

Entomopathogens in *Ips typographus* (Coleoptera: Scolytidae) from Several Spruce Stands in Bulgaria

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Abstract: The pathogen complex of the spruce bark beetle, *Ips typographus* of the Vitosha and the Rhodope mountains area in Bulgaria was surveyed and evaluated. Beetles were collected from four different localities including one reserve and three managed spruce stands from March 2003 to August 2005. The following pathogens were recovered: *I. typographus* Entomopoxvirus (*ItEPV*), *Gregarina typographi*, *Chytridiopsis typographi*, *Beauveria bassiana*, and the nematodes *Contortylenchus diplogaster* and *Cryptaphelenchus macrogaster*. *ItEPV*, *G. typographi*, *Ch. typographi*, *C. diplogaster* and *C. macrogaster* are new species to the Bulgarian fauna. The dominant pathogen species was *G. typographi*, which was found in beetles from all sites. In several cases male beetles showed significantly higher *G. typographi* infection rates than female beetles. No gender dependant differences in the infection rates were observed for *C. typographi* and *ItEPV*. The pathogen distribution in single and mixed infections was higher in the beetles from the Bistrishko Branishte Reserve.

Key words: Bulgaria, *Ips typographus*, pathogens, infections