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2017 Symposium

“Pest Management in
Emerging Sectors”

Tuesday, February 28, 2017
Scandinavian Community
Centre
Burnaby, BC

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Summary of the 2017 AGM

The 2017 PPMABC Annual General Meeting was held at the Scandinavian Community Centre in Burnaby, BC.

2017 Awards

Thelma Finlayson Lifetime Achievement Award was awarded to Victoria Brookes. Jolene Swain (bottom right) is shown presenting the award.



The **Student Award** was given to MPM student (SFU) Elana Varner (below), for her presentation at the AGM entitled: *"Search for the volatile sex pheromone components of house mouse females: Tracking odor profile evolution from juveniles to adults"*



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The PPMABC welcomes sponsorship from companies interested in supporting the costs associated with our annual AGM. If interested, please contact Tammy McMullan (ppmabc@sfu.ca).

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2017 AGM Student Presentations

Presenter: Jesse L MacDonald

Title: Wasabi: Growing issues in a growing industry

Abstract: *Wasabia japonica* (wasabi) is a high value and growing industry in the Pacific Northwest. The 12-18 month crop cycles and high humidity environment required encourage disease development. The first description of *Botrytis cinerea*, *Colletotrichum higginsianum*, and *Albugo candida* causing disease of wasabi in Canada are reported.

Presenter: Kate Mill

Title: The Sublethal Effects Of Anti-Sea Lice Pesticides On Non-Target Crustaceans

Abstract: There is concern about the direct release of anti-sea lice pesticides from salmonid aquaculture sites into coastal waters. Spot prawns, *Pandalus platyceros*, are being exposed to multiple pulse and stressor scenarios with their feeding, locomotory and avoidance behaviours evaluated to elucidate the sub-lethal effects of these chemotherapeutants on non-target crustaceans.

Presenter: Joshua Pol

Title: The uninvited dinner guests... and how to get rid of them

Abstract: German cockroaches (GCs) are pests in human dwellings. We hypothesized that GCs are strongly attracted to human foods. In laboratory experiments, we bioassayed the responses of GCs to many food types. In a field experiment, one particularly attractive food type proved as appealing to GCs as the leading commercial bait.

Presenter: Asim Renyard

Title: Identification and Testing of the Poison Gland Pheromone in the Carpenter Ant *Camponotus modoc*

Abstract: The carpenter ant (CA) *Camponotus modoc* is a widespread pest, infesting man-made wooden structures. Pheromones could enhance poison food bait control tactics. We demonstrate strong attraction to pheromones from the poison gland (PG) in *C. modoc*. Future studies will focus on identifying and determining the function of the PG pheromone.

Presenter: Elana Varner

Title: Search for the volatile sex pheromone components of house mouse females: Tracking odor profile evolution from juveniles to adults

Abstract: Monitoring volatile odor profiles as mice mature from juveniles to adults will pinpoint compounds particular to sexually mature adult mice, identify which compounds are attractants, and test them for optimal attraction efficacy. These attractants, coupled with conventional trapping methods, should provide an effective ecofriendly alternative to currently used products.

Presenter: Kari Zurowski

Title: The Effect of *Metarhizium brunneum* on the Reproduction of *Agriotes obscurus*

Abstract: Management practices of the agriculture pest, dusky wireworm (*Agriotes obscurus*), focus on removing damaging larvae, but removal of pre-reproductive adult beetles is an alternative method. I infected adults with entomopathogenic fungus *Metarhizium brunneum* to determine the effect on oviposition. Oviposition occurred earlier but to the same amount in infected individuals.

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PPMABC Executive

President: Jolene Swain

Jolene completed her B.Sc. at the University of Alberta in Biology and Ecological Anthropology. She is currently a graduate student at SFU working on her M.Sc. with a focus on how an outbreak of an insect pest in organic apples might be related to a changing climate. Prior to her graduate studies, Jolene worked in the Yukon in an alpine research field camp, in BC with meso-carnivores, and in Alberta on a large-scale biodiversity monitoring project. In the past season, she has taken part in some small-scale agriculture (market gardening) in Northern B.C., where in addition to growing a wide variety of vegetables for the small northern communities, she's learning about growing grain, milling flour, and raising a small flock of sheep and a milk cow. When she is not too busy with the farm, or writing, she also visits organic farms around the province to complete inspections to verify compliance with the Canadian Organic Standards (for organic certification).



Vice-President: Jen Scholefield

Jen graduated from SFU's Master of Pest Management program in April 2015, having studied interactions between various microbial control agents of insect pests. She spent the summer of 2015 working with Culex Environmental in integrated mosquito management, managing research projects in BC and Ontario. Jen has recently started working for ES Cropconsult as a supervisor in blueberry IPM. She is excited to delve into the practical (and outdoor) side of pest management, having spent much of her Masters in the lab infecting cabbage loopers!



Webmaster: Paul MacDonald

Paul completed his BSc (Biology and Mathematics) in Halifax and BEd in Toronto. He is currently at SFU completing his MPM under the supervision of Dr. Jenny Cory. Paul's research concerns the population dynamics of the western tent caterpillar.



Treasurer: Tammy McMullan

Currently a Senior Lecturer at SFU: since 1988, Tammy has taught a wide range of courses, including graduate-level field courses in pest management. Tammy has held numerous Research Assistant positions and been involved in several research projects on a wide variety of insect pests, served as Director of the BC Entomological Society, and has previously held the positions of Secretary and Student Representative.



Secretary: Heather Coatsworth

Heather completed her BSc (Zoology) at the University of Guelph, and is currently working on her PhD at Simon Fraser University in Dr. Carl Lowenberger's laboratory. She is interested in teasing apart refractory mechanisms in mosquitoes in an effort to genetically modify them to stop the spread of disease causing viruses such as Dengue and Zika.



Membership Director: Chelsea Eby

Chelsea completed her BSc in Victoria while working co-op jobs in the field of insect pest management. Following graduation from UVIC, she continued to work in the pest management field in BC and in England. She then completed her MPM program at SFU on visual and olfactory cues used by the Apple Clearwing Moth to locate food sources. Chelsea then worked as Research Scientist for Semios, a start-up company integrating wireless technology with pest management in the agricultural sector. She now is an IPM Officer for the BC Ministry of Environment.



Student Representative: Pauline Deschodt

Pauline completed her BSc (Biology) at the University of Faidherbe (France), completed her Masters in Pest Management at Montpellier SupAgro (France) and is currently working on her PhD at Simon Fraser University in Dr. Jenny Cory's lab. She is interested in microbiological control and host-pathogen interactions within the host as well as within the host population.



Remembering Thelma Finlayson

by Gail S. Anderson

Professor Thelma Finlayson passed away peacefully in her sleep at the age of 102. Thelma had an amazing, fascinating and influential life. She was a pioneering scientist and a giant in the pest management world. She, together with Dr. Bryan Beirne, had a vision of controlling pests in an integrated manner, with as little chemical pesticide use as possible, long before such ideas were fashionable or accepted. Together they founded the Masters of Pest Management Program in 1973. This program is still going strong today, having graduated hundreds of students from around the world.

Thelma was born in 1914 and did not meet her father until he came home from the First World War when she was four years old. She attended the University of Toronto and not only obtained an excellent academic degree, she also was trained as a pianist to the most advanced level.

Thelma graduated in 1936, the height of the Great Depression, and was determined to get a job at the Dominion Parasite Laboratory in Belleville, ON which later became part of Agriculture Canada and prelude to Agriculture and Agri-foods Canada. She arrived on their doorstep with her newly minted qualifications but was immediately turned away as they were not about to hire a female! She refused to leave, sitting on their doorstep, reading entomological texts in their library, chatting to other scientists and generally refusing to just “go away quietly”. Eventually someone needed an extra pair of hands and so she was asked to help. After a period of volunteering, eventually someone felt guilty enough to actually offer to pay her for the work she was doing and she was offered a job for the princely sum of \$50 a month, as long as she worked holidays and weekends as well! Thelma was the first female scientist to be hired. Sometime later she married another scientist there, Roy Finlayson. Thelma was then fired, because, in 1940, married women were not allowed to work in the civil service. Then war struck again, and, in 1942, Thelma, and many other women scientists were hired to replace the men who had gone to fight. But after the war, they said, congratulations, we’ve won the war, you’re fired! Thelma fought all the way up to the Assistant Deputy Minister, and won – winning an extremely important human rights battle for women in Canada.

Thelma had an active and rewarding career with the government as an entomologist, published many papers and monographs, did a tremendous amount of foundational work in biological control and had two insects named after her, an Oakworm Moth, *Anisota finlaysoni*, and a wasp, *Mesopolobus finlaysoni*. When many people are beginning to think of retirement, Thelma moved across the country to the fledgling Simon Fraser University to begin a new career as a professor. It was not just very brave to start an entirely different career, but brave for other reasons too as she did not have a PhD as she had been too poor to continue at university. Over her career with the government, she published many monographs each of which could have been PhDs in their own right, but she did not have the actual degree. Despite this, she decided to embark on a career as a professor and came to SFU in 1967 where she helped Bryan Beirne establish the Masters of Pest Management program, the program that brought me to SFU, and Canada. Thelma was the first woman to be hired as a professor in Biological Sciences and rose to full professor in a short time. She was also the first Professor Emerita. So many firsts.

The MPM program is, rightfully, world famous, attracting students from all over the globe. Many overseas graduates have gone back to their own country afterwards to become leaders in their forestry or agriculture departments, and those in Canada are employed in all sectors of pest management, helping to ensure that Canada’s produce is the finest in the world. As a biological control specialist, Thelma understood the importance of biological control in pest management so she endowed a Chair in Biological Control in 2008, currently held by Dr. Jenny Cory. She has

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also established many awards and graduate scholarships for students in the Pest Management Program.

Before she retired, Thelma recognized that a great number of students were in academic distress and she was one of the first people associated with academic advising when it was first established. She volunteered her time for almost 40 years before it became too much for her to physically walk to the centre from the parking lot. At 95 she was probably the oldest academic advisor. Innumerable students have benefitted from her sage advice and calm non-judgemental tones. Most have gone on to respected careers when, without Thelma, there was only despair and failure. After meeting with her, they were inspired and encouraged to find their way. Some years ago, I became the undergraduate director in Criminology and whenever I had a question that stumped me, I knew I could always ask Thelma as she knew the answers to all student related issues despite being in her 90s. I used to tell any of my CRIM students who needed to go to advising to go and see Thelma, rather than whoever they were supposed to go to in arts as I knew Thelma would look after them kindly. Two years ago, SFU, rebuilt the academic advice centre and renamed it the Thelma Finlayson Student Engagement Centre in her honour. She gave a speech for 5 minutes, with no notes! At her 100th birthday, she gave a 20 minute speech, again, with no notes.

Thelma won many awards. She was awarded an honorary doctorate from SFU in 1996, the Order of Canada in 2005, the YWCA Women of Distinction award in 2007, SFU's Chancellor's Distinguished Service Award in 2010, to name just a few. She was made an Honorary Member and Fellow of the Entomological Society of Canada and Honorary Life Member of the Entomological Society of British Columbia and received the C.D. Nelson Memorial Prize for outstanding service to the University. She published her most recent paper at the age of 99!

Thelma led by example thousands of women scientists and showed time and time again that women can be great scientists and compassionate leaders. She influenced so many generations of young women as well as young men, and her legacy will live on forever in those people and their students, and in their students. She made a difference in so many peoples' lives by example and by advice. She changed the world for women scientists and we are forever grateful to her for her strength and leadership.

We will never forget her.