

Area-analytical zoogeographic classification for the members of the gastropod family *Hydrobiidae* of Southern Europe II.

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Abstract: This work presents the results of the area-analytical zoogeographic classification based on the refugial area classification system of Dévai 1976 worked out for aquatic invertebrates from the results of De Lattin (1976) and Varga (1971, 1975).

Key words: Zoogeography, South Europa, Hydrobiidae, Mollusca

Material and methods

The area-analytical zoogeographic classification of the family Planorbidae is based on the refugial area classification system of Dévai (1976) worked out for aquatic invertebrates from the results of DeLattin (1976). The distributions of the individual taxa are depicted on maps with the name of the first descriptor. I am greatly indebted for the kind assistance of dr. Sándor Bagdi in the preparation of the maps.

The fauna groups of the studied areas

Ponto-Mediterranean Elements: Bulgaria: *Hydrobia steini* (Martens, 1856), (Angelov, 2000). Vitosha Mts. at the village of Kuyarlevo; *Insignia macrostoma* (Angelov, 1972) (Angelov, 2000), karstwater potenfálnuls Stara Planina Mts.

Euxinic Elements: Turkey, *Islamia anatolica* Radoman 1973 (Radoman, 1983) Kirgöz Lake 40 km NW of Antalia; *Falsibelgrandiella bunarica* Radoman, 1973 Pinar Basa creek at Vedelek near Gemlik, 200 km of Istanbul (Radoman, 1985).

Ponto-Mediterranean Elements – Greece: *Albinaria contaminata* (Charpentier, 1852) (Rähle, 1980) Kephallinia and Zakynthos; *Albaniria senilis* (Rossmässler, 1836) (Rähle, 1980) Zakynthos.

Ponto-Mediterranean Elements – Albania-Macedonia *Chilopyrgula stankovoki* (Polonera, 1929) Lake Ochrid (Radoman, 1985).

Horatia ochridana (Polinski, 1829), *Horatia brusinae* (Radoman, 1955), (Radoman, 1985) Lake Ochrid; *Chilopyrgula dybowski* (Polonera, 1929) (Zilch-Jaeckel, 1961), Ochrid Lake, *Pseudamnicola anctinaumi* (Radoman, 1964) creek close to Sveti Naum near Lake Ochrid (Kabat-Herschler, 1993).

Ponto-Mediterranean Elements: Albania: *Ochrigocea karevi* Hadzisce, 1956 (Radoman, 1985) Ochrid Lake at Veli Dab, *Prespiana lacustris* Radoman, 1973 (Radoman, 1985). Rocky SW shores of Lake Prespa at Stenje.

Ponto-Mediterranean Elements: Montenegro: *Lithoglyphus notata* (Frauenfeld, 1965) (Kabat-Herschler, 1993) Bulgarica, near Petrovác.

Ponto-Mediterranean Elements: Bosnia-Herzegovina-Croatia; *Emericia expansilabris* Bourguignat, 1880 (Radoman, 1985) Zoljevo spring, Boka Kotorska; Peljesae peninsula, near Dubrovnik at Dubroveka, Ombla; *Emericia ventricosa* Brusina, 1870 (Radoman, 1985) Vojskova creek upstream of the Cetina, at Sinj north of Split and Popovo Palje.

Ponto-Mediterranean Elements: Bosnia-Herzegovina: *Belgrandiella novoselensis* Radoman, 1975. Radoman, 1985) creek at Nova Sela along the road of Kocevja-Delnice downstream of the river Kupa; *Belgrandiella croatica* (Hirc, 1881) Radoman, 1985) at the village of Lesmica SW of Delmica along the road of Karlovac-Rijeka, at Ogulin, at the village of Sovenica and the area of the Kupa channel.

Ponto-Mediterranean Elements: Croatia: *Vinodolia flumana* Radoman, 1973 (Radoman, 1985). Glogi creek at Bribir and Drist creek at Javor east of Rijeka; *Semisalsa dalmatica* Radoman, 1974 (Kabat-Herschler, 1993) Pirovna creek and Zrmanja river; *Dalmatiella fluviatilis* Radoman, 1972 (Kabat-Herschler, 1993) Zrmanja river; *Obrovia sabaria* Radoman, 1972 (Kabat-Herschler, 1993) Zrmanja river Obrovac.

Sandria zrmanjae Brusina, 1886 (Kabat-Herschler, 1993) Zrmanja river; *Lithoglyphus tedanicus* Schlickum et Schütt, 1971 (Kabat-Herschler, 1993) Zrmanja river near Obrovac; *Costellina tunita* Kuscer, 1933 (Kabat-Herschler, 1993) Jadro creek near Split; *Istriana mirnae* Velkovrh, 1971 (Kabat-Herschler, 1993) creek at the river Morva near Gruznoj; *Ammicola convoluta* Frauenfeld, 1863 (Kabat-Herschler, 1993) Kukulovo creek, Pag Island Adria; *Paladilhiosis langhofferi* A. J. Wagner, 1927 (Soós, 1943) Biscoplac, Zagreb Back creek, Eljeme Hills, Likai Uplands subsurface waters, Sljena Hills.

Belgrandiella koprivnensis Radoman, 1975 (Radoman, 1985) Krcana creek 2 km of the road of Cazin-Buzin at the village Donyá Kaprivna; *Lithoglyphus prasinus* Küster, 1852 (Soós, 1943). Ogulin, Leskovac and Stunjica creek; *Lithoglyphus fuscus* C. Pfeiffer, 1828 (Soós, 1943) Kapela near Jasipol. Ostaria, Svarca, Slunjica river, Detulja and Bistrac Turja, Krapina from the Subla, near Goljak from the Sava; near Zagreb; *Hydrobia scalaria* (Radoman, 1973) (Radoman, 1985) Zrmja river at Obrovác and brackish water; *Hydrobia testadura* (Radoman, 1973) (Radoman, 1985) Zrmja river; *Adriasulana conovula* (Frauenfeld, 1863) (Radoman, 1985) Kukulovo Pag Island creek; *Anagastina matjasici* (Bole, 1961) (Radoman, 1985) creek at Lipovik along the road of Rijeka-Conovica; *Plagigeyeria montenegrina* Bole, 1961 (Radoman, 1985) Obodska pecina cave near Rijeka Conojevica; *Belgrandilla fontinalis* (Schmidt, 1867), (Radoman, 1985). Canalized area of the river Sava, areas of the streams Savinja Ljubljana and Krka, Borovnica, creek, Iseica river south of Ljubljana, Ribnica mouth, Kupa channel, Mreznica river at Ogulin, creek at Josenak, south of Ogulin, Dretulja river near Plaski.

Hauffenia tovunica Radoman, 1978 (Radoman, 1985) Tounjica cave near Tounj along the road of Duga Resa Jesipdol, between Mali and Veliki Kapell; *Islamia latina* Radoman, 1973 (Radoman, 1985) Miraca creek near the village of Islam Latinski 20 km south of Zadar; *Bythinella magna* Radoman, 1976 (Radoman, 1985) Klanac creek at Zagrevici and the Gacka river at Vrelo and Sesce.

Alpian-Ponto-Mediterranean Elements: Austria-Croatia: *Bythinella lacheineri* Küster, 1852 (Radoman, 1985) Mezica creek at Graz, Bole Voda, creek, Velenje, creek, Vinski Gorá, creek.

Summary

48 faj taxa was identified in the studied areas in the following amounts: Bulgaria 2, Turkey 2, Greece 2, Albania-Macedonia 1, Albania 5, Montenegro 1, Bosnia-Herzegovina 2, Bosnia-Herzegovina and Croatia 2, Croatia 22, Austria-Croatia 1 species. Zoogeographical groups: Euxinic 1. Ponto-Mediterranean 46, Alpian-Ponto-Mediterranean 1.

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