

## **Symposium abstracts: Urban Insects – They Live Among Us**

### **Entomological Society of British Columbia Annual General Meeting**

**Pacific Forestry Centre, Victoria, BC, October 15, 2016**

#### **Out of the cities and into the forest: Range expansions of non-indigenous introductions in southwest British Columbia**

*Lee M. Humble, Natural Resources Canada, Canadian Forest Service, Victoria, B.C., Canada*

Since surveillance programs were established for the detection of non-indigenous introductions in the mid 1990s, more than 25 introduced species of Coleoptera, Hemiptera, Hymenoptera, and Lepidoptera have been discovered in the urban and managed forests of British Columbia. The life histories and known distributions of selected species are documented and used to infer likely pathways of introduction and to illustrate the importance of anthropogenic influences on their range expansion. Future research needs for species of potential importance to forestry in B.C. are briefly discussed.

#### **Preventing gypsy moth from establishing in British Columbia isn't fun**

*Tim Ebata, Resource Practices Branch, B.C. Ministry of Forests, Lands and Natural Resource Operations, Victoria, B.C., Canada*

My talk outlines how British Columbia has successfully remained "gypsy moth free" and describes some of the difficulties faced in mounting eradication programs in an urban environment.

#### **Treading Carefully on Fire Ants in the Urban Landscape**

*Rob Higgins, Biological Sciences, Thompson Rivers University, Kamloops, B.C., Canada*

Working quietly on ants while sitting in a forest, perhaps a hundred metres from a colleague and a hundred kilometres from the nearest town allows you to develop a specific set of research and social skills. Unfortunately, none of them provide much guidance when you are talking to an angry homeowner who has recently retained a lawyer because of the ants you are studying. Nor guidance when dealing with businesses fearing major losses who need immediate advice you simply aren't sure you have. Nor dealing with the police and fire department that someone has called. Nor needing to keep your data so confidential you cannot share it with your funding agency and certainly not the media who keep asking. Working in a social environment as densely developed as the condominiums you find yourself within is a uniquely challenging situation. Here we will look at the invasive fire ants of BC in the urban landscape and reflect on those times we spent sitting in that quiet forest while stuck in traffic.

#### **180,000 bites later: The aggregation pheromone of the common bed bug is finally identified.**

*Regine Gries<sup>1</sup>, Robert Britton<sup>2</sup>, Michael Holmes<sup>2</sup> and Gerhard Gries<sup>1</sup>, <sup>1</sup>Department of Biological Sciences; <sup>2</sup>Chemistry Department, Simon Fraser University, Burnaby, B.C., Canada*

Drawing on our 2015 publication in *Angewandte Chemie* (International Edition), the presentation describes our approach to collecting sufficient pheromone sources for identifying the aggregation pheromone of the common bed bug (*Cimex lectularius*);

Hemiptera: Cimicidae), the analytical steps taken to identify the pheromone blend, the pheromone components that mediate attraction and arrestment of bed bugs, and the experiments we have run in the laboratory and in bed bug-infested apartments to test the effect of synthetic pheromone as a trap lure. The presentation also highlights future objectives, including the development of a commercial lure and trap.

### **Butterfly and moth conservation in urban and semi-urban habitats: Challenges and reflections taken from species at risk recovery projects**

*Jennifer Heron, British Columbia Ministry of Environment, Vancouver, B.C., Canada*

The order Lepidoptera is one of the largest and most studied orders of insects. This group is ecologically and economically important, serving as pollinators of many plants and pests for many others. Butterflies are considered by many to be the most charismatic of the arthropods, and the public enjoys seeing these species in their gardens and surrounding natural environments. Many species of Lepidoptera, especially pollinating groups, are at risk. Although the butterflies are relatively well known, there are many species of moths we know little about, and engaging the public in moth conservation efforts is challenging. In this talk, we summarize the biology of these species and cite examples of Lepidoptera conservation projects and the challenges encountered in urban and semi-urban areas.

### **Beetles in the City: Carabid diversity in the urban environment**

*Rob McGregor and Veronica Wahl, Institute of Urban Ecology, Douglas College, New Westminster, B.C., Canada*

Ground beetle surveys (Coleoptera: Carabidae) have been widely used to assess habitat quality and the influence of human disturbance on urban, agricultural, and forested landscapes. Here, we describe carabid surveys conducted in urban forest fragments in Coquitlam, B.C., where European carabid species predominate in disturbed forests. In addition, we describe a citizen science program where homeowners and community gardeners trap and identify carabids from urban gardens, in association with insectary plants. Finally, we describe preliminary work to document populations of a threatened tiger beetle, *Omus audouini*, in coastal habitat in Delta, B.C.

### **Up on the Roof: Surveying Biodiversity in a Unique Urban Landscape**

*C.G. Ratzlaff and K.M. Needham, Beaty Biodiversity Museum, University of British Columbia, Vancouver, B.C., Canada*

We have been conducting a monthly survey of the insects making their home on the "green roof" atop the Vancouver Convention Centre, West. The roof was planted almost a decade ago with 23 species of plants and is nearly six acres in size—the largest green roof in Canada. It is left to grow throughout the year and is mowed only once in the fall. Surrounded by tall buildings and concrete sidewalks, with no significant green spaces nearby, we were curious about which insects might find this "meadow" a suitable habitat. Beginning in April and ending in December, we will have visited the roof once a month, including one black-light trapping event in September, and will have catalogued all of the insects collected there. In this talk, we present our preliminary results and highlight some of the finds we have made to date.