ABSTRACT

Genus *Trichoderma* - anamorph of the genus *Hypocrea* (Hypocreaceae, Hypocreales, Sordariomycetes, Ascomycota) belongs to saprotrophic filamentous micromycetes. The representatives of this genus are known primarily as cosmopolitan inhabitants of soil ecosystems, including leaf litter and woody debris. This work summarizes the results of the study of isolates belonging to the genus *Trichoderma* originating from the territory of the Czech Republic, mainly from soil and leaf litter. During the study, altogether 267 isolates were analysed. For all of the isolates the following methods were used: phenotypic characterisation, UP-PCR fingerprinting, gene sequencing in tef 1α and ITS regions, and in the strain AK 115/00 also in rpb2 region. The main result of the study was the identification of 21 species of genus *Trichoderma* belonging into 4 groups and discovery of one isolate of species yet unknown to science. Species *T. crassum, T. gamsii, T. ghanense, T. rossicum* and *T. longipile* were found in the Czech Republic for the first time. According to the literature review and results of this study, 34 different *Trichoderma* species is currently known from the Czech Republic. In the work there is also discussed low reliability of identification of certain species based only on phenotypic characters.

Key words: diversity, *Trichoderma*, *Hypocrea*, Czech Republic, *Trichoderma* sp. nov.