SUMMARY

The dissertation thesis contains six original papers dealing with an influence of isolation, fragmentation and habitat loss on present cultural and urban landscape. Conclusions are based from studies of one species to those of whole butterfly communities.

The first two papers deal with autecology of The Hermit (*Chazara briseis*) from its last viable population in the Czech Republic. During the last 20 years, it retreated from the republic, and recently it is classified as nearly extinct. The papers point to reasons of the rapid decrease: specialized life strategy and habitat losses. Due to high mortality of long-lived females, this species requires the compensation by high population size in large habitats. The next paper refers to habitat requirements of The Hermits´ caterpillars. Local habitat conditions at study sites were noticeably similar to the conditions at German localities, at which this species is now practically extinct.

Following two papers study an influence of urbanization on butterfly communities in 25 Prague reserves and parks. The first paper points to diversity changes during 30 years and their causes. Average number of species per site remained the same, but there were detected changes in species composition. Remarkable switching of species composition was observed mainly at large and connected areas, with high geomorhological and vegetation diversity. The next paper deals with direct influence of urbanization on species composition and abundances of butterfly communities based on recent observations. More specialized species disappeared towards the city centre, but the majority of species had the highest abundances at the periphery. 11 species did not show any trend in abundance and no species profited from the environments of city centre. The papers thus show at important influence of urbanization gradient on species composition of butterfly communities.

The fifth paper studies an influence of long-term habitat and climate changes on diversity of moth guilds at Prague periphery during 23 years. While specialised species react directly on habitat changes and loss, the unspecialised species were affected by long-term climate trends. Specialists, whose biotopes disappeared, show a significant decrease in species diversity, while diversity of unspecialised species increased in time depending on increased average annual temperature.

The last, sixth paper, refers to possibilities which offer recent cultural landscape to specialised vanishing species by rising of compensatory habitats at post-mining sites, namely at abandoned calcareous quarries in The Bohemian Karst Protected Landscape Area. The study compares influence of technical reclamations and spontaneous succession on development and composition of communities at these sites. The importance of spontaneous succession on diversity of vascular plants and ten taxa of invertebrates has been shown. The sites retained under spontaneous succession processes contain species bonded at early-successional stages, i.e. the biotopes vanishing from common cultural landscape. The paper refers to important influence of possible controlled succession for surviving of main part of endangered organisms.

For more details, see abstracts of the studies below.