The Seasonal Increase in Bed Bug Activity
Jeff White, Technical Director, BedBug Central

While bed bugs have always been noted as a year-round household pest, an increase in activity during the summer months has been long been reported by pest management professionals. Until now, this trend has been based on field observation and data has not been reported to support this claim. Several pest management companies from across the United States tabulated their monthly initial bed bug services (the first service at a bed bug infested home) from January 2008 until April 2012 and each company reported their findings. When the monthly totals from each company were added a clear peak in bed bug activity was noted from July through September. This trend has effectively been noted as “the bed bug season”.

Until now, the only scientific documentation of a seasonal peak in bed bug activity during the summer months was from the research paper “The ecology of the bed bug in Britain” by C.G. Wilson that was released in 1941. Since this study was released, the structure of homes has changed which can ease the treatment of bed bugs and reduce the rate at which bed bugs can spread. This makes it necessary to present data on current bed bug infestations to be assured that the seasonal trend noted in the 1941 paper still holds true in modern communities.

For this study, five pest management companies from different regions in the country (Northeast, Mid-Atlantic, Southeast, Mid-west and Northwest) were asked to submit their monthly bed bug initial service totals from January 2008 through April 2012. The totals for each pest management company were then added together and the summation of the monthly data is presented in the graph “Bed Bug Initial Service Totals by Month”.

![Total Initial Bed Bug Services by Month](graph.png)
While the exact timing of the surge in bed bug initial services is difficult to predict and can vary by year, it is clearly noted in the graph that there is a large peak in activity during the summer months, specifically July-September. This graph also indicates that June and October are “high-risk” months and can have significant bed bug activity depending on year. The reason for this increase in activity has long been thought to be due to an increase in travel, which could definitely play a role. That being said, this increase in activity may have more to do with an increase in bed bug reproduction and movement in warmer temperatures. While air conditioning is present in many homes, the average ambient temperature is still warmer than it is during the winter months. Previous studies have shown that bed bugs develop from an egg to adult in 66 days at 64°F, but this developmental time dramatically decreases to only 14 days at 82°F. This increase in development combined with an increase in bed bug movement in warmer temperatures is probably largely the reason for an increase in activity during the warmer months.

In addition to the seasonal trend that this study illustrates, a yearly rise in bed bug initial service calls can be seen each from 2008 to 2010 (median). One interesting trend to note is that 2011 was the first year that the seasonal increase was not as pronounced as previous years even though the median number of jobs remained close to the same as 2010. The exact reason for the decrease in activity is not known but an increase in public awareness combined with an increase in the effectiveness of pest management companies treating for bed bugs are likely to have affected this trend.

I would like to thank Adams Pest Control, American Pest, Johnson Pest Control, Eden Advanced Pest Technologies and Cooper Pest Solutions for participating in this study. Without their help this report would not have been possible.