

Abstract

The rigorous dissertation extending the graduation thesis deals in its general part comprehensively with a parasitic mite *Varroa destructor* and its relation to the bees of the *Apis* genus (with focus on the species *Apis mellifera*). Both the host and the parasite are comprehensively introduced in terms of systemic classification, anatomical constitution, biology, developmental cycle, learning the mutual relationship, diagnosis, spreading, treatment and prevention of varroaosis in honey-bearing bees (*Apis mellifera*). As a part of the rigorous dissertation, there is discussion on Eastern honey bee (*Apis cerana*), concentrating on its spreading (subspecies) and its defence against varroaosis. The dissertation also mentions basic information about the American foulbrood (*Histolyasis infectiosa pernicioso larva apium*) and nosemosis. It also states the infection situation of *Varroa destructor* in the period of 2004-2010. Last but not least, I attempted to outline the infection situation of *Varroa destructor* on selected continents.

Practical part of the dissertation lists the actual results of experimental incubation of *Varroa destructor* together with the honey-bearing bee in different temperatures.

The studied theme was also processed with regard to its didactic potential. Performance of a SWOT analysis of textbooks (in the graduation thesis) regarding data on the honey-bearing bee found out that information given can only be considered as basic. That was a reason to prepare materials utilizable in teaching. Manuals on the honey-bearing bee were prepared for three age categories on the primary and secondary schools, and check tests were added to them with key. This part of the rigorous dissertation introduces a lecture on the *Varroa destructor*, the honey-bearing bee and the Eastern honey bee. Effectiveness of the lectures was evaluated via prepared questionnaires. The proposed laboratory exercise states instructions for preparing specimen of the honey-bearing bee.

Within the framework of the rigorous dissertation, PowerPoint presentations were tried out together with worksheets, namely among the pupils at a primary school and at a grammar school. Further research dealt with knowledge of the pupils at primary schools and grammar schools, ascertained via questionnaire inquiries (testing differences in knowledge of pupils in villages and towns). Beekeepers were the next group of respondents, and the aim was to gather a summary of their practical knowledge of varroaosis (via a method of interviews with the respondents). The last chapter of the practical part contains findings on theoretical knowledge of the beekeepers regarding *Varroa destructor* gathered via a questionnaire inquiry.

