NEWSLETTER

Volume 23:1 Editor: Ian Efford January 2012

SPECIAL EDITION ON ROOT WEEVILS

President's Message

I write this as the temperature reaches 12C and the plants in the garden are not sure whether to sprout or not. Let us hope that the temperature drops soon so that we do not see a large number of plants beginning their spring-time growth and then suffer from a cold snap which would destroy our spring blooming.

We had an excellent Christmas party and Sandra Stevenson should be congratulated for coordinating this event. Many volunteers were involved during the evening and they must all be thanked for their effort. A number of people said that it was one of the best parties that we have had over the years. It was particularly pleasing to see some of the older members, who no longer attend our regular meeting. We all enjoyed their company and I am sure the discussion at some tables was about the early history of the society.

One event that proved to be very exciting and involved everyone was the photo competition run by Sharon Tillie. There were a number of excellent photos of rhododendrons. The winners and runners up are to be congratulated. I asked, at the party, for the winners to send me their photos for publication in the

Coming Events

February 1
Bill Terry: "The Perfect Garden: Plant Hunting in Tibet"

March 7
Geoff Ball: "Milner Gardens and It's Rhodendrons"

May 5
2012 Cowichan Valley Garden Fair and Rhodo Sale – Cowex

The Cowichan Valley Rhododendron Society
A Chapter of the American Rhododendron Society
P.O. Box 904, Duncan, British Columbia, V9L 3Y3 http://cowichan.rhodos.ca

newsletter. I have not receive one photo so, please treat this as a reminder and send them for the next edition. Thanks Sharon!

Our next meeting is to be a joint event with the Cowichan Valley Garden Club because the speaker, Bill Terry, will be speaking on his experiences seeking blue poppies in the Himalayas. He will also tell us about other plants, including rhododendrons, that he saw. Bill is an excellent speaker and should attract a large audience so be early!

Finally, the society is expected to provide all members with a copy of the by-laws when they join. We do not do this as the document is long and rather boring. To comply with regulations, however, it has been made available to you on our website.

I wish you all a Happy and Prosperous New Year with an amazing display of rhododendrons in all your gardens.

Ian E. Efford

From the Editor

As we do not have meetings in January, the newsletter prints a special edition this month which covers a single subject in more detail. The last two January editions contained a report on *Phytophora* and an account of the Rhododendron Species Foundation. This edition deals with, root weevils, a pest that can be found in most of our gardens. I have well over 100 rhododendrons and azaleas and in about five there are signs of badly damaged leaves caused by root weevil adults munching the edges of the leaves [see the photo on the first page]. These plants are all under large Douglas fir trees and the problem does not seem to have spread to other areas of the garden. The leaf damage is not so serious that the plant is killed although, as the plants are small, development appears to be stunted. The most serious problem, however, is not leaf damage but the ringing of the stem below the surface of the ground by the feeding of weevil larvae. These plants will be killed unless I eliminate the problem.

This edition provides an overview of the life history of the weevils and different ideas that can be used to try and control the population without the use of insecticides.

I have also included an interesting article about a new pest copied from the Mount Arrowsmith society's newsletter, The Rhodovine, and one about rhododendrons themselves becoming a serious economic pest!

Ian E. Efford
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Root Weevil Control on Rhododendrons

Root weevils are the most important pests of rhododendrons and azaleas in the Pacific Northwest. About a dozen kinds of root weevils attack these plants, but usually only five of them are of any significance. These are the obscure root weevil, S*ciopithes obscures*, black vine weevil, *Otiorhynchus sulcatus,* woods weevil, *Nemocestes incomptus, Dyslobus* spp. (no common name), and the clay-colored weevil, *Otiorhynchus singularis*. The first three are probably the most important.

Damage
Although the larvae of several of these weevils do feed on the roots of many ornamentals, this type of damage usually is serious only in potted nursery stock or in very sandy soil. In the landscape environment, adults cause objectionable damage, consisting of mild-to-severe notching of new leaves, depending on species or variety of plant.

Description and Biology

The obscure root weevil is brown, displaying a wavy brown line across the back near the rear. It is about 5 to 7 millimeters long **(1/4** inch). The black vine weevil is about 9 millimeters long (2/5 inch), black or brownish black, often with small flecks of yellow or white. The clay-colored weevil is similar but lighter in color and smaller. The woods weevil is light to dark brown with gray spots on its back. It is about 5 to 7 millimeters long (1/4 inch). *Dyslobus* are grayish black weevils ranging from 7 to 10 millimeters long (1/4–2/5 inch).

Larvae of all species of root weevils are very similar in appearance. They are legless white grubs with brown heads. The pupa, white in color, is about the same size as the adult. It is very soft and has the outline of the parts of the adult weevil.

Black vine weevil adult. (Photographer unknown)

The life history is similar for all species. Weevils overwinter as adults (inactive during cold weather) or as larvae in the soil. In late May and June *Otiorhynchus* larvae change to pupae, which are inactive and do not feed. Transformation to the adult stage occurs in June and July. Adults feed on plant foliage and begin to lay eggs 3 to 4 weeks after emergence. Obscure root weevil adults emerge beginning in August and are more numerous from August to October. As larvae emerge from the eggs, they burrow into the soil to feed on roots.

Woods weevil has a life history very similar to the other root weevils except the different stages of growth overlap. It is possible to find adults, eggs, larvae, and pupae all at one time in one location; however, a major peak in adult numbers occurs in late autumn.

Root weevil larvae. (Antonelli photo)

Root weevils feed and develop on a wide variety of plants. Weedy fields, woodlands, and fencerows (especially salal or huckleberry thickets), all serve as sources of infestation for adjacent rhododendron plantings. Because these weevils cannot fly, they may require several years to spread entirely across a large planting from an outside source or from an infestedplant brought into a clean planting.

Biological Control

Various insect killing nematodes are available for control of immature root weevils as a soil drench. Limited data relative to the success of this technique is available; however, it is available for your use should you want to try it. They are best used when soil temperatures are 52°F or above (usually late summer to early fall). Also nematodes should be applied to soil previously saturated with water and should never be applied in direct sunlight, as UV light kills them quickly.

Chemical control

At the moment, there are no insecticides registered for general control of larval root weevils in a non-commercial garden setting in BC. {Ed. This paragraph has been changed from the original text]

An example of damage caused by the weevil larvae. Note female adult on stem.

Mechanical Control

Apply bands of sticky material to the trunk of the shrub to keep weevils down. Weevils are night feeders. They generally move to the trunk, or any other access to the foliage, the following evening. If a sticky band is present, they either will not cross it or may become trapped in it. This technique is less effective where taller plants overhang the rhododendrons. Indications are that prolonged use of this material on bare bark may be somewhat damaging. Snugly fitting a strip of polyethylene (Visqueen) around the trunk and applying the sticky material to the strip can avoid potential problems.

Cultural control

Recent research by WSU entomologists has shown some species and hybrid rhododendrons are less susceptible to adultweevil feeding than others. The following is a list of some rhododendron species and hybrids that are highly to moderately resistant. In most home landscapes, hybrids are more common than species. Unfortunately, hybrids are generally less resistant than species rhododendrons. Dark red flowered hybrid or species rhododendrons are generally susceptible.

This article was published by A.L. Antonelli, Ph.D., Washington State University Extension entomologist, WSU Puyallup, and R.L. Campbell, Ph.D., WSU Research entomologist, retired, College of Agricultural, Human, and Natural Resource Sciences, Washington State University Extension Department Extension Bulletin 0970E, 2007.

It has been reproduced with permission of Dr. Art Antonelli and has been modified in the section on chemical control to reflect the state of the regulations in British Columbia. Only one of the photos are from the original article.

Adult root weevil damage to foliage. (Antonelli photo)

SPECIES RHODODENDRONS

SHOWING RESISTANCE TO FEEDING BY ADULT ROOT WEEVIL

SPECIES	SERIES	COLOUR	RATING *
heliolepis	Heliolepis	white, rose	100
impeditum	Lapponicum	purplish blue	100
scintillans	Lapponicum	purplish blue	100
burmanicum	Maddenii	yellow to greenish	100
dauricum	Dauricum	lavender-rose	97
intricatum	Lapponicum	mauve	97
minus	Carolinianum	rose, white	93
desquamatum	Heliolepis	rose, violet	93
ferrugineum	Ferrugineum	rose, white	93
hemsleyanum	Fortunei	white	93
cuneatum	Lapponicum	rose	90
fastigiatum	Lapponicum	lilac, purple	90
yakusimanum	Ponticum	white, rose	90
ungernii	Ponticum	white, pale pink	83
rubiginosum	Heliolepis	pink, rose	83
irroratum	Irroratum	white, ivory, rose	83
racemosum	Virgatum	white, rose	80
russatum	Lapponicum	blue-purple	80
carolinianum	Carolinianum	pink, mauve, white	80
oreodoxa	Fortunei	rose, white	80
oreotrephes	Triflorum	mauve, purple, rosy	77
vernicosum	Fortunei	red	77
adenophorum	Taliense	white, rose	77
campylogynum	Campylogynum	rose	77
xanthocodon	Cinnaborinum	pink, purple,	77
diaprepes	Fortunei	crimson	73
pubsescens	Scabrifolium	ivory, yellow	73
lepidastylum	Trichocladum	white, pale rose	73
pemokoense	Uniflorum	white, rose	73
arizelum	Falconeri	pale yellow	73
glaucophyllum	Glaucophyllum	lilac-pink	73
decorum	Fortunei	white, yellow, rose,	73
cardiobasis	Fortunei	crimson	73
praestans	Grande	white, rose	73
hippophaeoides	Lapponicum	white, pink,	73
eurysiphon	Thomsonii	chartreuse	73
imperator	Uniflorum	white, rose	70
concatenans	Cinnaborinum	magenta-rose, pink	70
yunnanense	Triflorum	lilac, rose	70
ciliatum	Maddenii	ivory, rose	70
discolor	Fortunei	white, pink	70
davidsonianum	Triflorum	white, pink, rose	*70*

HYBRID RHODODENDRONS

SHOWING RESISTANCE TO FEEDING BY ADULT ROOT WEEVILS

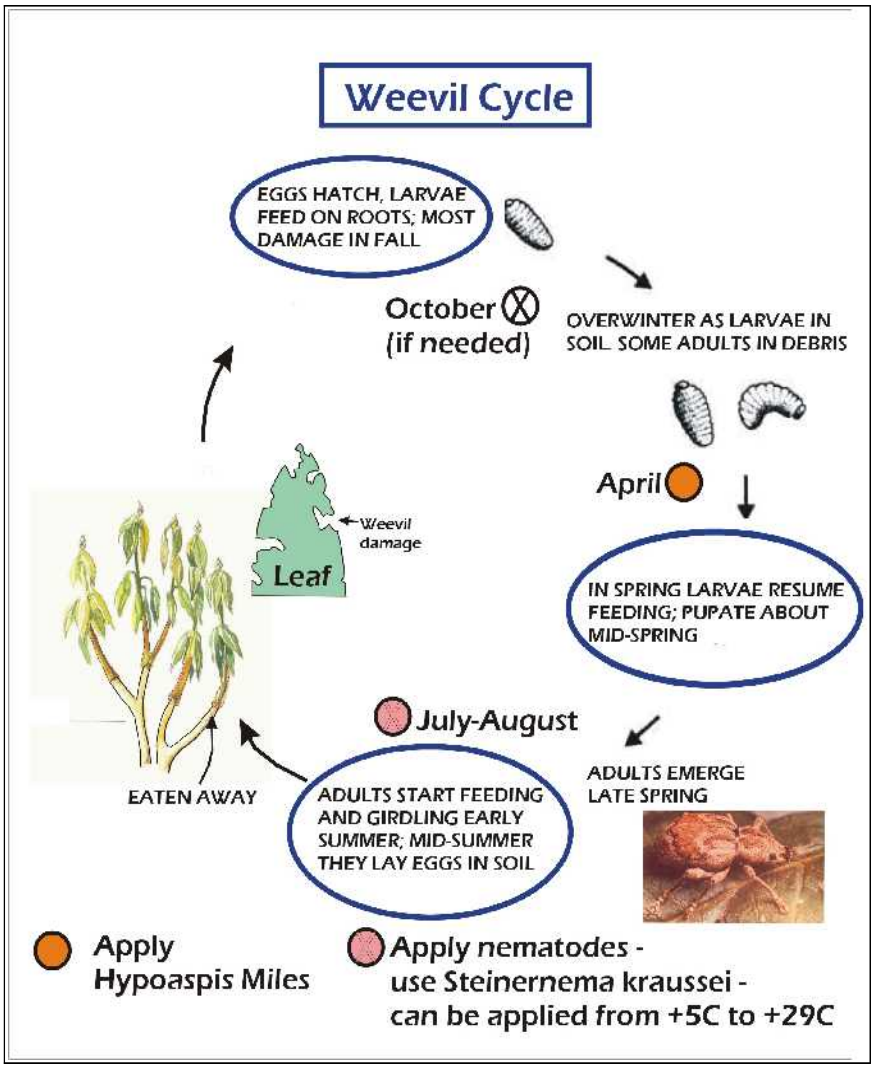
HYBRID	COLOUR	RATING *
P.J. Mezzitt (P.J.M.)	pink	100
Jock	pink	92
Sapphire	blue	90
Rose Elf	white, flushed violet-pink	89
Cilpimense	white	88
Lucky Strike	deep salmon-pink	83
Exbury Naomi	lilac tinged yellow	81
Virginia Richards	Chinese yellow/crimson	81
Cowslip	cream, pink	80
Luscombei	rose-pink	80
Vanessa	soft pink	80
Oceanlake	deep violet-blue	80
Dora Amateis	white, lightly spotted green	79
Crest	yellow	79
Rainbow	carmine-pink	76
Point Defiance	pink	76
Naomi	pink	76
Pilgrim	rich pink	76
Letty Edwards	yellow	76
Odee Wright	yellow	76
Moonstone	yellow	73
Lady Clementine Mitford	pink	72
Candi	bright rose	72
Graf Zeppelin	bright pink	71
Snow Lady	pure white	71
Loderi Pink Diamond	delicate pink	71
Faggetter's Favourite	cream with pink	70

*The higher the number, the less feeding is expected. A 100 rating indicates complete resistance

Doug Justice's comments on the control of the Black Vine Weevil [*Otiorhynchus sulcatus*]

- regular, repeated picking and disposing of adults in the late evening;
- boards or up-turned pots, which the weevils will shelter under, can be carefully inspected during the day and any weevils present dispatched;
- summertime applications of parasitic nematodes [the soil temperature must be over 12C for the nematodes to be active];
- encouraging ground-feeding birds [keep cats inside];
- using trap crops, such as common primrose, *Primula vulgaris*. The weevils preferentially lay eggs in the trap crop container which can then be discarded.

[Quoted from material distributed at "The Ultimate Rhododendron Conference: UBC Botanical Garden April 2010]



Hypoaspis miles *

Another proposed control is the mite *Hypaspis miles* although there is little information as to whether it is effective in killing the larvae of weevils in the garden.

The mite is used as a control in commercial greenhouse situation and can be purchased on-line but it is quite expensive for an unproved control method. It is a soil-dwelling predatory mite that usually stays in the growing media and can feed on a range of different organisms, including larvae of fungus gnats and shoreflies, nematodes, and pupae of thrips, leafminers and gall midges.

If one was to test this predator against weevils, it should not be distributed around the rhododendrons until the temperature is warm - above 12C and the area should be kept moist after the predator has been distributed.

[* Ed: Abstract from Greenhouse Canada January 2007; The diagram is taken from the Victoria Rhododendron Society newsletter]

New Bug in Town: Lacebugs

Margot Moser, Mount Arrowsmith Rhododendron Society

One of the advantages of gardening in this part of BC's west coast is that many pests rampant on the Lower Mainland have not yet gained a toe hold in our area. In 2001, the BC Ministry of Agriculture confirmed the occurrence of four new insect pests of ornamental plants in BC - Viburnum Leaf Beetle, European Chafer, Hemerocallis Gall Midge and Andromeda Lacebug. See: http://www.agf.gov.bc.ca Perhaps it is only a matter of time until these nasties make themselves known in our part of Vancouver Island, but so far, there has been little indication of their presence. Therefore, it was with great dismay recently that I spotted Andromeda Lacebug on a friend's *Pieris japonica* (Lily-of-the-Valley shrub – once known as *Andromeda*). Unfortunately the Andromeda Lacebug is also known to feed on *Osmanthus* as well as some rhododendrons and azaleas.

Once you have dealt with this lacebug, it is easy to recognize the damage it inflicts. First you will notice a yellow-speckled or mottled appearance on the upper surfaces of leaves and on the underside, small black spots along with adult bugs and nymphs. Both adults and nymphs suck plant juices from the leaves,

Yellow speckled foliage

Andromeda Lacebug (Stephanitis takeyai)

creating the yellow stippling and leaving black fecal material.

This species overwinters as eggs in plant foliage and produces 2 to 3 generations per year. Plant health appears largely unaffected by feeding damage but the cosmetic damage persists throughout the season. *Pieris japonica* growing in sunny locations is much more vulnerable to attack than those in shade. *Pieris floribunda* (Mountain Pieris) and *Pieris formosa* (Himalayan Pieris) are resistant, even in sun.

So, what can we do to prevent or deal with this pest? To be proactive, consider moving *Pieris japonica* growing in sunny locations to shady spots. Luckily, pieris are among the easier-to move shrubs, even when quite large.

Encouraging beneficial insects in your garden is always a good idea. Ladybugs, lacewings and parasitic wasps love to feed on critters like lacebugs.

If this pest does show up on your plants, hose them off frequently or use an insecticide registered for lacebug control - although few insecticides are left to use in BC - and a last resort. If you spray, do so when nymphs are present on the underside of leaves. Keep in mind that once your plants are infested with lacebugs, it's next to impossible to completely eradicate them. You may want to just sacrifice the pieris to keep them from infecting your rhododendrons.

[Quoted from *The Rhodovine* December 2011]

Scotland Declares Rhododendron War

Every last specimen of *Rhododendron ponticum* in Scotland's national forests is being rooted out in a major fifteen-year programme aimed at bringing one of the country's most rampant and troublesome weeds under control.

The Forestry Commission Scotland describes *R. ponticum* as 'one of Scotland's most unwelcome invasive species', and has set aside £15 million to rid the nation's forests of the weed.

'It suffocates habitats, hampers biodiversity, and as if that wasn't bad enough, it harbours tree-killing Phytophthora species,' said Commission ecologist Richard Thompson. 'Getting rid of it would be a real shot in the arm for Scotland's environment and for forestry.'

It's thought about 6,500 hectares (16,000 acres) of the Commission's 660,000 ha (2,500 square miles) estate is currently infested with *R. ponticum*, decimating local populations of rare plants, particularly liverworts and lichens. It's hoped the eradication of the weed from the National Forest estate will also help limit the growing number of Scottish cases of the highly virulent pathogen Phytophthora ramorum, devastating to commercial forests and often spread by infected *R. ponticum* growing nearby.

Detailed surveys are currently under way to determine exactly where the rhododendrons are growing before work begins on systematically removing them. The first phase of work has already started on eradicating plants from the most badly-infested areas on the west coast, including Lochaber and West Argyll.

[Quoted from *The Garden*, publication of the Royal Horticultural Society September 2011]

2011-2012
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COWICHAN VALLEY RHODODENDRON SOCIETY

Programme for 2011-2012

7:30 pm at St John's Anglican Church

163 First St, Duncan, BC V9L 1R1

(1St and Jubilee)

September 7	Siggi Kemmler and Ken Webb "Rhododendron Nurseries in North Germany"
October 5	Bill McMillan "Selected English Gardens and Birds"
November 2	Gerry Gibbens "The Rhododendrons at VanDusen Gardens"
December 7	Christmas Party
February 1	Bill Terry "The Perfect Garden: Plant Hunting in Tibet" Co-Sponsored with the Cowichan Valley Garden Club
March 7	Geoff Ball "Milner Garden and its Rhododendrons"
March 20	District 1 Executive Meeting
April 4	Bill Bischoff "A Prize Winning Garden in the Making"
May 2	Dennis Bottemiller, Rhododendron Species Botanic Garden "Variables in Propagation of Rhododendron Cuttings"
May 5	Garden Fair and Rhododendron Sale
June 16	Summer Picnic