Rearing bumble bees in laboratory
The picture supplement

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The book comprises the author’s experience with rearing bumble bees in laboratory conditions. First, the biology of bumble bees is explained, followed by the description of the simple equipment used. The step by step technique aimed at obtaining Bombus terrestris colonies including the rearing of young queens is shown, as well as its application to other pollen stores (B. lucorum, B. lapidarius, B. pratorum, B. soroeensis, B. cryptarum and B. hypnorum. Similarly, B. pascuorum, which responded as the best to the artificial rearing conditions, served as the model for other pocket makers (B. sylvarum, B. ruderarius, B. humilis, B. hororum, B. ruderatus and B. subteraneus). The list of enemies noted during the rearing in captivity is added, as well as basic recommendations for placement of colonies in the open air. The simple guide allows recognizing Czech species of bumblebees and cuckoo bumblebees. As a supplement 111 colour photos illustrating the text are added. The book is written in Czech, the English version of the texts to pictures arised for the Journal of Pollination Ecology (http://www.pollinationecology.org/) to be available electronically for the community of researchers as well as bumble bee friends.

Key words: Bombus, Psithyrus, bumblebee, cuckoo bumblebee, Aphomia sociella, Brachycoma, Melittobia, management, rearing, pollination.

The appreciated financial support was granted by the Czech Institutions:
Ministry of Agricultural - NAZV IR44014
Ministry of Education Youth and Sports - NPV II 2B06007

The Editor
Tribun EU, ltd.
Gorkeho 41,
60200 Brno,
Czech Republic
www.knihovnicka.cz
The first edition 2008
The Picture appendix

Fig. 1: The queen of *Bombus* sp. collecting honeydew in Finland.

Fig. 2: Queen of *B. terrestris* incubating her brood.
Fig. 3: The structure of the first brood in *B. lapidarius*. Cocoons from the first eggs are below; above them are the second and the third portions of larvae and eggs making the incubation groove. Right, toward the entrance, there is the honey pot.

Fig. 4: Freshly emerged workers (*B. pratorum*) are grey. Yellow are cocoons containing pupae, some of them have dark eyes. Brownish clumps of wax cover the larvae. Empty cocoons (left) serve as honey pots. Just below on the pictures there are another 3 honey pots.
Fig. 5: The queen of *B. lapidarius* laying several eggs into one wax cell constructed on the cocoons.

Fig. 6: The natural nest of *B. hypnorum* in artificial hive. The central pollen store is surrounded with clumps of larvae in various stage of development. The egg cell is below (button like). The lower shells are cocoons.
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Fig. 8: The colony of *B. lapidarius* in early stage of development.
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Fig. 14: Aquaria for mating queens or storing bumblebee adults.
The refrigerator is at the back side
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Fig. 55: Another developing colony of *B. cryptarum*.
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