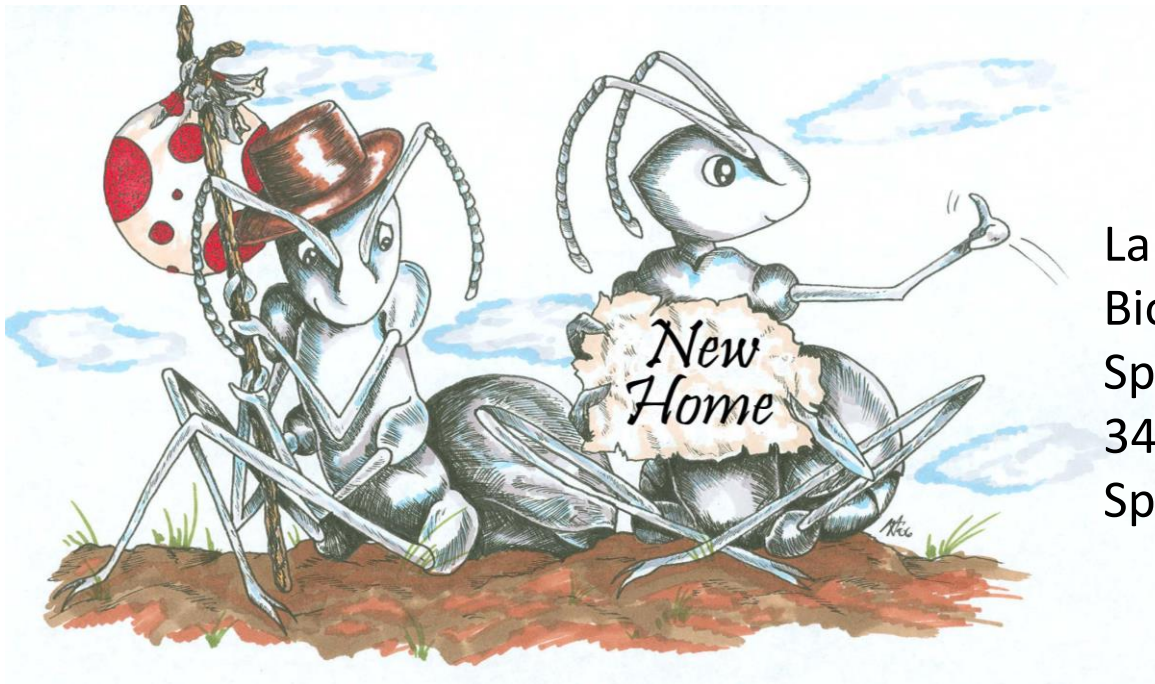


Occasional and established introduced ants in Washington and Oregon

Invasive Species Research Conference

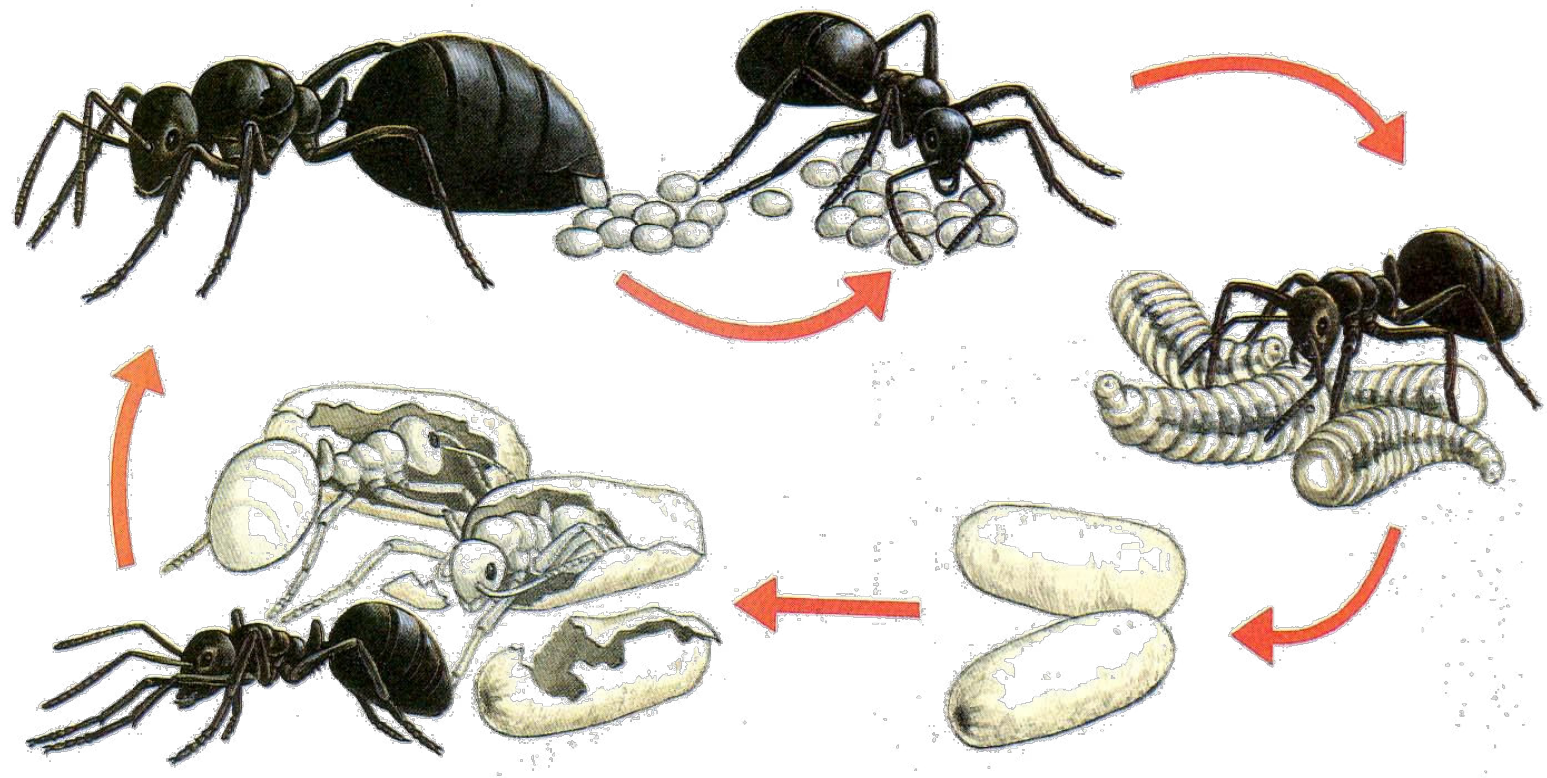
Kamloops, British Columbia

June 20-22, 2017



Laurel D. Hansen
Biology Department MS 3280
Spokane Falls Community College
3410 W Fort Wright Drive
Spokane, WA 99224

Ant life cycles



Hawaiian Islands

ALL ants species are alien

44 species: majority in the
100 years

Upset ecosystem:

no predators
no defenses by plants and
animals



Pantry/ grain pests

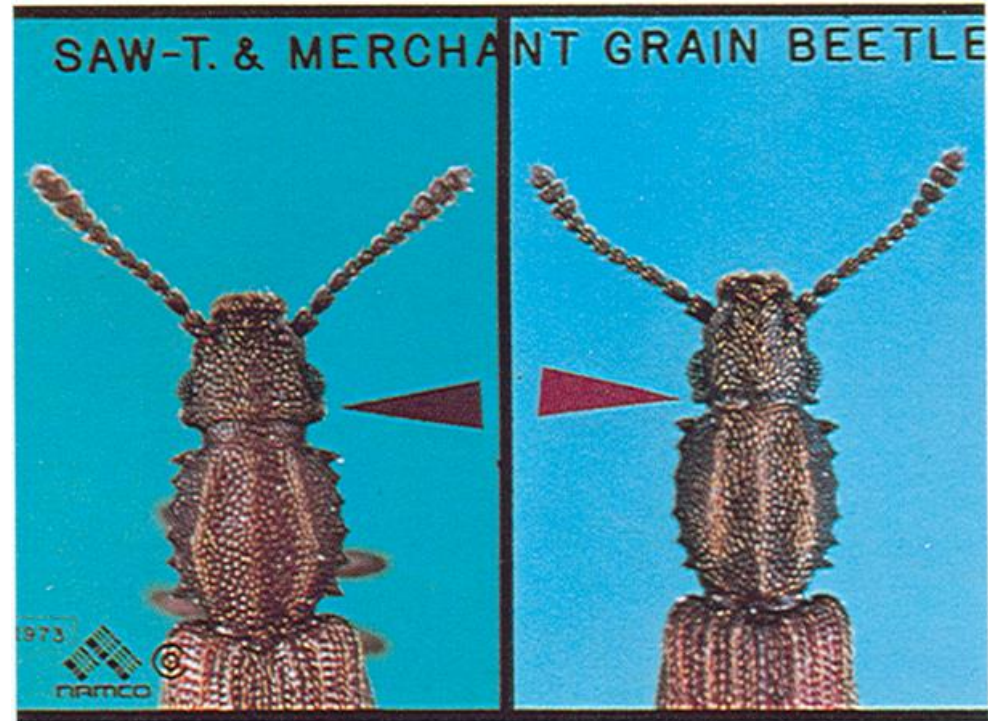
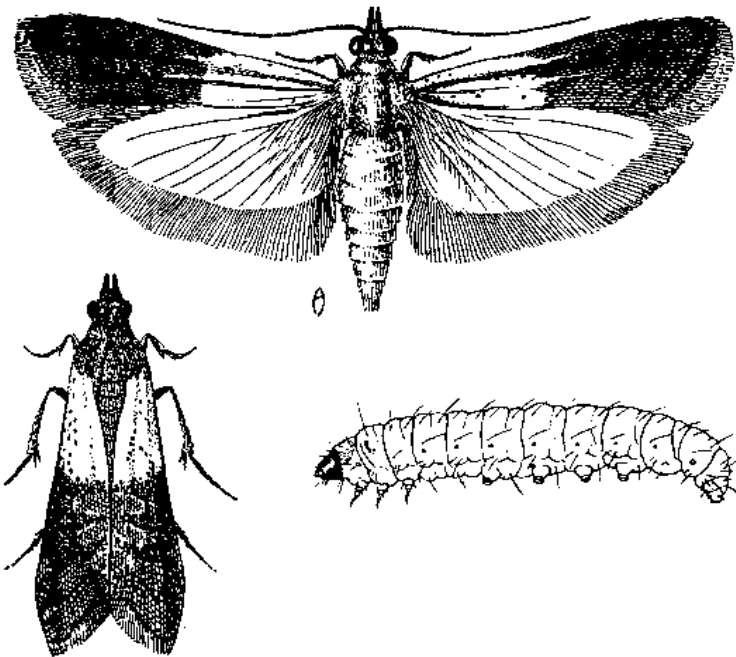


Figure 10-N. Comparison of the sawtoothed grain beetle with the merchant grain beetle (Van Waters and Rogers).

Figure 12.3 Indianmeal moth *Plodia interpunctella*: adult (wingspan about 6 mm) and larva (about 12 mm fully grown).







Why a survey?

1. Reports of exotic/tramp ants
2. Reports of stings
3. Reports of unidentified ants
4. Reports of damage-not carpenter ants
5. Identifications not confirmed
6. Ants in question not collected

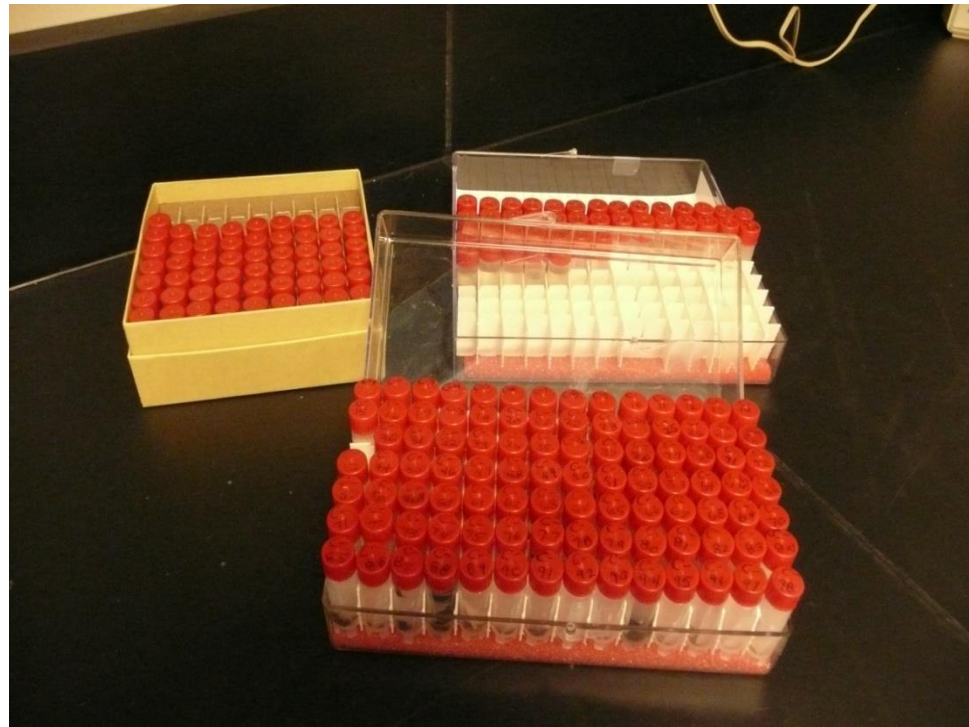
Coordinate activities with Pest Management Companies

Two surveys:

1. Canada 2010-2011
2. Pacific Northwest: Washington and Oregon 2015-2016



- Samples sent; catalogued, identified



Pest Management Companies selected
Geographical representation
Ant collections

VIALS
ENVELOPES
MAILERS

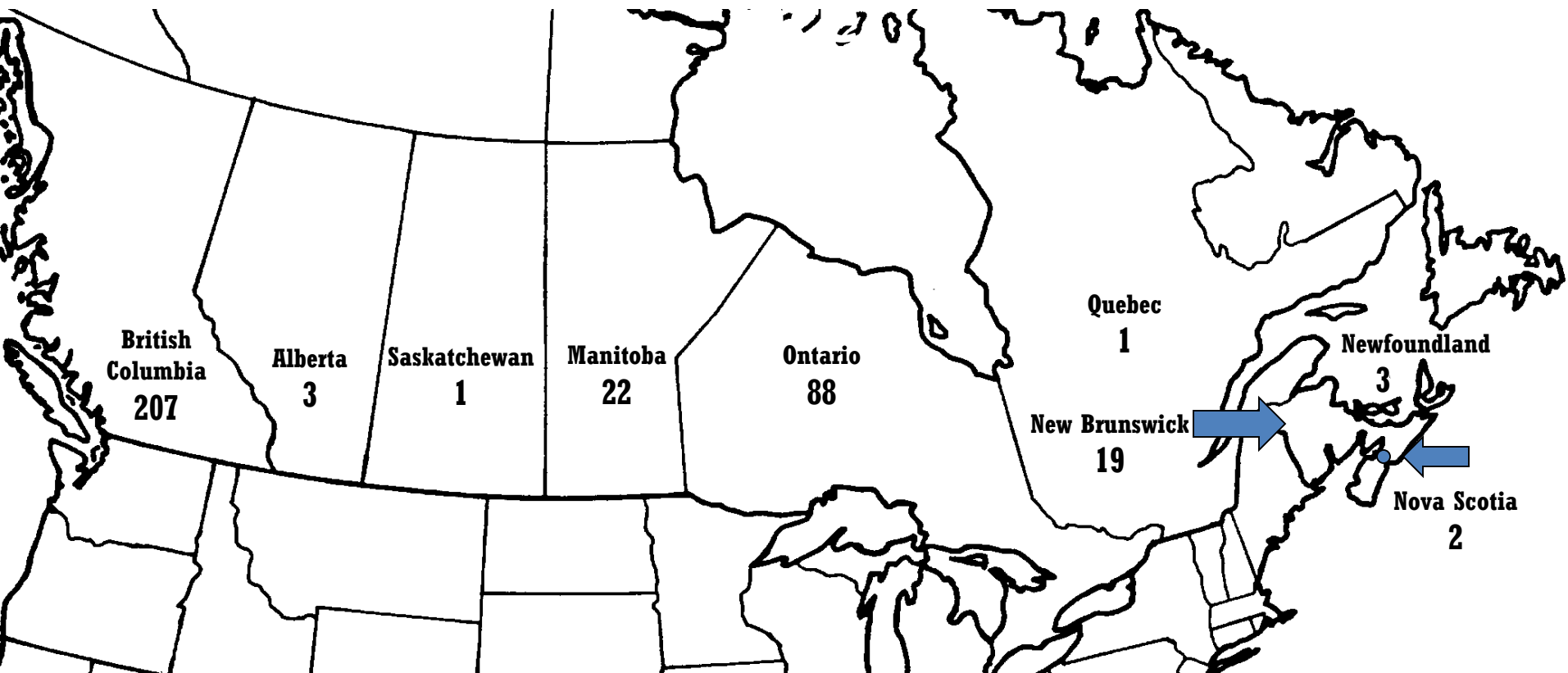


Cascade Pest Control

Whitworth Pest Solutions

Survey of Ants in Canada

332 samples from 9 provinces



Exotic/tramp ants

- Newfoundland (3)

- *Hypoponera*
- *Lasius*
- *Formica*
- 3 species

- Nova Scotia (2)

- *Formica*
- *Lasius*
- 2 species

- New Brunswick (17)

- *Camponotus* (4)
- *Lasius* (2)
- *Formica* (2)
- *Hypoponera*
- *Myrmecocystus*
- 10 species

- Ontario (82)

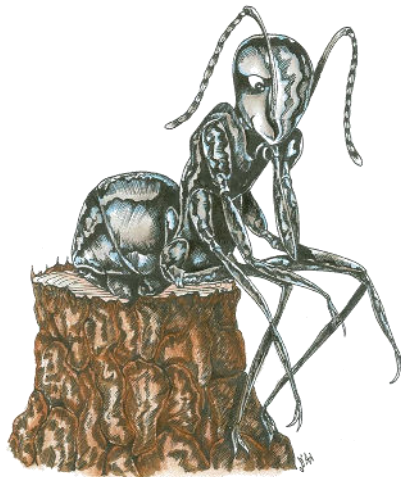
- *Camponotus* (4)
- *Myrmica*
- *Lasius* (3)
- *Prenolepis*
- *Solenopsis*
- *Tetramorium*
- *Formica* (2)
- *Monomorium*
- *Crematogaster*
- *Hypoponera*
- *Acanthomyops*
- *Tapinoma*
- 19 species



- Manitoba (18)
 - *Camponotus* (4)
 - *Lasius* (2)
 - *Formica* (1)
 - [7 species](#)

- Alberta(3)
 - *Solenopsis molesta*
 - *Myrmica incompleta*
 - *Tetramorium*
 - [3 species](#)

- Quebec (1)
 - *Formica*
 - [1 species](#)



- Saskatchewan (1)
 - *Camponotus*
 - [1 species](#)
- British Columbia(205)
 - *Camponotus* (6)
 - *Formica* (15)
 - *Tetramorium*
 - *Lasius* (6)
 - *Manica*
 - *Aphaenogaster*
 - *Myrmica* (4)
 - *Leptothorax* (2)
 - *Tapinoma*
 - *Temnothorax*
 - *Liometopum*
 - *Myrmecocystus*
 - [40 species](#)

Summary of Canadian Survey



Camponotus: 5 out of 9 provinces

7 species (carpenter ants)

Lasius species: 6 out of 9 provinces

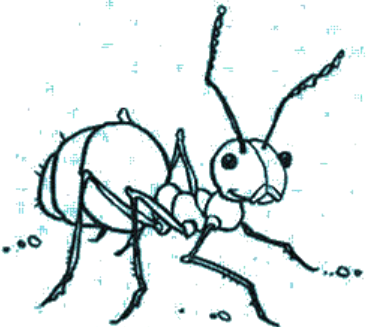
6 species (moisture ants)

Formica species: 7 out of 9 provinces

16 species (thatching ants)

Hypoponera: 3 out of 9 provinces

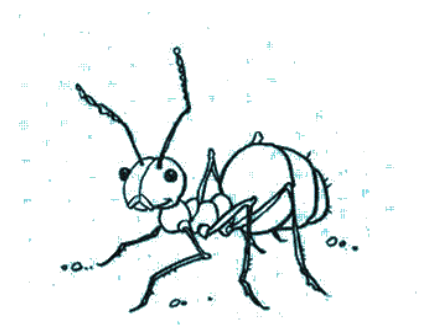
Myrmica ruba: 2 out of 9 provinces



Total number of pest ants in the Pacific Northwest?

Exotic/tramp ants

1590 samples from 2 states



Formicine ants

Carpenter ants

Moisture ants

Thatching/ground nesting ants

Small honey ants

Rover ants

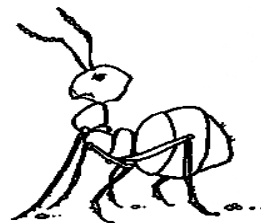
Dolichodorine ants

Odorous house ants

Velvety tree ants

Argentine ants

Ghost ants



Myrmicine ants

Pavement ants

Aphaenogaster ants

European fire ant

Impressive fire ant

Harvester ants

Pharaoh ants

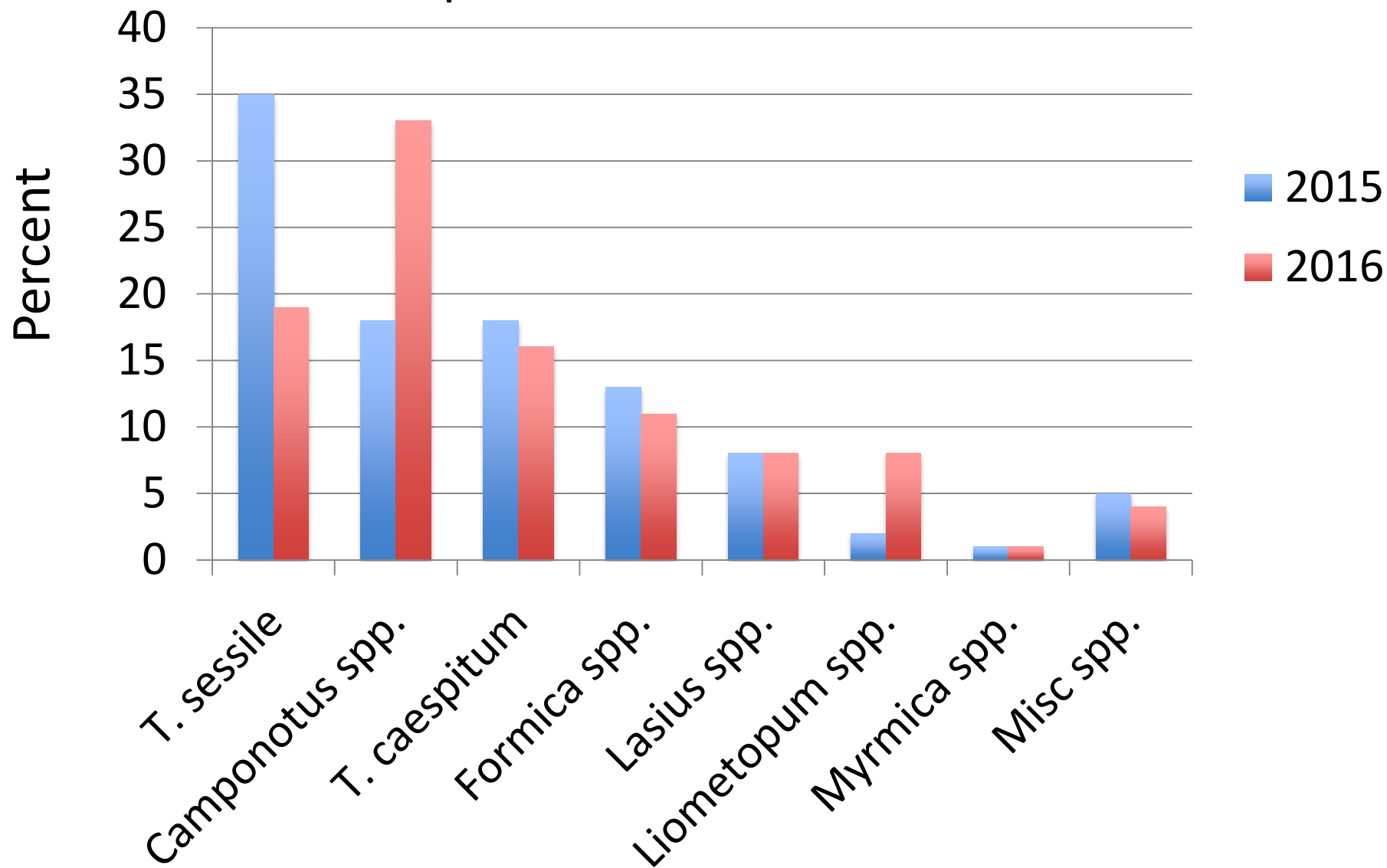
Thief ants

Little Black ants

Ponerine

Collections in Survey 2015 and 2016

Samples: 1590



Ideal features of Tramp Ants

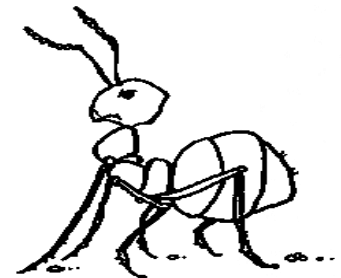
Tramp, introduced, exotic, invasive, alien
(People are clearly the ants' best friends)

Polygyne: many queens

Unicolonial (Non aggressive)

Polydomous: many homes OR not a permanent
home (or nest)

Reproduce by budding



Argentine ants

Linepithema humile

South America: origin

SE United States

Spread West

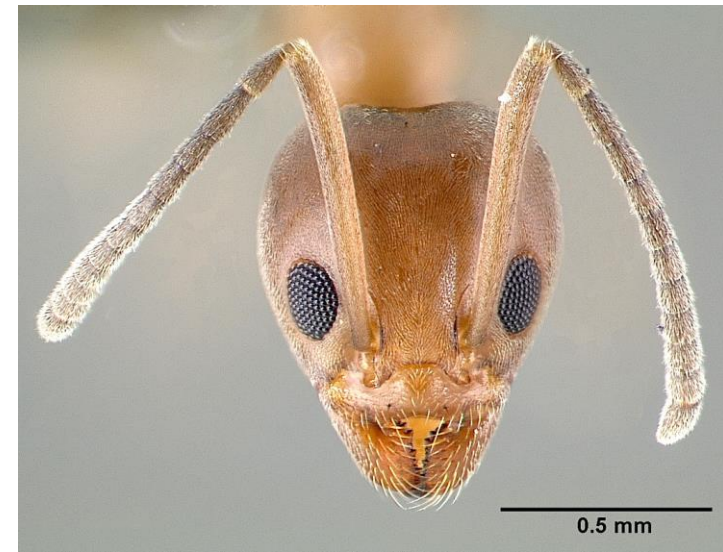
Zoos

Plant Nurseries

Polygyne

Polydomous

Unicolonial



Victoria, B.C.

(Seattle, WA)

Ghost ants

Tapinoma melanocephalum

Polygyne

Polydomous



From tropical Old World

Exotic throughout

New World tropics

Portland, OR

Seattle, WA

Edmonton, Alberta

Vancouver, BC

Odorous House Ants
Tapinoma sessile

Native
Invasive, Tramp

North America



Hawaii

Velvety Tree Ants

Liometopum occidentale

L. luctuosum

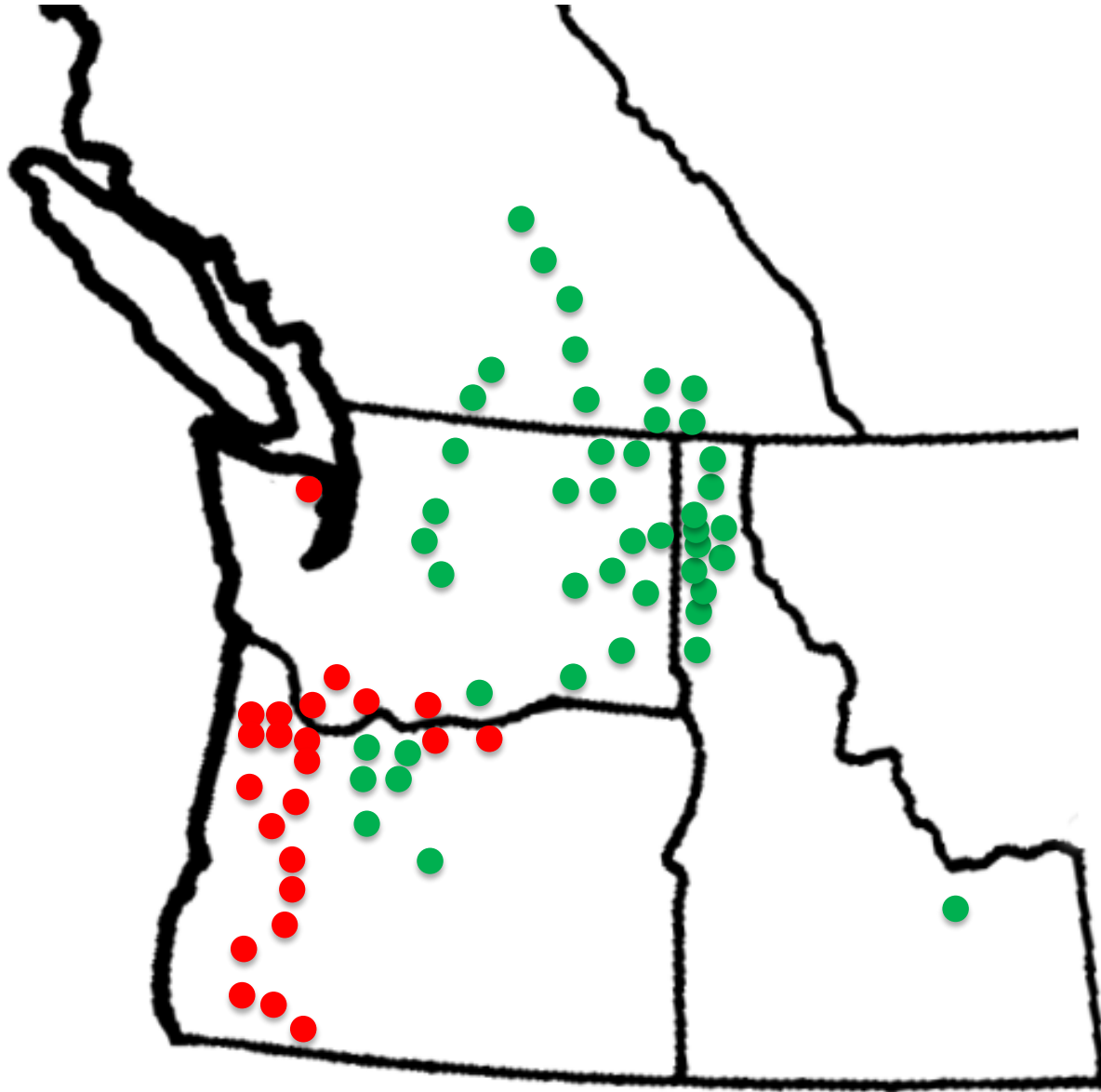
Native

Invasive, Tramp

North America



Velvety tree ants
Liometopum spp.



Dolichodorinae

Argentine ant



Ghost ant



Exotic; tramp

Odorous house ant



Velvety tree ant



Native

Red Imported Fire Ant *Solenopsis invicta*

South America

Southern US,
Caribbean & Australia

Polygyne colonies

Sting produces pustule



Little Fire Ants

Wasmannia auropunctata

South and

Central America

Very small (1.5 mm)

Very annoying sting

Polygyne colonies

Serious ecological pest



Emphasis: LITTLE

European Red Fire Ant (Ruby Ant)

Myrmica rubra

Native: Europe

Tramp: Eastern US and Canada



New England states, SE Canada

Seattle, Vancouver and Victoria, British Columbia



East Coast in 1908

1986 confirmed as

M. rubra

Spreading: 2002 and

2004

European Red Fire Ant (Ruby Ant)

Myrmica rubra

Habitat: wet areas

Aggressive stinging ant



Another *Myrmica*

???



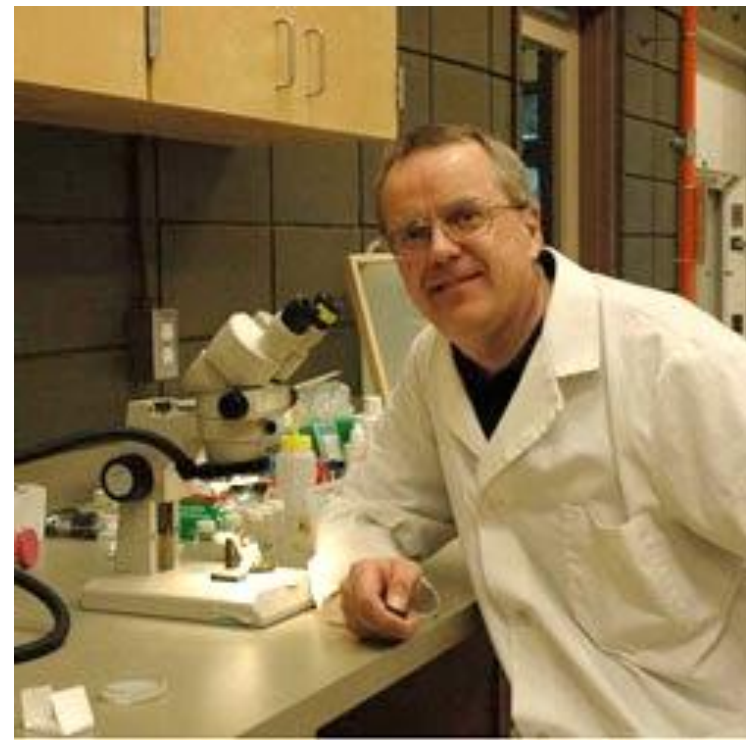
European Fire Ant
Myrmica rubra

Impressive Fire ant
Myrmica specioses

Dr. Robert J. Higgins
Thompson Rivers University
Kamloops, BC

Ecologist
Ant Specialist/Taxonomist

Movement: landscaping materials, soil,
potted plants



Identified *Myrmica speciodes* in our area

Study infestation of *Myrmica rubra* in British Columbia

Pharoah Ant

Monomorium pharaonis

Africa

Urban areas

worldwide

Polygyne colonies



Pavement Ant
Tetramorium caespitum
Tetramorium spp. E

European origin (?)

Temperate ant

Sting

Rocks, concrete, patios,
sidewalks, driveways



Myrmicinae

Red imported fire ant



Little Fire ant



European Red Fire ant



Pavement ant



Pharaoh ant



Hypoponera punctissima

Ponerine ant (Subfamily Ponerinae)

Native: Africa or

Central Asia

World wide



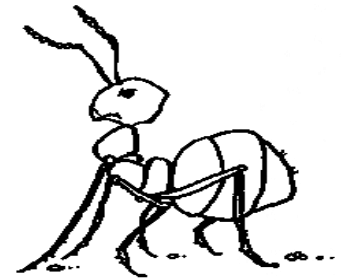
Ideal features of Tramp Ants

Polygyne: many queens

Unicolonial: (Non aggressive)

Polydomous: many homes OR not a permanent home (or nest)

Reproduce by budding: as opposed to mating flights



With ant species: Identification is important
17,000 species

Imperative to know if the species is native or tramp

Assistance:
pest management
professionals

