

НАУКОВІ ЗАПИСКИ ТЕРНОПІЛЬСЬКОГО НАЦІОНАЛЬНОГО ПЕДАГОГІЧНОГО УНІВЕРСИТЕТУ ІМЕНІ ВОЛОДИМИРА ГНАТЮКА. Серія :Біологія. – 2012. – №2(51). – С.327-329.

УДК 594

OLIVIA CIOBOIU<sup>1</sup>, GHEORGHE BREZEANU<sup>2</sup>

<sup>1</sup>The Oltenia Museum,

str. Popa Şarcă no. 8, Craiova, 200416, Romania

<sup>2</sup>Romanian Academy, Institute of Biology,

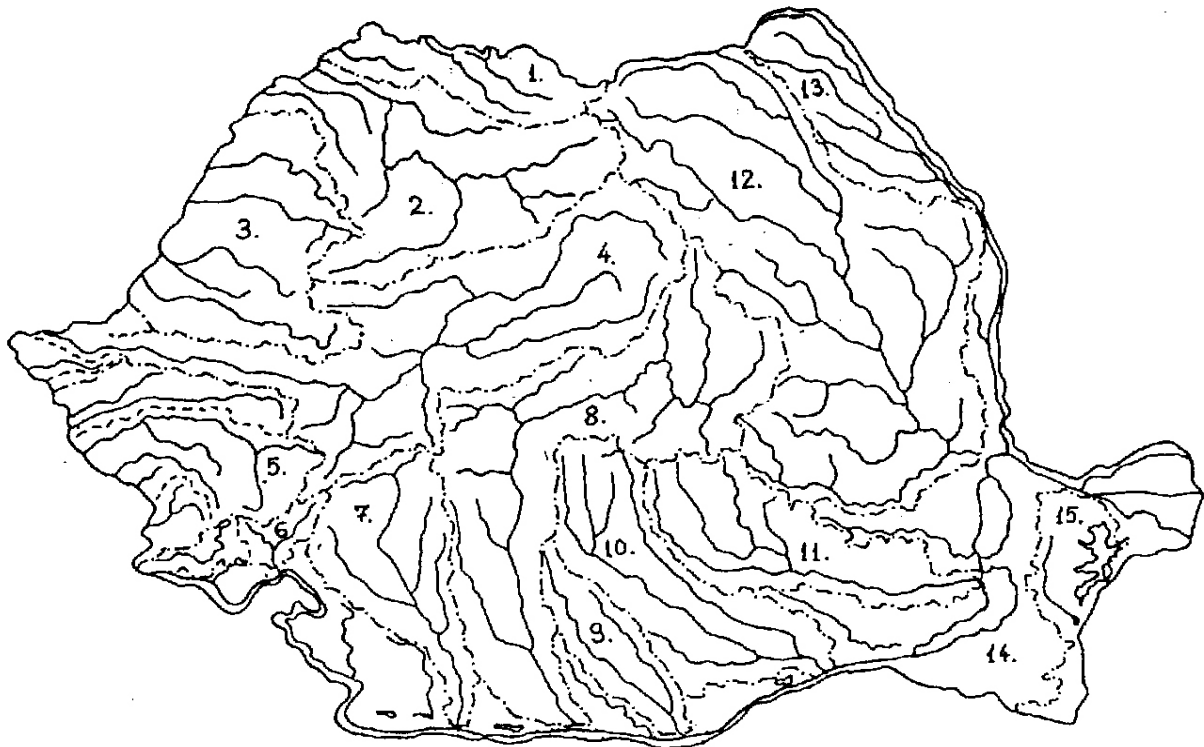
str. Splaiul Independenţei no. 296, Bucharest, 060031, Romania

## GASTROPODS IN THE INLAND WATERS OF ROMANIA –HYPOTHETICAL MODIFICATIONS OF THE POPULATIONS STRUCTURES INDUCED BY GLOBAL CLIMATIC CHANGES

The hydrographic network of Romania is more than 66,000 kilometers long and includes 15 basins.

The diversity of the ecosystems included in the hydrographic network (springs, streams and rivers, the Danube and its Delta, lakes and swamps) impose a specific structure and distribution of the gastropods populations.

*Key words: gastropods, Romania, global climatic changes*



Distribution of gastropods within the hydrographical basins of Romania

1. The upper Tisa – 30 species; 2. The Someş – 30 species; 3. The Crişuri rivers – 39 species; 4. The Mureş – 35 species; 5. The Bega, the Timiş, the Caraş – 54 species; 6. The Nera, the Cerna – 51 species; 7. The Jiu – 28 species; 8. The Olt – 31 species; 9. The Vedea – 29 species; 10. The Argeş – 29 species; 11. The Ialomiţa – 31 species; 12. The Siret – 29 species; 13. The Prut – 31 species; 14. The Danube – 113 species (54 species along the Romanian sector); 15. The shore area – 96 species (82 species on the continental platform of the Black Sea, the Romanian sector).

Within present stage in the inland waters of Romania there have been identified 83 species that belong to two large systemic groups: Prosobranchia (43 species) and Pulmonata (40 species). In the first group, the most frequent species are *Theodoxus danubialis*, *Th. fluviatilis*, *Viviparus acerosus*, *Valvata piscinalis*, *Bythinella austriaca*, *Lithoglyphus naticoides*, *Bithynia tentaculata*, *Esperiana esperi*, *E.*

*daudebardii acicularis*; in the second group, we mention *Physella acuta*, *Lymnaea stagnalis*, *Stagnicola palustris*, *Radix ampla*, *Planorbis planorbis*, *Planorbarius corneus*. These represent 32 percent of the European fauna of gastropods; it is a fact that reflects the importance of the area located among the Carpathians, and the Danube for the fauna of gastropods.

These modifications will obviously influence the life of the aquatic organisms, including the gastropods' populations. A general image of the gastropods populating the Romanian river system emphasizes the individual ecological features. In case climatic global changes occur, these features will modify. Under these circumstances, certain species can disappear, while others can increase a lot, exceeding the present limits.

The ecological features represent an important parameter for forecasting their tendency of evolution. Thus, the cryophilic species, such as *Paladilhia carpathica*, *Bythinella dacica*, *Ancylus fluviatilis*, *Stagnicola palustris* that need clean water, will limit their area or will disappear. The ubiquitous species *Lymnaea stagnalis*, *Radix ampla*, *Planorbis planorbis*, *Planorbarius corneus*, which live in strongly eutrophic and polysaprobe water, at high temperatures will be frequent species if the hydrological features and the water quality change. If brackish aquatic surfaces extend, the species *Theodoxus euxinus*, *Pseudamnicola razelmiana*, *Turricaspia lincta*, *T. dimidiata* will enlarge their area and will become more frequent.