

Abstract

During the last two centuries a significant change of lichen communities has happened in the Czech Republic. Important factors which had influencing the lichen biota in the past and recently are summarized in this bachelor thesis. Acid rain caused by high imissions of SO₂ a NO_x was the most important factors of change of species and remaining acidification of substrates is still influencing lichen communities. Until the end of 80's of 20th century acid rain was a dominant factor influencing lichens. Afterwards, thanks to drop of its intensity in 90's of 20th eutrophication and availability of nitrogen in landscape became dominant influencing factors. All these factors mainly affected the communities of macrolichens, and especially cyanolichens to such an extent that some species in the Czech Republic became extinct. Recently the increasing availability of nutrients has been supporting the spread of nitrophilous species. Due to decrease of SO₂ emissions to values from the end of 19th century some areas have been recolonized and some endangered species have returned. The transformation of lichen communities has also been significantly affected by forest management and land use. Based on changing climate and change of natural habitats a further decline mainly of suboceanic species is expected. A more frequent occurrence of epiphytic lichens with mediterranean biogeographical range is expected in the future. Several such species have been newly recorded in our country.

Keywords

acidification, acid rain, air pollution, eutrophication, recolonization, climate change