EPIDEMIOLOGY AND CONTROL OF COCKROACHES INFESTING URBAN AND SUBURBAN AREAS IN SICILY

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Cockroaches could represent one of the most important hygienic problems, since they can contaminate food with bacteria, transmit diseases and cause human allergies. For this reason, urban governments and food industries devote part of their balance to cover the cost of their control. One of the first steps for a correct pest management is a good knowledge of the target species. To this aim, investigations have been carried out in several urban and suburban areas of Eastern Sicily, in order to detect the synantropic cockroaches, while studying also their distribution and the control strategies applied by several private companies. By using food and pheromone traps and through visual inspections, five species of Blattaria have been found: the Polyphagidae *Polyphaga aegyptiaca* (L.), the Blattidae *Blatta orientalis* L. and *Periplaneta americana* (L.), and the Blattellidae *Blattella germanica* (L.) and *Supella longipalpa* (F.). The first species have been found in a mill industry in the town of Messina and in a few small villages on the slopes of Mount Etna. It was collected directly by visual inspection because it has a negative response to glue traps. It is a typical species of sand areas and is easy to be found in suburban areas, in caves and woodsheds, but it usually does not represent a hygienic problem. *B. orientalis* is very common in neighboring areas, where dark and powdery places are still present, especially where favourable climatic conditions occur, but its presence in urban areas showed to be less common in the latest years. More important, from an applied point of view, is the American cockroach, *P. americana,* that is infesting nearly all coastal towns of Sicily. It was possible to catch it with several kinds of glue traps in different urban environments (ports, garages, promenades and squares). Flying adults have been collected during hot summers also inside domestic environments, up to fifth floor, where they were able to arrive climbing on the walls. Specific chemical control is applied against this species by municipalities. The German cockroach is the most injurious species because it is present in most of the investigated food industries (bars, restaurants, catering) and also in hospitals and airports. Against this species several kinds of pesticide have been used, mainly permethrin, chlorpyriphos and propoxur, while pheromone and food traps (that give good results for monitoring and controlling in small centres of infestation) are less used by disinfestors as well as boric acid. The brown banded cockroach, *S. longipalpa*, is mainly injurious in houses, because it needs lower relative humidity than the other previously named species; for this reason, it is able to survive inside kitchens and bathrooms. Against this species glue traps are used, but without good result. A good control has been achieved reducing food available, modifying the waste removal, and cleaning and washing the infested sites. At the last, because oothecae represent a valid tool for infestation detection, a photographic identification key has been realized in order to help the operators.

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Wm H. Robinson, F. Rettich and G.W. Rambo (editors). 1999.