THE OCCURRENCE OF MONTOMORIUM PHARAONIS (L.) OUTSIDE HUMAN DWELLINGS

The ant *Montomorium pharaonis* is an annoying companion of man in the housing estates. It was introduced to Europe from tropical regions (Eichler W., Prakt. Schädlingsbek., 14: 1–2, 1962). However, the central heating in flats enables it to a successful survival and reproduction even under conditions of a mild climatic zone. Together with the development of the central heating in the housing estates *M. pharaonis* has further spread so that it can now be said that its occurrence is geophilological. Due to its ecological requirements, particularly on the environmental temperature (Eichler W., Diss. Zool. Ent. Z. (N. F.) 10: 207–215, 1963, Lauterer F., Ca. byg., 16: 86–91, 1971) it is strictly associated with human dwellings in the mild zone and a long-term occurrence in nature has not yet been recorded. It was found only occasionally on outer walls of infested buildings in summer season (Eichler W., Angew. Parasitol., 13: 245–246, 1972).

This problem was accidentally met with during studies of the effect of urbanization on natural foci of diseases. One of the studied ruderal biotopes was a dump of communal wastes measuring about 4 hectares and situated in the locality Svéhlová Háječek (400 m a.s.l.) about 1.5 km west of České Budějovice (mild region MT1) with 40–50 summer days, 140 to 160 days with the temperature of +10°C, average temperatures in July 17–18°C). *M. pharaonis* was first found on brown-rats caught in this locality on 26th May 1981. There were several specimens (workers) moving in the hair of dead brown-rats. The ants were repeatedly recorded at the following regular catchings in the same area (16th and 18th June, 16th and 22nd July, 5th and 26th August, 5th and 16th October 1981). The persistent and regular occurrence of this ant species in the limited area of the dump suggested that not only specimens accidentally brought here with the wastes were involved. We studied therefore the occurrence of *M. pharaonis* directly in the dump and around it. The ants were encountered in a relatively small, limited area of the dump and adjacent grass from June to October. They were found on an about 3 m high wall on the west side of dump in an area measuring about 70 × 5 m in a surprisingly high number (500–700 specimens/m²). The assumption that not only surviving specimens were concerned was supported by the finding of three colonies during a more detailed examination of the area on 5th October 1981. The colonies were situated both on the surface of the dump and on the adjacent grass area at about 2 m from the dump, always under thermally isolating materials (polyethylene wrapping, paper-board etc.). In addition to a large number of workers, each colony contained about 10 females and several tens of pupae. The last positive checking was made on 16th October 1981. At the control on 26th October 1981 the ants were no more observed. The populational were unevenly distributed in the studied area. The ants were accumulated on microclimatically suitable places under materials well protecting against cold, particularly those enabling the conditions of glass-case effect, as polyethylene foils.

Our observations indicate that *M. pharaonis* was able to exist in this biotope during the whole vegetation period (for 143 days) and that the species were not only accidentally introduced, but survived and reproduced in the colonies. The existence of colonies in this biotope was apparently enabled by three favourable factors: sunny wall of the dump oriented to west, possibility of glass-case effect and exothermic putrefactive processes in the wastes. The present knowledge of this ant species suggests that the existence of the exanthropic population in a ruderal biotope is temporary. However, it is possible that there are microclimatically suitable areas in the dump, as nests inhabited with brown-rats, which would enable *M. pharaonis* to survive in winter. This will be the subject of our further studies.

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