

Abstract

The aim of this work was to evaluate the limits of ranges of European land snail species along the north-south gradient. To work out the document it was necessary to prepare the set of digitalized maps, that enabled to create the database of ranges of the individual land snails species. Based on obtained data I tried to identify places where the northern and southern borders of species ranges are the most frequent. The landsnails' ranges are affected not only by particular life requirements of the individual species (*potential limits*), but also by other conditions, especially climatic, geographical and historical (*truncated limits*). In this work I focused on their differentiation. Above mentioned process also enabled me to track the north-south changes in *species richness* of the landsnails taking into consideration the *truncated* and *potential limits*. The most important natural barriers constraining that numerous of species cannot naturally widespread from the south to the north are the Scandinavian Mountains, the Alpes and the Carpathians and suprisingly also southern borders of german and polish lowlands. On the other hand, spreading of the species form the north to the south is limited only by the Alpes. I also tried to distinguish the group of species whose ranges are not influenced by these *truncated limits*. I also made efforts to identify areas where the species richness is abruptly changing. The majority of them is concentrated in the Alpes and suprisingly also in the central Scandinavia, northern Sudetenland and the Apennines. In addition, I found out that species richness of European landsnails is positively correlated with increasing temperature.

Key words: Mollusca, Gastropoda, truncated limits, potential limits, range, northernmost limits, southernmost limits, latitudinal gradient, species richness, biogeography, Europe