

BIOLOGICAL CONTROL OF *ANOBIUM PUNCTATUM* IN INFESTED BOOKS, USING THE PARASITOID *LARIOPHAGUS DISTINGUENDUS*

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A severe infestation of thousands of books by *Anobium punctatum* was discovered in an Israeli library. Initial successful treatment was carried out, involving fogging the library space and freezing the books to -30°C. With the other known methods for treating books (anoxia or methyl bromide), they must also be removed from the library and treatment is very problematic. BIP Company from Berlin suggested checking the possibility of biological control of the infested books while they remained on the library shelves, using the parasitoid wasp, *Lariophagus distinguendus*. Research has proved that this wasp has the ability to indentify and parasitize host larvae in closed and limited spaces like grains of rice or pulses, and to reduce the populations of stored pests like *Sitophilus granarius* or Bruchidae. In each of three months, from wasp pupae supplied by BIP, adults were released in a closed library room in which other infested books had been concentrated in an open carton exposed to the wasps, and infested control books were in material covered cartons. 46 % of the larvae among the exposed books were found dead. The live larvae were sent to BIP to check if they were parasitized. 86% of the larvae were found live in the covered box. In parallel, *Sitophilus granarius* larvae in wheat kernels, in four gauze bags with a mesh width of 1.5mm, were put amongst boxes of uninfested books for 5 days exposed to the wasps. There was no emergence of adult *S. granarius*. However, emergence of wasps, which had developed in the host larvae, was found, proving the ability of the wasps to identify the host and to parasitize them, both between and inside the books. There is a potential for *Lariophagus distinguendus* to serve as a biological control agent in books on the shelves, but more experiments are necessary to make this potential practical.