

SPRUCE BARK BEETLE *IPS TYPOGRAPHUS* (L.) IN PROTECTED MOUNTAIN AREAS AS A SUBJECT OF INTERNATIONAL RESEARCH PROGRAMS

S u m m a r y

The paper presents the aims and principal results of three international research programs dealing with *Ips typographus*, carried out with differentiated approaches. In two projects (IUFRO-Biodiversity and ILTER) the insect was used as a bioindicator of environmental stresses caused by air pollution, mainly ozone. The differences in selected parameters characterizing bark beetle occurrence on Norway spruce in investigated stands (infestation density, beetle-caused tree mortality, captures in pheromone traps) show a positive, however not linear, response of *I. typographus* to this kind of stress, expressed by the increase of its population density. Within the ILTER project (suspended after 2 years) some important information about *I. typographus* ecology has been collected, especially concerning its adaptation and dispersion abilities in the

mountain conditions, including upper montane and timberline zones. The third project (INCO-Copernicus TATRY) was focussed on better understanding of spreading of the bark beetle outbreak in a transboundary area in Tatra mountains. The analysis of the data from Polish (TPN) and Slovak (TANAP) Tatra National Parks revealed the same course of the bark beetle outbreak in both parts of the study area, regardless of the nature of the protection regime applied in individual countries. The high dependence of the outbreak on the weather conditions, as well as forest stand and site characteristics, was described. In conclusion, the role of national parks in the research on the bark beetle occurrence on Norway spruce is discussed.