

Education and Outreach for Prevention and Management of Bed Bugs in New York State, NY State IPM Program, 2009

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Abstract:

In the past decade, bed bugs have made an astounding comeback all across the United States. Bed bugs are small blood-feeding insects that invade human habitats, specifically the home, and where people sleep. Since bed bugs were nearly absent for 40 years in the US, very little is currently known about them, both in terms of their biology and the public's familiarity with their appearance and control. Educational needs for dealing with this pest are overwhelming, and include outreach to cooperative extension educators, Master Gardeners, pest control professionals, facilities managers, social workers, medical professionals, travelers, college students and their families, landlords, tenants of rented properties, and just about everyone else. Those who seem to be most vulnerable to bed bugs include those in multiple unit buildings, the elderly (living alone), and those living in assisted or group homes. Elderly and disabled individuals tend to have fewer resources and may lack the ability to recognize or deal with bed bugs.

The New York State IPM Program has approached the bed bug issue from a variety of angles. Staff members are frequently called upon to help individuals, organizations and agencies deal with bed bugs in homes, facilities, and even schools. Through phone calls, presentations, sample identification, development of educational materials and other outreach, the NYS IPM Program is working hard on raising public awareness about this pest and the best methods of controlling it.

Background and Justification:

Bed bugs, *Cimex lectularius*, are blood-feeding parasites of humans and some animals. Bed bugs cannot fly or jump, but they run and they are excellent at remaining undetected. These insects, once commonplace in homes and hotels, nearly disappeared from developed countries by the 1950's due to the use of residual insecticides. A steady resurgence of bed bugs became evident in the late 1990's, and since this time research and outreach from various sources have expanded yearly. But so have the bed bug infestations.

Throughout the United States people are facing bed bug infestations in their homes, dormitories, hotels, and almost all types of housing and accommodations. According to a survey of the pest control industry conducted

in 2005, the resurgence of bed bugs has been consistent across the US (Gangloff-Kaufmann et al. 2006). Although bed bugs are not vectors of disease, they do have significant health effects for sufferers. Bed bugs cause high levels of anxiety, stress, and loss of sleep when they infest the home. While reactions to bites vary among individuals, bites often result in itchy welts that may lead to secondary infections from scratching. Anemia has been reported for the elderly in heavy infestations. Bed bugs have also been identified as an asthma trigger. However, the overexposure to pesticides, especially from self-treatment, may be a greatly underestimated public health risk.

Extension programs in many states have responded with fact sheets, new research programs, and educational opportunities. In addition, health departments and municipal agencies in a few cities have taken steps to help their citizens with bed bug problems. Still the problem appears to have worsened over the past few years. Complaints to the New York City help line have increased from about 540 in 2004 to more than 8800 by the first half of 2008. Field collected bed bugs from various parts of the US are known to be resistant to commonly used pyrethroids (Romero et al. 2007). Although bed bugs are not currently known to vector disease, their public health impact can be seen in the numbers of bites victims suffer, the emotional stress of fighting them, the financial strain placed on families and people when money is tight, and the potential for pesticide overuse. Even with the improved level of communication among pest control professionals and university researchers, and increased awareness and skill level, bed bugs continue to be among the most frequent and challenging pests to deal with. This project addresses the needs of the pest control industry, municipal agencies, and the general public for help with bed bug problems. In particular, focusing on underserved audiences, such as shelters and group homes, may have a significant impact on the protection of human health while indirectly benefitting others.

Objectives:

1. To improve awareness of techniques for prevention and management of bed bugs.
2. To increase audience (and stakeholder) ability and confidence in managing bed bug outbreaks, with time focused on non-traditional audiences.
3. To collaborate statewide, regionally and nationally, sharing bed bug resources, research, and educational opportunities.

Activities:

New York City Response to Bed Bugs

In early 2009 Gale Brewer of New York City Council introduced three bills regarding bed bugs. A group of three committees in the NYC Council held a special public hearing on these bills and invited NYS IPM staff member Jody Gangloff-Kaufmann to testify along with experts from the pest management industry and the field of public health. The legislation would have banned the sale of used mattresses in NYC, established a work group for bed bugs, and created some laws about the disposal and pick up of infested furniture. The City

Council ultimately passed a law that created a Bed Bug Advisory Board, charged with the development of recommendations and best practices for the prevention and management of bed bugs in private dwellings and public facilities. The Board shall also make recommendations on tracking and recording infestations, disposal of bed bug infested items, and education and training for the pest control industry, city workers, and the public.

Bed Bug Advisory Board

The NYC Mayor's office had the opportunity to appoint some of the members of the Bed Bug Advisory Board, while City Council members appointed the rest. Jody Gangloff-Kaufmann was appointed by the Mayor's office to the Board then volunteered to Chair the Board. This began to meet monthly starting in September, and held numerous meetings together and with agency representatives to get more in-depth information about their bed bug struggles. The Board is in the process of developing the report containing control recommendations, educational outreach messages, and a vision for a web-portal and task force devoted to prevention and management of bed bugs in NYC. The report is due to the City Council by April 1, 2010, and will be made public. The impact of this report is anticipated to be great, both within New York City, and for other cities in the United States, as it lays out a reasonable course of action for reversing the upward trend of bed bug infestations.

International IPM Symposium

For the 6th International IPM Symposium, a group of extension entomologists, including NYS IPM staff, collaborated to hold a session titled "Bed Bugs and Public Health; Establishing the Connections". IPM Program members were partly responsible for coordination but ultimately it was the speakers whose presentations made the session remarkable. The session was very well attended (a packed room, over 110 participants) and the impact may be most obvious in the national networking that has resulted among scientists working with bed bugs.

EPA Bed Bug Summit

A member of NYS IPM attended the EPA-sponsored Bed Bug Summit in Washington DC in April, 2009. Over 200 bed bug experts, policy makers, and public health officials gathered together for this summit to discuss the needs and possibilities for prevention and control of bed bugs. Breakout sessions helped participants focus on several key questions and issues. It is the hope of many that the federal government (CDC and/or EPA) will consider listing bed bugs as a pest of public health significance, a move that may free up funding for research on this persistent pest. The outcome of this summit is that it started a national dialogue between scientists and federal agencies, and facilitated the networking needed for those concerned about and working with bed bugs.

University of Maryland In-Service

In the spring of 2009, Jody Gangloff-Kaufmann of NYS IPM was invited to the University of Maryland Home and Garden Information Center to conduct an in-service training for Maryland cooperative extension agents. This two hour session was videotaped by visual communications student interns. After

combining the video of the presentation, the students integrated slides from the Power Point presentation and overlaid visual and audio effects to produce training videos. This in-service now appears on www.youtube.com in a three part series. (Search in YouTube for "HGIC" and "bed bugs" to see the videos listed). These videos rank well in viewer feedback (4.5 and 5 stars).

Nassau County/Hempstead Bed Bug Project–

Nearly two years ago I was approached by the Nassau County Assistant District Attorney, Rene Fiechter, about addressing a group of community members about the subject of bed bugs in Hempstead, NY, public housing, where the problem had become quite bad. Along with the Department of Health, many community groups, the government of Hempstead Village and a pest management firm, we have created the Nassau County Bed Bug Task Force. The task force meets about once monthly. We have succeeded in getting bed bug IPM information into the DSS office in the form of a continuous loop presentation of four slides in both Spanish and English. We have held two tenant association bed bug presentations in low-income housing developments. We surveyed residents of the smaller development (109 units) and received 60 replies. Two-thirds of the residents report that they have had bed bugs at one time, half who responded still have bed bugs, the majority are long term (1 year or more) problems, and nearly all have treated (or been treated) with insecticides for bed bugs.

The next item of business for the task force is to hold county-wide trainings for landlords, housing inspectors, social and medical care workers, and anyone who helps others in their homes. We anticipate a good turnout.

Media

In 2009 IPM members were quoted in several news articles about bed bugs:

"City trying to get handle on resurgent bed bugs" Feb 25, 2009, Newsday (by Jason Fink)

"Keeping the bed bugs from biting", March 10, 2009, Newsday (by Ridgely Ochs)

"Patient Money: Sleeping with the enemy (bed bugs)" July 10, 2009, NY Times (by Walecia Konrad)

Presentations on the management of bed bugs:

Lynn Braband in Upstate New York:

- Rochester Institute of Technology; Resident hall advisors; February 13; Brighton (Monroe Co.); 15 people.
- Master gardeners; April 21; Belmont (Allegany Co.) with polycom connections to Steuben and Cattaraugus Co.; 40 people.
- Rochester General Hospital: Social workers; June 3; Rochester (Monroe Co.); 23 people.
- Master gardeners; June 4; Jamestown (Chautauqua Co.); 20 people.
- Strong Hospital; Social workers; June 17; Brighton (Monroe Co.); 25 people.
- Rochester Housing Authority; Property managers; September 15; Rochester (Monroe Co.); 15 people.
- Landsman Associates; Property managers; September 17; Brighton (Monroe Co.); 20 people.

- Master gardeners; September 23; Geneva (Ontario Co.) with participants from several counties; 50 people.
- Master gardeners; October 29; Kingston (Ulster Co.) included participants from Orange Co.; 35 people.
- Cornell Ag. Inservice; Extension educators; November 12; Ithaca (Tompkins Co.); 10 people.
- Pinnacle Place Apartments; Staff and residents; December 8; Rochester (Monroe Co.); 45 people.

Jody Gangloff-Kaufmann in Southeastern New York:

- "Bed Bugs – What You Need to Know", Nassau County Dept of the Aging, DOH staff 38 people.
- "Bed Bugs - What You Need to Know", Nassau County, A coalition of interested community groups who deal with housing. 23 people.
- "Bed Bugs - What You Need to Know", Borough Park, Brooklyn, OHEL staff and clients (non-for-profit organization that helps mentally ill clients), 40 people.
- My comments on four NYC bills pertaining to bed bugs, New York City-City Hall City Council members and a diverse public audience of 75 people.
- "Bed Bugs – Where We Need to Go", International IPM Symposium, Portland Oregon, IPM Symposium attendees, 110 people.
- "Bed Bugs – The Basics", East Meadow, NY (Nassau Co), The bed bug task force members, 15 people.
- "Bed Bugs- What You Need to Know" Mental Health Association of Nassau Co, Hempstead, NY, Social workers in this organization, 40 people
- "Bed Bugs - What You Need to Know", University of Maryland Home and Garden Information Center staff, Ellicott City, MD, 23 people.
- "Bed Bugs - What You Need to Know", South Shore Assn for Independent Living – Baldwin NY (Nassau Co), Social workers in this organization, 11 people.
- "The Top 20 Things You Need to Know about Bed Bugs", 400 Fulton Street, Hempstead (public housing) Nassau County, Tenants Association 14 people.
- "The Top 20 Things You Need to Know about Bed Bugs", 100 Terrace Avenue, Tenant's Association, public housing. 65 people.
- "Bed Bugs and Their Control", Coalition for the Homeless, Central Islip, NY 45 people.