



Invasive Ant Local Government Workshop: Where are we now?

A summary of the workshop for Local Governments
on Invasive Ants held June 9th, 2014

Sponsored by the BC Inter-Ministry Invasive Species Working Group. Facilitated by the Invasive
Species Council of BC

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Acknowledgments

A sincere thank you to the City of Richmond for hosting the event and to all those who expressed interest, attended and participated in the June 2014 Invasive Ant Local Government Workshop. A special thank you to:

Canadian Wildlife Service

City of Chilliwack

City of Coquitlam

City of Mission

City of New Westminster

City of North Vancouver

District of North Vancouver

City of Vancouver

City of Richmond

City of Surrey

Coastal Invasive Species Committee

Corporation of Delta

District of Saanich

Fraser Valley Regional District

Invasive Species Council of British Columbia

Invasive Species Council of Metro Vancouver

Ministry of Environment

Ministry of Forests, Lands and Natural Resource Operations

Thompson Rivers University

VanDusen Botanical Garden



Executive Summary

On June 9th, 2014 the *Invasive Ant Local Government Workshop* was held in Richmond, BC. The workshop began with a special session for local governments, followed by an open session after lunch. The workshop was a follow-up meeting to the *European Fire Ant in BC: 2012 Field Results and Planning Forward Workshop* that was held in November 2012 and the *European Fire Ant Planning Session for Governments* held in June 2012.

The special local government meeting reviewed legal responsibilities of local governments towards issues with invasive ants and confidentiality. This allowed for participants to collaboratively work together to determine the main issues and how to work towards solutions. After the local government meeting, the workshop opened up to other leaders in affected or threatened regions to join the conversation.

Invasive ant expert Dr. Robert Higgins provided an overview of invasive ants in or close to BC including the tropical stinging ant, Argentine ant, Asian needle ant, *Myrmica specioides* and European fire ant (EFA). Dr. Higgins proceeded to provide insight on his research to date on EFA population distribution and control methods. Research will continue this summer on mapping population distribution of EFA as well as different control techniques.

The group discussed each of their responses and actions to invasive ants to date and reviewed the objectives of the Joint Action Plan for EFA that was created in June 2012. The main topics that were determined in the morning session were used to guide the group in discussion and to collaboratively determine next steps. Under each key topic, lists were created on flipcharts and full lists are shown under each discussion section in this report. From the workshop lists, a summary of key workshop actions was created:

Summary of Workshop Actions

Table 2. Actions assigned to the main topics of the invasive ant workshop of June 2014.

Main Topic	Action	Stakeholder	Additional Comments
Legal	Define due diligence	City of Vancouver	Applied legal definition
	Send resolutions to UBCM for an Invasive Species Act	All groups	
	Research municipal composting and soil movement	TBD	
	Create small working group to discuss soil transport	TBD	
Confidentiality	Seek legal counsel related to confidentiality	City of Vancouver	For protecting privacy and surrounding properties
Consistent Messaging	Share existing information for management, control and containment	All groups	

	Facilitate common messaging – create key hub	ISCBC with IMISWG as support	How: to get regional groups involved to get local government input What: public handout, presentations, containment options AND what doesn't work, common signage, public outreach, articles/ads, media information Support: local governments, BCLNA, WCTA, IAF, WorkSafe BC, IMISWG
Other	Increase awareness for MVRD related to composting with private contractors; seek landscape soil products	TBD	
	Check First Nations Reserve Lands	TBD	
	Increase field sampling of specioides	All groups	
	Develop name for specioides	MOE	
	Create photokey for invasive ants; common protocol for density monitoring	Dr. Higgins (TRU)	
	Sharing of inventory protocols	All groups	Based on known locations Random sampling on public lands
	Report an invasive species on the IMISWG site; update EFA factsheet to include IMISWG site	IMISWG	
	Establish a local government contact person for invasive ants	TBD	IMISWG committee
	Identify options for small invasive ant population removal	Dr. Higgins and City of Vancouver	
	Development, testing, applied trials	Local governments	
	Develop a hub or list serve for local government updates on invasive ants	ISCBC	
	Develop protocol for use of successes and circulate	Dr. Higgins (TRU)	Protocol for use of "successes" (see CFIA)

The workshop was a cooperative success bringing together provincial and local governments as well as non-profit organizations to manage the presence of invasive ants in BC. The overall outcomes and next steps of the workshop include an agreement to work together as management and research continues to move forward with another invasive ant workshop to be held in October 2014. Next steps also include continuing research on soil management and municipal composting in regards to invasive ants. The group will continue to work together by sharing knowledge and expertise and a commitment to provide collaborative education for the BC public.

SECTION 1 – LOCAL GOVERNMENT INVASIVE ANT WORKSHOP: Legal Responsibilities, Confidentiality and Consistent Messaging

1.0 Purpose

On Monday June 9th, 2014 representatives from regions that are affected or threatened by invasive ants gathered to discuss next steps for local governments and the progress that has been made since the November 2012 planning session. The first session of the workshop was a special meeting for local governments, to allow a platform to share common issues, solutions and expertise. This session allowed for the group to come to collective solutions and next steps targeted towards local government needs. Section 1 summarizes the discussions and next steps that were determined collaboratively by the local government group.

2.0 Introduction

The workshop began with the opportunity to discuss the unique local government issues in regards to invasive ants. The process began with the first session in June 2012 in Burnaby held by the IMISWG that brought everyone together to discuss EFA as an invasive “species”, a recent expansion from addressing invasive “plants”, with the provincial Joint Action Plan emerging as a result of the session. The second session held in Richmond in November 2012 was a follow-up of the actions outlined from June and for participants to tell their story of where they are at with EFA management. The third present session, was held to see what has emerged in regards to EFA since 2012, and to bring in other invasive ants to the discussion.

The group was asked to list the main topics that they wanted to be addressed during this section of the workshop. The following list emerged:

1. Legal responsibilities
 - Provincial
 - Local and private lands dispersal (including soil management and municipal composting)
2. Confidentiality
3. Consistent Messaging

The three identified topics were used as the structure for the remaining closed session.

3.0 Legal Responsibilities

There are resources that have been developed and are available: the Invasive Species Strategy for BC, ISCBC Invasive Plant Toolkit and the Invasive Species Toolkit for Local Governments. Each of which are good resources for local governments to develop guidelines and bylaws around invasive species.

3.1 Provincial Roles and Responsibilities

Ministry of Forest Lands and Natural Resource Operations (MFLNRO) - represented by Val Miller:

In 2012, the provincial government completed a gap analysis of invasive species legislation to flag current gaps in the regulatory framework. For the invasive “species” portion, there were many gaps. Now that the Inter-Ministry Invasive Species Working Group (IMISWG) has been created and other regional and provincial organizations have moved to a more broad invasive species title, it became clear to look at the legislative framework, where a gap was identified, and the responsibility for invasive ants was not clear.

The Plant Protection Act covers invasive species that affect trees or agriculture. Ants don't directly impact one resource, and therefore, the Plant Protection Act does not provide coverage for invasive ants. The controlled invasive species under the Wildlife Act, has recently changed slightly, and now includes aquatic species, but not invasive insects. It has been suggested that BC needs one overarching Invasive Species Act – one piece of legislation with attached regulation to streamline all invasive species. Currently, it is on the radar; however, provincial government cannot guarantee that it will be on them to create it. Some local governments have discussed putting a resolution through UBCM to support this process.

At this point, the provincial role does not have a regulatory ability regarding invasive ants. The provincial government has assisted with the invasive ant workshop to have a better idea on the statuses of new invasive ants in the province. At first, it was hoped to contain and remove European fire ants (EFA) through the Early Detection and Rapid Response Plan (EDRR) but unfortunately EFA was already well established. The current provincial role is supportive, and was successful in obtaining funding for Dr. Higgins to continue research over the last few years.

The group discussion on this topic developed the following list of key actions aimed at provincial and federal governments.

Legal Responsibilities: List Summary of Key Actions for *Provincial Government*

1. Need to better link invasive ants as an Agriculture issue – what to do to make this reality; pests of economic risk
2. Need to increase recognition as Health Risk – work with health authority
3. Ensure that this is recognized as agriculture issue – horticulture, landscapes
4. Increase recognition as health risk
5. Increase awareness as a pests of economic risk to BC

3.2 Local Government Legal Responsibilities

At the November 2012 meeting, Bill Huot from the Ministry of Community, Sport and Cultural Development presented on legislation for local government action. Bill Huot explained that local governments have many tools in the Community Charter Act than at the provincial level. Options for municipalities to build specific bylaws were put forward. Please refer to Joint Action Plan from the meeting for more information. There is a need for local governments to work on a standard approach for a species bylaw and avoid duplicating efforts.

Overall, invasive ants are not addressed specifically within federal and provincial legislations. One option for local governments is create a bylaw, but there are other tools to use. The group discussion is provided in the list below.

Legal Responsibilities: List Summary of Key Actions for *Local Government*

1. Prepare a Model invasive species bylaw for local government
 - Include recommendations for adapting or creating “soil movement” bylaw
2. Define “due diligence” for invasive ants (liability, etc.)
 - Applied legal definition – City of Vancouver/Surrey to report
 - Work at legal counsel – City of Vancouver to report
3. Local governments to educate public:
 - signage/information; due diligence
4. Create/Use Common Information
 - Signage; standard information; real risk
5. Seek legal counsel towards confidentiality and sharing with group – City of Vancouver to lead
 - a. Legally, it is a soil management issue
6. Municipal composting research
7. Include funding for research for invasive ants
8. Provide information to BC Landscapes and Nursery Association
9. Prepare resolutions to UBCM calling for Invasive Species Act
10. Prepare and provide resources to private home owners
11. Cumulating research in BC and share it with all of the municipalities

4.0 Confidentiality

Confidentiality is a very sensitive issue for landowners. When a new infestation is found, Dr. Higgins asks if he can communicate the location. Some individuals approve of releasing the information, while others do not want to disclose the location. Local governments would have to be deemed negligent of informing/advising the public on the issue to be held responsible for any fault. There are some questions as to the implications of when an informational sign is put up by local governments - as this could reflect acknowledgement of the infestation and could link to management responsibility. It is important to show *due diligence*: recognizing that the species is there and informing the public. Despite the presence of informational signs, there is a need to convey the real risks of fire ants to the average person. Local governments need to seek applied legal guidance. A list of key actions was generated from the discussion and is presented below.

Confidentiality: List Summary of Key Actions

- Hold open house session (district of north Vancouver)
- Define what are the legal responsibilities
 - o for protecting privacy; for protecting surrounding properties
- Seek Legal Counsel – to lead: City of Vancouver

5.0 Consistent Messaging

The group agreed that consistent messaging is key for delivering a message to the public through word-of-mouth, informational signs and educational resources. A brainstorm on what is required for consistent messaging and what needs to be done to move forward generated the list of key actions that follows.

Consistent Messaging: List Summary of Key Actions

- Share existing information for management/control/containment/signage* (important)
- Broader open house/outreach
 - o Not just infested areas to offer open houses
- Need to focus on containment
- Develop consistent messaging around soil management:
 - o Move x³ soil
 - o Provide direct communication with infested properties
 - o Dealing with developers
 - o See WorkSafe
 - o Dealing with excavation
- Need to let public know that research is underway
- Posting the known information in small public papers
- Shared funding:
 - o Provide public info of different ants to municipalities and regional weed committees
 - o Provide common presentation
 - o Provide info to pest management companies
- Who: have ISCBC to facilitate; seek IMISWG support
- How: to get regional groups involved to get local government input
- What: public handout, presentations, containment options AND what doesn't work, common signage, public outreach, articles/ads, media information
- Support: local governments, BCLNA, WCTA, IAF, WorkSafe BC, IMISWG

SECTION 2 – OPEN INVASIVE ANT WORKSHOP: Joint Action Plan, Invasive Ant Biology, Local Responses and Next Steps

1.0 Purpose

After the morning session, the workshop became open to those from regions affected or threatened by invasive ants. The goals of the open workshop were to learn about invasive ant biology, their current distribution in BC, to review strategies in the provincial Joint Action Plan and strengthen provincial partnerships. This report summarizes the presentations, discussions and next steps that determined collaboratively by the group.

2.0 Review of the Provincial Joint Action Plan (Presented by Val Miller)

Val Miller spoke on behalf of the provincial government. Most of the action items in the Joint Action Plan (page 14 of November 2012 report) have been worked on. Early Detection and Rapid Response (EDRR) was the initial provincial government approach to the presence of EFA. It was determined that EFA was well established and have been in BC much earlier than originally thought.

Progress on the Joint Action Plan since the last workshop:

- City of Richmond has created and communicated a standardized EFA sign for local governments
- The development of EFA control methods is still an ongoing progress
- One point media contact is Dr. Higgins. Researching and compiling is still ongoing

The few outstanding items in the plan will be discussed with the IMISWG meeting in mid-June. Outstanding tasks will be addressed by Dominique Sigg upon return from maternity leave in September 2014.

3.0 Invasive Ants in British Columbia: An Emerging Issue (Presented by Dr. Robert Higgins)

Myrmecologist, Dr. Robert Higgins explains that invasive ants becoming a much bigger issue in Canada and BC.

1. **Tropical stinging ant:** This ant was the very first invasive ant in BC, which was found in Vancouver in 1926. In 2013, records of this any have been growing rapidly with populations being found in Duncan, Victoria, Vancouver and Toronto. This ant is rather small and almost entirely subterranean, establishing under pavement or apartment buildings and nesting. If there is a report of a flying, stinging ant, it is most likely the tropical stinging ant. These ants are extremely difficult to eradicate, it is recommended to put out sticky traps in hopes of catching a queen before further spread.
2. **Argentine ant:** this species of ant doesn't sting, doesn't particularly bite, but overwhelms in dramatically large populations – well over a million workers in ten square meters. The Argentine ant causes a big problem in Europe, and it has established in Victoria BC. This ant is very temperature sensitive, therefore if the habitat temperature can be decreased by a few degrees the ants will perish. The ants often forage with the queens allowing for a large number of

queens to be targeted by control. Currently, the best treatment is boric acid baits, although there is some controversy about using baits. A clear plan has not been formed to address this issue. As the climate warms, the Argentine ant may begin to be found in new locations.

3. **Asian needle ant:** this ant is not in BC yet. If there are reports of an ant whose sting is phenomenally painful, immediately report the sighting to Dr. Higgins. This is one type of ant that could be prevented or controlled effectively by early detection and rapid response.
4. ***Myrmica specioides*:** this ant was sent in to Dr. Higgins in 2011 to identify, as it was thought to be EFA, but it wasn't. When the ant was first spotted, there had originally been one or two colonies here and there with no dense population established. Over the last two years, sightings of *M. specioides* have dramatically increased, with one very large and dense population at the Vancouver airport. Last season, ten random samples were taken in North Vancouver, and *M. specioides* was found at all of them. This ant is a relatively aggressive stinging ant, but it is not as aggressive and doesn't form as dense of colonies as EFA. *M. specioides* is an emerging issue because of the density and number of populations that are being found. A problem associated with this ant is that it looks much like EFA. Additionally, there is need to establish a common name.
5. **European fire ant (EFA):** over the last year, the EFA has been found in Courtenay and Naramata. In Naramata, it is likely a unique situation in the grounds of a small seniors complex that users sprinklers to water the grass each night. EFA is able to survive because of the increase in moisture, once the excess water is no longer supplied, EFA should go away. When Dr. Higgins is contacted by residents that use the word "can't use", it is likely that EFA is there. The economic impact of EFA done by provincial government is estimated to be over \$100,000,000 for BC. Those who have had pest control companies come, generally have heard that the populations go away for a while, but then return.

EFA Treatment and Control:

Dr. Higgins explained the process to date of lessons learned from different treatment options including: pesticide on EFA in Maine (none were successful), possibility of using decapitating flies for EFA (very labour intensive for little effectiveness), search for a local *Microspodia* (protist pathogen for EFA), exclusion fencing to prevent spread and exploiting heuristics. Lastly, Dr. Higgins is continuing his laboratory work on mapping current populations, their natural boundaries and the effect of different concentrations of boric acid baits over this coming field season.

Recommended Actions from Dr. Higgin's Presentation:

- Increase awareness for Metro Vancouver Regional District (MVRD) related to composting with private contractors
- Check landscape soil products
- Check First Nations reserve lands for invasive ant populations

4.0 Roundtable – Local Responses and Actions

The group was invited to contribute to a roundtable discussion on what their organization/region is doing in regards to invasive ants. The range of activities varied between representatives:

- Establish and put up sign in ‘closed areas’
- Hold open house in local area
- Removed and/or controlled ants through the following **treatments**:
 - o Torching/digging (side note: freezing with liquid nitrogen (injection into top 8” of soil)
 - o Baiting: paper and apple traps (side note: Borax – can be toxic to small animals/plants);
 - o Wasp spray (side note: effective so far in small scale infestation)
 - o Hand digging/Balling (side note: ants form balls in cold temperatures – with digging hard to say if gotten all of them; winter digging is most effective with March being the latest)
 - o Mowing/skimming/chemicals/soil
 - o Soil steaming
 - o Flooding with metal/plaster
 - o Density monitoring

5.0 Next Steps

1. Working group/Forum/session on Invasive ants – City of Van to lead

- Vancouver to host
- Fall/winter; annual forum
- Hold 1-2 per year

2. Hold a special forum on soil/discussion

- Have small working group on soil, prepare solutions

3. Continue progress towards Key Actions

6.0 For More Information

1. For more information on the European fire ant please visit the following three websites: IMISWG: http://www.for.gov.bc.ca/hra/invasive-species/fire_ants.htm
2. Invasive Species Council of BC (ISCBC): <http://www.bcinvases.ca/invasive-species/invasive-organisms/european-fire-ant>
3. Dr. Higgins Website: http://www.tru.ca/faculty/rhiggins/myrmica_rubra_index.htm