Proceedings of the Eighth International Conference on Urban Pests
Gabi Müller, Reiner Pospischil and William H Robinson (editors) 2014
Printed by OOK-Press Kft., H-8200 Veszprém, Papái ut 37/a, Hungary

INFESTATION OF NATURAL BUILDING INSULATION BY THE CLOTHES MOTH, *TINEOLA BISSELLIELLA*

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Abstract Inside a two year old family house, clothes moth adults appeared in all rooms in 2012. Inspection of clothes did not find any moths. The moth population was heavy, with at least 10 moths caught daily. Thermal fogging inside the house with deltamethrin reduced flying moths for no more than 14 days. The natural wall insulation made from sheep's wool was suspected as a breeding site of the moths. Samples of wool extracted from inside the walls contained moth larvae. According to the insulation provider the ecologically friendly product was treated with a 10% solution of Molantin SP (10% permethrin), but as the two year guarantee had expired, the manufacturer refused any responsibility for the moth infestation. The house owner was so desperate that he considered removing the plasterboard from the walls and to replace the infested wool insulation with a traditional mineral one. The cost of such work was however unrealistic. We proposed treating the insulation by injecting a combination of the synthetic pyrethroids transfluthrin with a high vapour pressure as a fumigant, and permethrin for residual effect. A pilot pressurised aerosol product was prepared, containing 1% of transfluthrin and 1% of permethrin, and a non- flammable propelling gas. The can was equipped with a special nozzle allowing treatment of the internal voids filled by the insulation (1m width x 3m high x 5 cm depth). The product was applied into the internal voids through holes drilled into the plasterboard. Altogether 8 aerosol containers (each 750 ml) were used. The total volume of treated wool insulation was approx. 10 m^3. Up to 3 months after the treatment no flying moths were observed inside the house. Then 1 -2 moths began to appear again daily. The probable reason for the re-infestation was the fact that the internal voids behind the sauna were not treated, as we wrongly anticipated that moth larvae would not be able to survive high temperatures. Repeated application is planned and results will be presented on the conference.