL63.

Diagnosis: Shell slender, smooth, with stronger apical sculpture. Neck rounded, with weak crests, peristome attached. Lunella ventrolateral, separated from plica superior. Differs from *M. l. miraka* by the shorter basalis, not overlapping lamellae superior and spiralis, while from *M. l. disjuncta* ssp.n. by the weaker neck crests and the always separated plica superior.

Description: The slender shell of $10\frac{2}{3}$ to $11\frac{3}{4}$ whorls is almost entirely smooth, with fine wrinkles only at the apex. The sutural band is very narrow. The neck is smooth, quite rounded, with weakly formed crests. The peristome has a somewhat angular basis, its upper margin is fused to the adjacent whorl. The lamella superior does not overlap the spiralis. The lamella inferior ends low, below it the deep subcolumellaris is usually not visible in an oblique view. The ventrolateral to more lateral lunella is thickened, it forms with the relatively short basalis a triangular lump that is easily visible through the shell. The lunella is also connected to the plica principalis, but separated from the plica superior. The clausilium cannot be viewed through the aperture. Shell height 16.0 - 19.9 mm (mean 17.3 mm, S.D. 1.00, $n = 25$), shell width 3.6 - 4.3 mm (mean 3.9 mm, S.D. 0.20, $n = 25$), aperture height 3.8 - 4.4 mm, aperture width 3.0 - 3.7 mm.

Further material: Albania, Stravaj, SW of Përrenjas, 800 m, UTM DL53, leg. Z. ERÖSS & Z. FEHÉR, July 1, 2003; Albania, Shpellë, 4 km SW of Bishnicë, Shkëmbi i Qytetit, 1140 m, UTM DL53, leg. Z. ERÖSS & Z. FEHÉR, July 1, 2003.



Figs. 18 - 21: (18) *Montenegrina janinensis soosi* ERÖSS & SZEKERES ssp.n., holotype HNHM 94868, 14.6 × 3.2 mm; (19) *Montenegrina laxa disjuncta* FEHÉR & SZEKERES ssp.n., holotype HNHM 94871, 17.7 × 4.1 mm; (20) *Montenegrina laxa errans* ERÖSS & SZEKERES ssp.n., holotype HNHM 94874, 19.9 × 4.0 mm; (21) *Montenegrina laxa kontschani* ERÖSS & SZEKERES ssp.n., holotype HNHM 94878, 19.0 × 4.1 mm.

***Montenegrina laxa kontschani* ERÖSS & SZEKERES ssp.n. (Fig. 21)**

Type material: Holotype HNHM 94878, paratypes BMNH 20050227, HNC 63191, HNHM 94879/70, NHMW 103288, RMNH 100325, SMF 328092, ER/69 and SZ/4 (leg. Z. ERÖSS & Z. FEHÉR, October 22, 2002).

Type locality: Albania, 6 km S of Qafa e Shtyllës, 7.7 km S of the Elbasan junction along the Tiranë to Klos road, 1420 m, UTM DL27.

Diagnosis: Shell with wide aperture and thickened peristome. Neck rounded with weak crests. Lamellae superior and spiralis overlapping. Lunella lateral, mostly separated from plica superior. Differs from other forms of *M. laxa* (KÜSTER, 1861) by the strongly swollen peristome.

Description: The relatively small, dark-corneous shell is widest at its basis, consists of 10 to $11\frac{1}{4}$ whorls. The whorls are smooth over the entire shell, the sutural band between them is well recognisable. The neck is inflexed, rounded at its basis, with weak crests. Surrounding the large aperture, the peristome has a wide, swollen rim that is attached to the last whorl. The lamellae superior and spiralis overlap. The lamella inferior has a high, thick end, the deep subcolumellaris is barely or not at all visible in an oblique view. The lateral lunella is fused to the well-developed basalis, but only occasionally to the plica superior. The clausilium is not visible through the aperture. Shell height 14.8 - 19.3 mm (mean 17.0 mm, S.D. 1.21, $n = 25$), shell width 3.7 - 4.8 mm (mean 4.3 mm, S.D. 0.24, $n = 25$), aperture height 3.4 - 3.8 mm, aperture width 3.5 - 3.8 mm.

Further material: Albania, 3 km N of Qafa e Shtyllës, Tiranë to Klos road 1.3 km N of the junction to Elbasan, 1500 m, UTM DL28, leg. Z. ERÖSS & Z. FEHÉR, October 22, 2002, and also Z. FEHÉR, October 9, 2004; Albania, 3 km toward Elbasan from the Tiranë to Klos road, 1380 m, UTM DL27, leg. Z. FEHÉR, October 9, 2004.

Etymology: The new subspecies is named after Jenő Kontschán, an acarologist colleague, for his valuable help during the fieldwork.

Remarks: Our data considerably extend the known distribution area of *M. laxa* in both the north- and southeastern directions, reaching the line of the Drinit të Zi, as well as the mountains west of Lake Ohrid. In addition to the new subspecies, *M. l. miraka* NORDSIECK was also collected at the following locations: Albania, 1 km S of Lunik, along the Librazhd to Peshkopi road, 700 m, UTM DL46; Albania, Mengli, small gorge over the quarry, 250 m, UTM DL25; Albania, 6 km W of Librazhd, on the right bank of the Lumi i Shkumbinit, 230 m, UTM DL35; Albania, Qukës-Shkumbin, over the quarry on the left side of the Lumi i Shkumbinit, 500 m, UTM DL54.

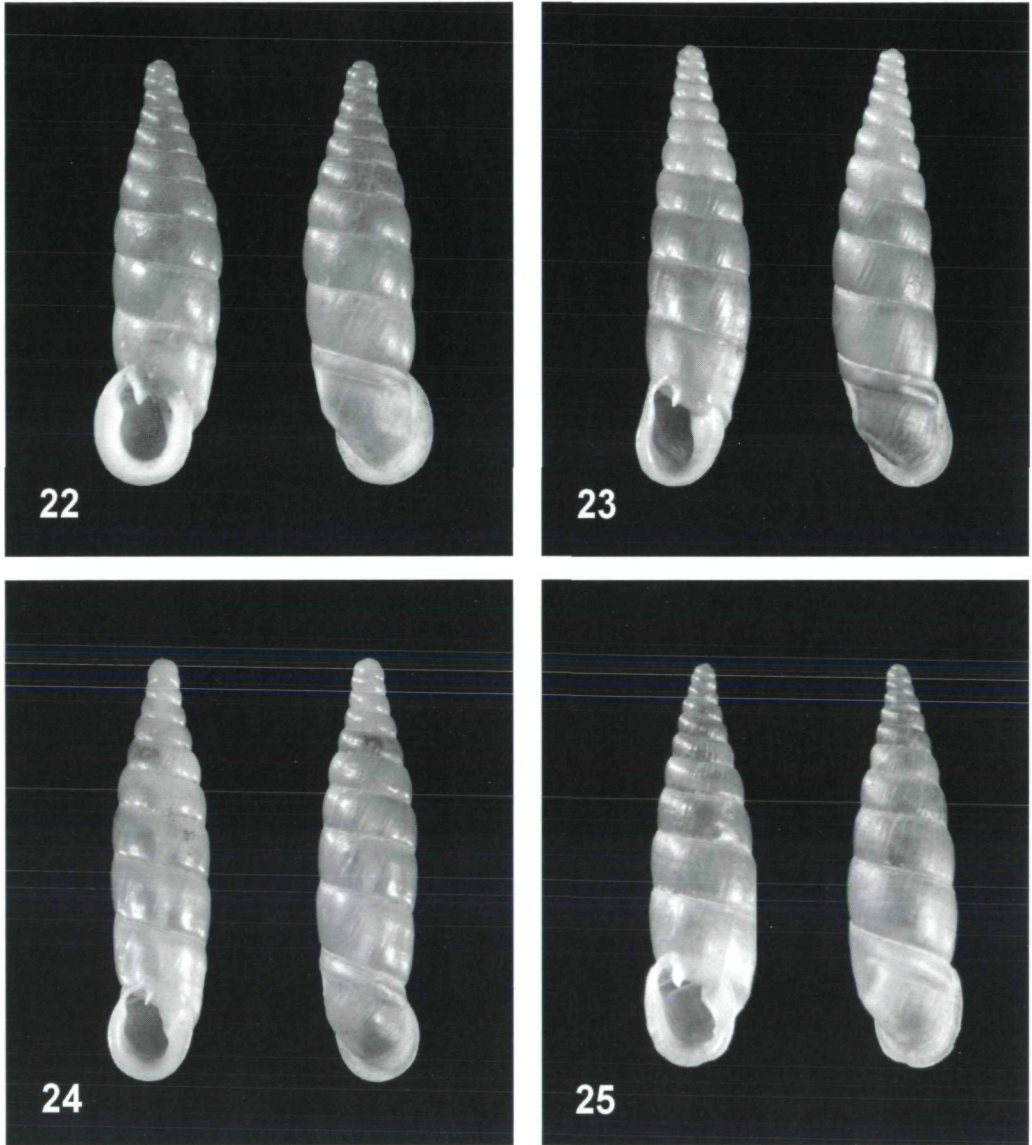
***Montenegrina perstriata callistoma* FEHÉR & SZEKERES ssp.n. (Fig. 22)**

Type material: Holotype HNHM 94883, paratypes BMNH 20050228, HNC 63192, HNHM 94884/29, NHMW 103289, RMNH 100320, SMF 328093, ER/30 and SZ/2 (leg. Z. ERÖSS & Z. FEHÉR, October 24, 2002).

Type locality: Albania, Klenjë (along the Librazhd to Peshkopi road), 1220 m, UTM DL57.

Diagnosis: Shell small, light-coloured, smooth. Neck weakly inflexed, with double crest. Peristome wide, callous. Basalis free or fused to lateral lunella. Differs from other forms of *M. perstriata* (A. J. WAGNER, 1919) by the small, slender shell, whereas from *M. p. ochridensis* (A. J. WAGNER, 1925) and *M. p. crassa* ERÖSS & SZEKERES, 1999 of similarly swollen peristome also by the stronger apical sculpture and more retracted lamella subcolumellaris, respectively.

Description: The small, somewhat ventricose shell of $10\frac{1}{3}$ to $11\frac{2}{3}$ whorls has a greyish-corneous colour. The whorls are almost smooth, becoming finely striate only at the apex and over the neck. The neck is moderately inflexed, at its basis the basal crest is strong,



Figs. 22 - 25: (22) *Montenegrina perstriata callistoma* FEHÉR & SZEKERES ssp.n., holotype HNHN 94883, 16.0 × 4.2 mm; (23) *Montenegrina perstriata gracilis* ERÖSS & SZEKERES ssp.n., holotype HNHN 94886, 16.5 × 3.9 mm; (24) *Montenegrina perstriata nana* FEHÉR & SZEKERES ssp.n., holotype HNHN 94889, 15.1 × 3.7 mm; (25) *Montenegrina perstriata steffeki* ERÖSS & SZEKERES ssp.n., holotype HNHN 94891, 17.7 × 4.9 mm.

the peripheral one less conspicuous. The peristome is wide and swollen, its upper margin is fused to the whorl above it. The lamella superior is long, its inner end overlaps with the spiralis. Descending straight, the weakly emerged lamella inferior ends low, near the end of the withdrawn, through the aperture mostly invisible subcolumellaris. The lateral lunella is either separated from, or connected to the well-developed basalis.

The plica superior is usually weak or absent, but rarely long and connected to the lunella. The clausilium cannot be viewed through the aperture. Shell height 14.3 - 18.1 mm (mean 16.3 mm, S.D. 0.95, $n = 25$), shell width 3.2 - 4.3 mm (mean 3.9 mm, S.D. 0.25, $n = 25$), aperture height 3.3 - 4.5 mm, aperture width 3.2 - 3.3 mm.

Further material: Albania, 1 km S of Stëblevë (Librazhd to Peshkopi road), 1250 m, UTM DL57, leg. Z. Erőss & Z. FEHÉR, October 24, 2002.

***Montenegrina perstriata gracilis* ERŐSS & SZEKERES ssp.n. (Fig. 23)**

Type material: Holotype HNHM 94886, paratypes BMNH 20050229, HNC 63193, HNHM 94887/90, NHMW 103290, RMNH 100322, SMF 328094, ER/91 and SZ/3 (leg. Z. Erőss & Z. FEHÉR, October 25, 2002).

Type locality: Albania, 10 km E of Bulqizë, bank of the Lumi i Zalli i Qytetit, 620 m, UTM DL49.

Diagnosis: Shell small, elongated, with stronger apical sculpture. Neck costate, lightly inflexed, with strong double crest. Peristome attached. Lamellae superior and spiralis without overlap. Lunella lateral, connected to basalis. Differs from the similarly small-sized *M. p. callistoma* ssp.n. by the stronger sculpture, stronger neck crests and the simple peristome.

Description: The slender, brownish-corneous shell is composed of $10\frac{1}{2}$ to $11\frac{2}{3}$ whorls. The last two whorls are nearly smooth, but they become costate toward the apex. The neck is costate, at its basis both crests are well developed. With its upper rim the simple peristome is fused to the last whorl. The lamella superior is short, it does not overlap the spiralis. The lamella inferior ends deep in the aperture, the subcolumellaris is not visible at an oblique view. The lateral lunella is broad, it is fused to the plica principalis and the basalis. The plica superior is mostly absent. When present, it remains separated from the lunella. The clausilium is not visible through the aperture. Shell height 14.2 - 20.1 mm (mean 16.8 mm, S.D. 1.63, $n = 25$), shell width 3.5 - 4.7 mm (mean 4.1 mm, S.D. 0.33, $n = 25$), aperture height 4.0 - 4.7 mm, aperture width 3.3 - 3.8 mm.

Further material: Albania, Zërqan, at the Burimi i Tre Çesmës, 18 km E of Bulqizë, 570 m, UTM DL49, leg. Z. Erőss & Z. FEHÉR, October 25, 2002.

***Montenegrina perstriata nana* FEHÉR & SZEKERES ssp.n. (Fig. 24)**

Type material: Holotype HNHM 94889, paratypes HNHM 94890/5, NHMW 103291, SMF 328095, ER/7 and SZ/2 (leg. Z. Erőss & Z. FEHÉR, October 24, 2002).

Type locality: Albania, 3 km NE of Lunik (Librazhd to Peshkopi road), 1050 m, UTM DL47, leg. Z. Erőss & Z. FEHÉR, October 24, 2002.

Diagnosis: Shell small, smooth, light-coloured. Neck with double crest, peristome attached. Lamella superior overlaps spiralis. Lunella dorsal, fused to rudimentary basalis. Differs from *M. p. callistoma* ssp.n. by the weaker peristome and basalis, from *M. p. gracilis* ssp.n. by the finer sculpture and the overlapping lamellae superior and spiralis.

Description: The light-corneous shell is very small, elongated, spindle-shaped, consists of $10\frac{1}{4}$ to 11 whorls. The whorls are almost completely smooth, but at the apex become finely papillate along the suture. The neck is inflexed, both crests are well developed at its basis. The peristome is simple, rounded, attached to the adjacent whorl by its

upper margin. The weak but long lamella superior reaches somewhat beyond the outer end of the spiralis. Lying deep, the weak lamella inferior is barely visible from the front. The lamella subcolumellaris cannot be viewed through the aperture. The lateral lunella is fused to the weak basalis. The plica superior is mostly very short, fused to the lunella, only remnants of its forepart are occasionally recognisable. The clausilium is not visible without breaking the shell. Shell height 14.3 - 16.1 mm (mean 15.2 mm, S.D. 0.53, $n = 11$), shell width 3.3 - 3.7 mm (mean 3.5 mm, S.D. 0.09, $n = 11$), aperture height 3.5 - 3.8 mm, aperture width 3.1 - 3.3 mm.

***Montenegrina perstriata steffeki* ERÖSS & SZEKERES ssp.n.** (Fig. 25)

Type material: Holotype HNHM 94891, paratypes BMNH 20050230, HNC 63194, HNHM 94892/2, NHMW 103292, RMNH 100321, SMF 328096, ER/8, ST/32 and SZ/6 (leg. J. Šteffek, July 28, 1985).

Type locality: Macedonia, gorge above and W of Jablanica, about 25 km NNW of Struga, UTM DL67.

Diagnosis: Shell light-coloured, medium-sized, inflated, with wrinkled surface. Neck costate, inflexed, with double crest. Aperture wide, peristome attached. Lamellae superior and spiralis overlapping. Lunella dorsolateral, basalis mostly separated. Differs from other *M. perstriata* subspecies by the strong sculpture and the position of the lunella.

Description: The light corneous, inflated shell of $10\frac{1}{4}$ to $11\frac{2}{3}$ whorls is widest at its basis. Large, wrinkle-like ribs are either present over the entire shell, or confined to the apical whorls. The neck has strong and irregular ribs, the basal and peripheral crests are present but inconspicuous. The aperture is wide, somewhat angular at its basis, the upper margin of the peristome is fused to the last whorl. The lamella superior is long, overlaps with the spiralis. The lamella inferior is emerged, the broadly bent subcolumellaris is occasionally visible from the front. The lunella is dorsolateral to almost dorsal, in most cases separated from the well-developed basalis. The plica superior, that runs parallel with the principalis, is narrow, mostly separated from the lunella. The clausilium is partially visible through the aperture. Shell height 14.9 - 21.7 mm (mean 17.8 mm, S.D. 1.68, $n = 25$), shell width 3.9 - 5.4 mm (mean 4.5 mm, S.D. 0.32, $n = 25$), aperture height 3.6 - 4.8 mm, aperture width 3.8 - 4.5 mm.

Etymology: This subspecies is dedicated to Jozef Šteffek who collected the type material.

***Montenegrina perstriata skipetarica* (Soós, 1924)** (Fig. 26)

Soós's paper (1924) describing *M. p. skipetarica* is a chapter of a larger study assessing the results of E. Csiki's zoological explorations in northern Albania. Whereas the complete volume was published only in 1940, the chapter written by Soós had already been printed and circulated in 1924. Therefore, this earlier date is to be regarded as the description year of *M. p. skipetarica*.

The only known specimens of *skipetarica*, that had been collected by E. Csiki, were destroyed in the 1956 fire at the Hungarian Natural History Museum. Recently we have obtained material of this subspecies from the following locations: Albania, 2.5 km N of Bushtricë, along the road toward Lusën, gorge at Ura e Lapavës (Përroi i Vaut të Çayës),

600 m, UTM DM53 (type locality); Albania, 3 km W of Qafa e Murrës, 31 km W of the bridge of the Lumi i Drinit të Zi along the Peshkopi to Burrel road, 975 m UTM DM31 (together with *M. minuscula* sp.n.); Albania, 5 km E of Lis, 41 km W of the bridge over the Lumi i Drinit të Zi along the Peshkopi to Burrel road, 850 m, UTM DM20. Though the type locality lies quite far from the other two locations, the somewhat larger specimens from here do not differ from those of the Lis and Qafa e Murrës samples to an extent justifying taxonomic separation.

Remarks: Certain central Albanian forms of *M. perstriata* (e.g. *M. p. skipetarica* and *M. p. steffeki* ssp.n.) and *M. irmengardis* (e.g. *M. i. flava* ssp.n. and *M. i. timeae* ssp.n.) show transitional shell features between those that, according to NORDSIECK (1972), are characteristic for *M. perstriata* (withdrawn lamella subcolumellaris, lateral lunella) or *M. irmengardis* (dark colour, white suture, simple peristome, visible lamella subcolumellaris, dorsal lunella). This makes difficult the unambiguous separation of these species in this region, and may necessitate the taxonomic re-evaluation of their relationship. Nevertheless, in this work we tried assigning the transitional forms, as much as possible, to either *M. irmengardis* or *M. perstriata*, according to the diagnoses proposed by NORDSIECK (1972).

***Montenegrina sattmanni costulata* ERŐSS & SZEKERES ssp.n. (Fig. 27)**

Type material: Holotype HNHM 94893, paratypes BMNH 20050231, HNC 63195, HNHM 94894/77, NHMW 103293, RMNH 100323, SMF 328097, ER/78 and SZ/5 (leg. Z. Erőss & Z. FEHÉR, July 2, 2003).

Type locality: Albania, Qafa e Zvezdës, 4 km from Zvezdë toward the Liqeni i Prespes, 1030 m, UTM DL80.

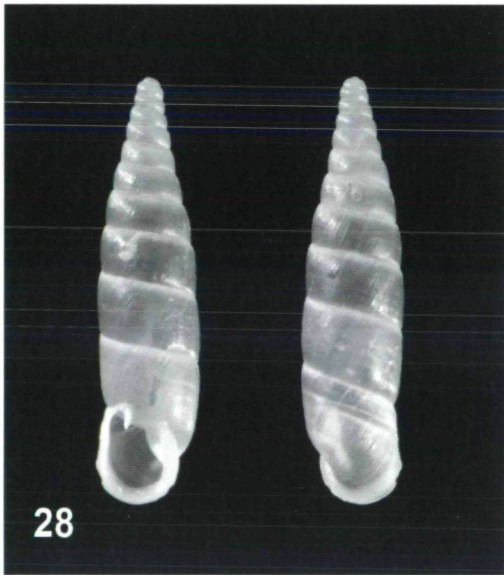
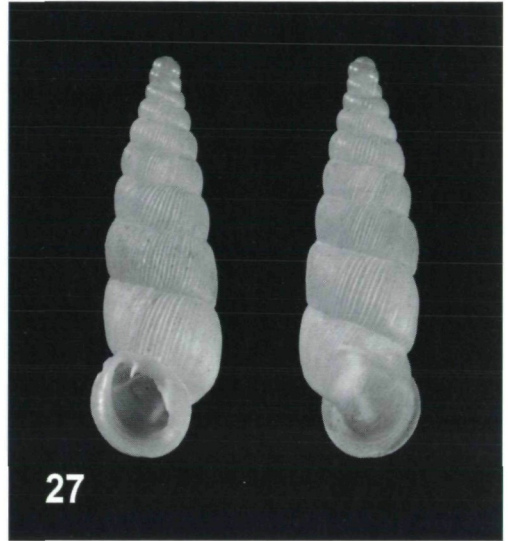
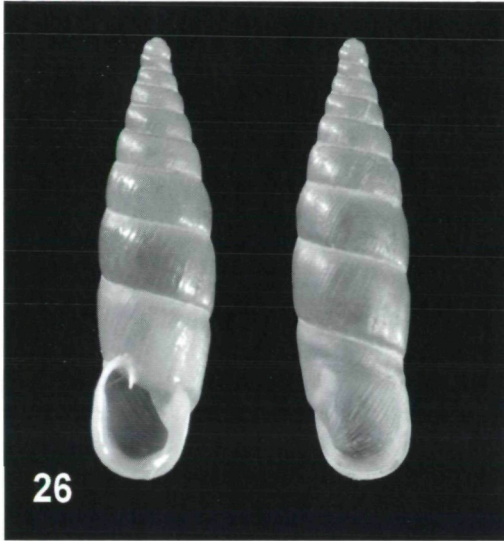
Diagnosis: Shell light-coloured, conical, costate. Neck rounded, with weak basal crest. Aperture wide, peristome mostly detached. Lunella dorsal, basalis mostly separated. Differs from *M. s. sattmanni* NORDSIECK, 1988 by the lighter shell colour, stronger sculpture and the mostly free peristome.

Description: The greyish-white, conical shell consists of $9\frac{1}{4}$ to $10\frac{3}{4}$ whorls. The bulging whorls are covered with ribs that become sharper and more distinct toward the apex. The neck has only barely recognisable inflection, the basis is rounded, with weak basal crest. The aperture is wide, the peristome is simple, with free upper margin. The lamella superior is very long, making considerable overlap with the spiralis. The lamella inferior ends in a small lump at medium height of the aperture. The lamella subcolumellaris forms a wide bend, even its ascending part is visible in an oblique view. The short lunella is dorsal, mostly separated from the high-positioned basalis, but connected to the plica superior. The clausilium plate is fully visible through the aperture. Shell height 14.1 - 20.4 mm (mean 16.7 mm, S.D. 1.67, $n = 25$), shell width 3.7 - 5.3 mm (mean 4.5 mm, S.D. 0.38, $n = 25$), aperture height 4.6 - 5.9 mm, aperture width 3.7 - 4.2 mm.

***Montenegrina sattmanni fusca* FEHÉR & SZEKERES ssp.n. (Fig. 28)**

Type material: Holotype HNHM 94895, paratypes HNHM 94896/9, NHMW 103294, RMNH 100324, SMF 328098, ER/7 and SZ/2 (leg. Z. Erőss & Z. FEHÉR, July 2, 2003).

Type locality: Albania, Korit e Bregas, 6 km S of Podgorje along the Pogradec to Zvezdë road, 900 m, UTM DL81.



Figs. 26 - 28: (26) *Montenegrina perstriata skipetarica* (Soós, 1924), Albania, 2.5 km N of Bushtricë along the road toward Lusën, gorge at Ura e Lapavës, HNHM 93813, 21.1 × 5.6 mm; (27) *Montenegrina sattmanni costulata* ERÖSS & SZEKERES ssp.n., holotype HNHM 94893, 16.0 × 4.8 mm; (28) *Montenegrina sattmanni fusca* FEHÉR & SZEKERES ssp.n., holotype HNHM 94895, 22.4 × 5.3 mm.

Diagnosis: Shell large, smooth, dark-coloured. Neck rounded, with weak basal crest. Aperture wide, peristome simple, attached. Lunella dorsal, connected to basalis and plica superior. Differs from *M. s. sattmanni* by the larger, darker shell and the palatal plicae that are always fused to the lunella.

Description: The large, dark brown shell is composed of 10 to 10³/₄ whorls. The last whorl is smooth, but the surface of the upper whorls becomes finely costate toward the apex. The neck is finely striate, rounded, with only a weak basal crest. The aperture is wide, the peristome is not thickened, its upper margin is attached to the adjacent whorl. Reaching deep, the lamella superior widely overlaps with the spiralis. The lamella inferior ends at medium height in the aperture. The ascending part of the broadly bent lamella

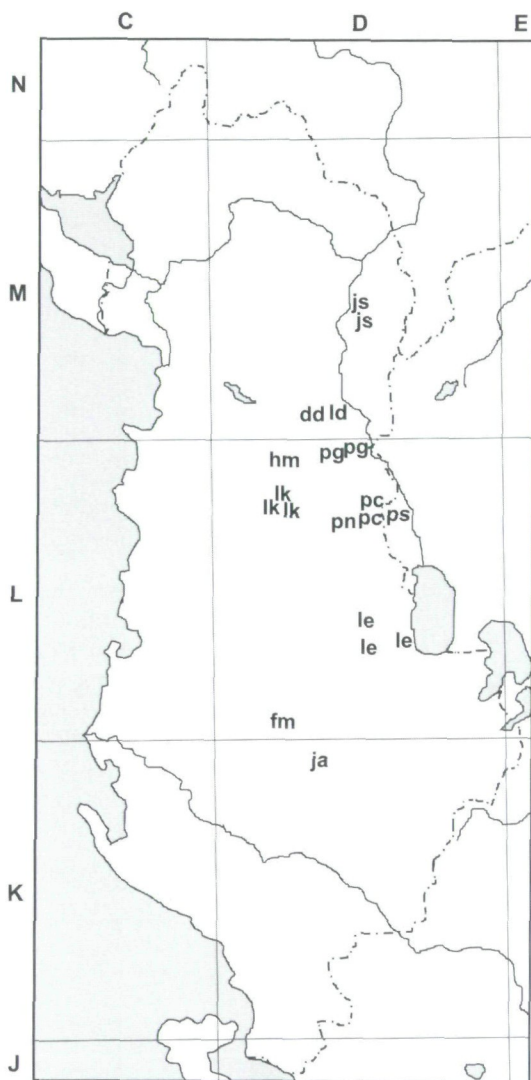
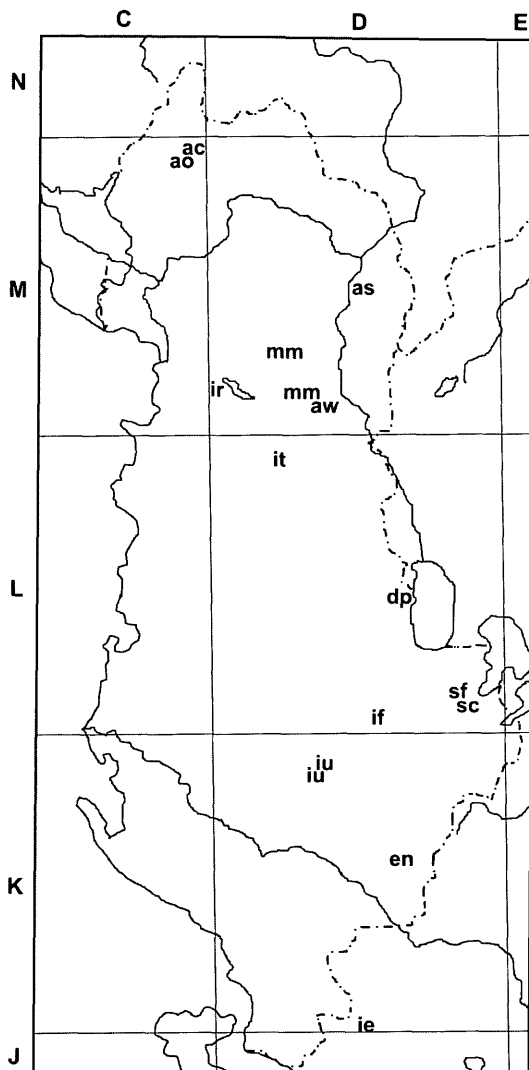


Fig. 29: Distribution of *Montenegrina drimmeri* FEHÉR & SZEKERES sp.n. (dd), *Montenegrina fuchsi muranyii* FEHÉR & SZEKERES ssp.n. (fm), *Montenegrina helvella magna* FEHÉR & SZEKERES ssp.n. (hm), *Montenegrina janinensis ampla* FEHÉR & SZEKERES ssp.n. (ja), *Montenegrina janinensis soosi* ERÖSS & SZEKERES ssp.n. (js), *Montenegrina laxa disjuncta* FEHÉR & SZEKERES ssp.n. (ld), *Montenegrina laxa errans* ERÖSS & SZEKERES ssp.n. (le), *Montenegrina laxa kontschani* ERÖSS & SZEKERES ssp.n. (lk), *Montenegrina perstriata callistoma* FEHÉR & SZEKERES ssp.n. (pc), *Montenegrina perstriata gracilis* ERÖSS & SZEKERES ssp.n. (pg), *Montenegrina perstriata nana* FEHÉR & SZEKERES ssp.n. (pn) and *Montenegrina perstriata steffeki* ERÖSS & SZEKERES ssp.n. (ps). 100 × 100 km UTM squares are indicated.

subcolumellaris is visible in an oblique view. The short lunella is dorsal to more dorso-lateral, it is fused with both the basalis and the long plica superior. The clausilium plate is fully visible through the aperture. Shell height 18.3 - 22.4 mm (mean 19.9 mm, S.D. 0.94, $n = 15$), shell width 4.5 - 5.3 mm (mean 4.9 mm, S.D. 0.24, $n = 15$), aperture height 4.0 - 5.0 mm, aperture width 4.2 - 4.7 mm.

Remarks: Up to now *M. sattmanni* was known only from its type locality: the vicinity of Mikrolimni along the Greek shoreline of Lake Prespa. In addition to the two new subspecies, which extend the range of this species in the western direction, *M. s. sattmanni* NORDSIECK was also found at the following localities: Albania, shore of Liqeni i Prespes at Liqenas, 860 m, UTM DL91; Albania, 1 km NE of Liqenas, shore of the Liqeni i Prespes at the Sv. Atanas and Veliki Antoni church, 870 m, UTM DL91. The Albanian specimens differ from those of the type locality by their stronger apical sculpture.

Fig. 30: Distribution of *Montenegrina minuscula* ERÖSS & SZEKERES sp.n. (mm), *Montenegrina apfelbecki caesia* FEHÉR & SZEKERES ssp.n. (ac), *Montenegrina apfelbecki csikii* ERÖSS & SZEKERES ssp.n. (as), *Montenegrina apfelbecki okolensis* SZEKERES ssp.n. (ao), *Montenegrina apfelbecki wagneri* SZEKERES ssp.n. (aw), *Montenegrina irmengardis edmundi* SZEKERES ssp.n. (ie), *Montenegrina dofleini plenostoma* FEHÉR & SZEKERES ssp.n. (dp), *Montenegrina ersekensis nobilis* ERÖSS & SZEKERES ssp.n. (en), *Montenegrina irmengardis flava* ERÖSS & SZEKERES ssp.n. (if), *Montenegrina irmengardis remota* FEHÉR & SZEKERES ssp.n. (ir), *Montenegrina irmengardis rugosa* FEHÉR & SZEKERES ssp.n. (iu), *Montenegrina irmengardis timeae* ERÖSS & SZEKERES ssp.n. (it), *Montenegrina sattmanni costulata* ERÖSS & SZEKERES ssp.n. (sc) and *Montenegrina sattmanni fusca* FEHÉR & SZEKERES ssp.n. (sf). 100 × 100 km UTM squares are indicated.



Concluding remarks

During the past decade several new species and subspecies of *Montenegrina* have been described from Albania. The impressive number and diversity of these taxa indicate that the centre of diversity within this genus is in this country and the adjacent regions of Greece and Macedonia. The substantial increase in the number of the known species taxa, and the fact that some of the new forms show transitional characters between those of the currently recognized species, reveal the necessity of re-evaluating of the phylogenetic relationships within this genus. Such a revision would greatly benefit from relying not only on morphological characters, but also molecular markers which proved to be very useful in approaching taxonomic problems (UIT DE WEERD & GITTENBERGER, 2004).

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