

Urban Insects: They Live Among Us

***Annual Symposium organized by
The Entomological Society of British Columbia
Pacific Forestry Centre, Victoria
– Oct 15, 2016 –***

	Title	Presenter (underlined)
8:25	Welcome	Brian Van Hezewijk
8:30	Out of the cities and into the forest: range expansions of non-indigenous introductions in southwest British Columbia.	Lee Humble Natural Resources Canada – Canadian Forest Service
9:00	Preventing gypsy moth from establishing in BC isn't fun.	Tim Ebata Resource Practices Branch, BCMFLNRO
9:30	Treading Carefully on Fire Ants in the Urban Landscape.	Rob Higgins Thomson Rivers University
10:00	180,000 bites later.....the aggregation pheromone of the common bed bug is finally identified.	Regine Gries, Robert Britton, Michael Holmes and <u>Gerhard Gries</u> Simon Fraser University
10:30	Break: Coffee, Tea & Snacks	
11:00	Butterfly & 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
11:30	Beetles in the City: Carabid diversity in the urban environment.	<u>Rob McGregor</u> & Veronica Wahl Douglas College
12:00	Up On The Roof: Surveying Biodiversity in a Unique Urban Landscape.	C.G. Ratzlaff & <u>Karen Needham</u> University of British Columbia
12:30	Lunch (provided) and time for discussions.	

Abstracts

1. **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, BC.

Since surveillance programs were established for the detection of non-indigenous introductions in the mid 1990's 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 BC are briefly discussed.

2. **Preventing gypsy moth from establishing in BC isn't fun.** Tim Ebata, Resource Practices Branch, BCMFLNRO, Victoria, BC.

My talk will outline how BC has successfully remained "gypsy moth free" and will describe some of the difficulties faced in mounting eradication programs in an urban environment.

3. **Treading Carefully on Fire Ants in the Urban Landscape.** Rob Higgins, Biological Sciences Thompson Rivers University, Kamloops, BC.

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.

4. **180,000 bites later.....the aggregation pheromone of the common bed bug is finally identified.**

Regine Gries¹, Robert Britton², Michael Holmes² and Gerhard Gries¹

¹Department of Biological Sciences, ²Chemistry Department, Simon Fraser University, Burnaby, BC.

Drawing on our 2015 - publication in *Angewandte Chemie (International Edition)*, the presentation will describe our approach to accumulate sufficient pheromone source for identifying the aggregation pheromone of the common bed bug (*Cimex lectularius*; Hemiptera: Cimicidae), the analytical steps we have 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 will also highlight future objectives including the development of a commercial lure and trap.

5. **Butterfly & 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, BC.

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 enjoy seeing these species throughout 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 a little more challenging. In this talk we will summarize the biology of these species, and cite some examples of Lepidoptera conservation projects and the challenges encountered in urban and semi-urban areas.

6. **Beetles in the City: Carabid diversity in the urban environment.** Rob McGregor & Veronica Wahl, Institute of Urban Ecology, Douglas College, New Westminster, BC.

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, BC 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, BC.

7. **Up On The Roof: Surveying Biodiversity in a Unique Urban Landscape.** C.G. Ratzlaff and K.M. Needham

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 6 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 will present our preliminary results and highlight some of the cool finds we have made so far.