VANCOUVER WEEKLY
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Japanese beetlemania may soon be sweeping Vancouver

JUNE 29, 2018 *by* **MARGUERITE DU PLESSIS**

With dreams of strawberry fields forever, the tiny invasive species known as Popilia japonica first found its way to North America nearly 100 years ago, fittingly landing in the garden state of New Jersey, and they have been slowly expanding their range westward ever since. In May of 2018, the City of Vancouver advised that the insects had arrived, with the Canadian Food Inspection Agency (CFIA) outlining an infested zone around False Creek and restricting the movement of plants and soils in that area.

Native to the northern islands of Honshu and Hokkaido, the fully-grown Japanese beetle measures only one centimetre in length. It features a coppery coloured shell with shades of metallic green, and can be also distinguished by white markings on their sides. Back where they once belonged, these diminutive insects caused little trouble, as numerous natural predators kept their numbers down. Additionally, its preferred food sources were not overly abundant and the temperature in its home latitudes was relatively cool, which together limited the beetles' reproductive cycle to two-year intervals.

However, having found an appealing habitat in North America, ideal food sources, an inviting climate, and a lack of predators, these beetles were able to increase their reproduction rate to a one-year cycle and have since become endemic in the US east coast.

According to the Canadian Food Inspection Agency (CFIA), the Japanese beetle has a taste for landscape plants, ornamental plants, fruit and vegetable gardens, nurseries, orchards, and agricultural crops. As such, these beetles pose a genuine risk not only to parks and gardens, but to agricultural production as well. Hoping to avoid any potential damage, strict controls have been in place for several decades, with the pest only making limited appearances on the West Coast in that time.

The Japanese beetle, however, finally seems poised to make its breakthrough into BC.

A Day in the Life

A subterranean pest for much of its life cycle, Popillia japonica's eggs are laid and hatched below the soil where the larva feeds on plant roots in its early stages in life. This introduces an additional layer of difficulty to manage the pest, as it is hard to reach them underground. In the adult stage, it emerges from the soil and starts feeding on the foliage of the plants, and then spreads its wings in search of additional food sources.

The effects of their voracious consumption are leaves chewed through to look like netting and grass fields scattered with clusters of brown. Aside from being an unpleasant sight to the eye, economically it can impact agricultural planning as well.

Free as a Bird

"If nothing was done to control existing sites, then within two years it would cover greater Vancouver," noted Dr. Murray Isman, Professor of applied biology for the faculty of land and food systems at UBC. "It can fly, so it moves quickly. It's very prolific, and feeds on a variable range of plant sources, so it can become well established very quickly."

Help!

The important thing now is to get the infestation under control before too much damage is done. The CFIA is going for a chemical approach, using an insecticide called Acelepryn to tackle the problem areas for spot eradication, an approach which has been successful in the past with other infestations such the Gypsy Moth.

"It is the best choice because it has a good use history in Canada for other subterranean species," advised Dr. Isman. "It is an insecticide that is taken up by the roots and transferred to the area of the plant where the beetles are actually feeding, without having to spray it onto a crop. This reduces the bystander exposure. They need to balance a product that will do the job versus limiting harm to other species. However, it does not harm the plant."

The topic of chemical insecticides raises the question regarding natural alternatives. For his part, Dr. Isman just wrapped up 35 years of research studying botanical insecticides. He indicated that there are some natural insecticide products based on plant and mineral oils coming through the approval pipeline in Canada, but a balance is required to address the urgency of this situation.

If you've got trouble

But how urgent is this beetle outbreak? Does the first sighting of a single Japanese beetle prompt teams of eradicators to spread out across the city? In reality, the response is more measured, with officials monitoring the beetle population using bucket traps, and they have been doing this for a few years. The idea is to look at how many beetles are trapped per week and compare the results over time.

In a quarantine situation, officials expect to find only a few beetles in the traps, but when upgrading to an active monitoring situation, the number of deployed traps and observations increases in order to better assess how quickly the population might be growing. Once 20-40 beetles start to appear in traps regularly, it is considered a problem that needs intervention.

Come and get it

In order to attract the beetles to the traps in the first place, a chemical cocktail composed of the beetles' favourite things is concocted. A combination of pheromones (either R-Japonilure or a Furanone), and a floral mix of Eugenol, Geraniol, and 2-phenyl Ethyl Propionate (PEP) is mixed Eugenol is derived clove oil, geraniol comes from lemongrass oil, and PEP is a constituent of peanut oil.

Though the Japanese Beetle does not pose any direct risk to human health, the chemicals used to control a potential outbreak are the more likely source of concern. The City of Vancouver approaches pesticide use carefully, but its application may be required in order to minimize the risk of a species that has already caused devastating damage on the east coast of North America.

"There are one of two consequences for Vancouver, if we uphold the cosmetic use of pesticides it means we have to get used to our trees, shrubs and parks getting heavily damaged by this insect. Or conversely we will have to get used to the idea of using insecticides," said Dr. Isman.

As far as Vancouver officials and BC gardeners are concerned, it is hoped that as June light turns to moonlight, these beetles will be on their way.

NORAHG Response

RESIDENTS OF BC'S LOWER MAINLAND HAD BETTER GET USED TO LIVING WITH GARBAGE DUMP GREEN SPACES UNLESS CONVENTIONAL INSECT CONTROL PRODUCTS ARE USED — NOW !

In a nursery located in Riverton, New Jersey, the Japanese Beetle was first discovered in 1916. It has been speculated that the beetle had entered the United States in a shipment of iris bulbs prior to 1912, when inspections of commodities entering the country began. By 1921, the Japanese Beetle grubs were first definitely observed injuring grass roots on putting greens at the Riverton Country Club in New Jersey.

As the name suggests, the Japanese Beetle is native to Japan. It is NOT very destructive in Japan, where natural enemies control it. In North America, it is a serious pest of grapes, rose bushes, and turfgrasses. For decades now, it has destroyed countless numbers of golf course putting greens and fairways.

The larvae of the Japanese Beetle, commonly referred to as White Grubs, are the real destructive scourge. In the larval stage, this insect feeds mainly on the fibrous roots, leaving behind brown patches of dead grass and dead plants.

By 2001, this insect had spread across most of the Eastern U.S., except for Florida. And by 2018, it reached Vancouver, British Columbia.

Originally, the physical control to prevent the spread of the Japanese Beetle adults required extraordinary measures. It had been determined that the adults were attaching themselves to passing motor vehicles, which facilitated their spread from one location to the next. In order to limit the number of insects present along roadsides, wild shrubs and trash were burned wherever these insects were located. However, golf facilities were

understandably NOT prepared to set fire to their putting greens to get rid of the Japanese Beetle.

For chemical White Grub control, the soil injection of Carbon Disulfide was suggested for the first time on turf as early as 1921. It was foul smelling and explosive. Carbon Disulfide was a concocted with a mixture of soap and water. It was poured (i.e. injected) directly into each White Grub burrow with a funnel, and each hole was plugged with soil to prevent the escape of fumes. This method provided satisfactory control of all White Grub species, but the method of application was neither simple nor practical, and Carbon Disulfide provided none of the desired residual long-term effect that would come with later products, like Lead Arsenate, DDT, and other insecticides.

As of 1927, experiments were conducted with products for « *poisoning the soil* » (i.e. providing long-term insect control). Experiments showed that White Grubs could be successfully controlled with either Lead Arsenate or Barium Silico Fluoride. At this point in time, the barium product had only been tested for two years. In the case of Lead Arsenate, the turf areas treated were « *poisoned* » enough to remain grub-proof for a period of five years.

DDT completely changed the landscape for turf insect control. For instance, DDT soil treatments were developed for the control of the rampaging Japanese Beetle grubs.

In 1946, the Green Section of the United States Golf Association (USGA) issued a report concerning a promising new insecticide. The following is an excerpt from that report. For the purpose of clarity, some of the grammar has been modified.

« *DDT is a very promising turf insecticide. But before general recommendations can be made, much work remains to be done. It has controlled Japanese Beetles (adult and grub), Leafhoppers, Chinch Bugs, Sod Webworms, Mole Crickets, Cutworms, and several species of Ants.* [...] *DDT is a slow-acting but persistent insecticide, giving protection over a greater period of time than the quicker acting types.* [...] *DDT has been found more effective on the third-instar larvae of the Japanese Beetle than the 1,000-pound (per acre) rate of lead arsenate. This chemical DOES NOT seem to have any effect on Earthworms.* »

Although DDT has the reputation of having been a carcinogen, this fact is known to be false. Actually, DDT was so safe you could eat it. In a study reported in 1969, people did exactly that for two years. After 1972, DDT was replaced by parathion, which was truly an unsafe product. In the

months following the removal of DDT, more than one hundred farm workers passed away because they were unaccustomed to handling really toxic pest control products like parathion.

With the reckless and unilateral removal of DDT, and with parathion as an undesirable alternative, chlordane was next introduced. However, it proved to be unsatisfactory as well. In 1972, the Japanese Beetle was confirmed to be resistant to chlordane. Since this time, the market has witnessed more modern and more satisfactory insect control products used to control Japanese Beetle grubs.

Unfortunately, in the 2000s, conventional insect control products have become the object of reckless and arbitrary prohibitions. Residents had better get used to destroyed and ravaged lawns ! With arbitrary pesticide bans, such as the one recklessly imposed by BC's lower mainland municipalities, green spaces have already become PEST INFESTED AND DANGEROUS GARBAGE DUMPS.

For more information, please explore the following links ...

√ -- Failure Of Organic Pesticide-Free Maintenance -- Tens Of Thousands Of Destroyed & Ravaged Lawns Because Of Prohibition -- British Columbia's Municipal Garbage Dump Green Spaces -- Nematode Insecticides Do Not Work -- European Chafer Insects -- BLOG

http://pesticidetruths.com/2015/11/24/failure-of-organic-pesticide-free-maintenance-tens-of-thousands-of-destroyed-ravaged-lawns-because-of-prohibition-british-columbias-municipal-garbage-dump-green-spaces-n/

√ -- Carnage Leading To Garbage Dump Green Spaces -- Anti-Pesticide Prohibition Destroyed Public & Residential Green Spaces By Turning Them Into Garbage Dumps -- WEB-PAGE

http://pesticidetruths.com/toc/carnage-leading-to-garbage-dumps/

√ -- Carnage Inflicted By Garbage Dump Green Spaces -- Pesticide Bans Have Never Made Our Green Spaces Look So #@!!% Ugly -- Photo Gallery -- WEB-PAGE

http://pesticidetruths.com/toc/carnage-leading-to-garbage-dump-green-spaces-photo-gallery/

√ -- Emerald Ash Borer -- Wisconsin Municipalities -- Safe & Effective Insecticide Treatments Versus Chain Saws -- Ontario Pesticide Ban Failure -- BLOG

http://pesticidetruths.com/2014/01/19/emerald-ash-borer-wisconsin-municipalities-safe-effective-insecticide-treatments-versus-chain-saws-2014-01-05/

Residents of BC's lower mainland municipalities had better get used to living with GARBAGE DUMP GREEN SPACES, since it is IMPOSSIBLE to adequately control damaging pests, like Japanese Beetle, without the use of conventional insect control products.

Recommending entomo-pathogenic nematodes for controlling damaging White Grubs is mis-guided and wrong ! It would be better to do nothing rather than use these nematodes. Entomo-pathogenic nematodes are NOT viable, NOT efficacious, NOT practical, and NOT economical as a green alternatives to replace conventional insect control products. Entomo-pathogenic nematodes CANNOT be consistently considered as true alternatives to conventional products, since White Grubs are often only suppressed, and NOT controlled. Laboratory and field tests tend to indicate that the best nematode species are only marginally effective in controlling insect infestations. On the other hand, conventional insect control products fully and effectively control White Grubs. In fact, conventional insect control products, such as Merit (imidacloprid) and Acelepryn, are deemed safer than entomo-pathogenic nematodes. NO resident deserves this #@!!% ban nonsense !

For more information, please explore the following link ...

√ -- Acelepryn Insecticide (chlorantraniliprole) -- LABEL

http://pesticidetruths.com/wp-content/uploads/2018/03/Label-Acelepryn-Insecticide-chlorantraniliprole-2015-06-05.pdf

Throughout BC's lower mainland municipalities, home-owners have NO other option than re-sodding their lawns, over and over and over again. In fact, Sod Growers probably represent the only industry that has actually profited from the garbage dump green spaces that have been inflicted by anti-pesticide prohibition. If BC's lower mainland municipalities truly want to save residential lawns from White Grubs, then they should have their local pesticide bans RESCINDED. Across North America, municipal officials are thinking twice about prohibition by looking at the experience of those jurisdictions that have suffered the hardship and stunningly exorbitant costs of this #@!!% nonsense !

For more information, please explore the following links ...

√ -- The Media Library On Nematode Insecticides -- WEB-PAGE

http://pesticidetruths.com/toc/nematode-insecticide-marginally-effective-better-to-do-nothing/

√ -- The Media Library Regarding The Sod Industry -- WEB-PAGE

http://pesticidetruths.com/toc/sod-grower-industry/

√ -- Carnage Created By Stunningly Exorbitant Costs Of Maintenance For Municipalities -- Who Can Afford This #@!!% Ban Nonsense ?!?! -- WEB-PAGE

http://pesticidetruths.com/toc/carnage-leading-to-stunningly-exhorbitant-costs/

√ -- Government Officials Are Thinking Twice Before Banning Pesticides -- White Paper Report On Pesticide Bans -- BLOG

http://pesticidetruths.com/2012/10/31/government-officials-are-thinking-twice-before-banning-pesticides-white-paper-report-on-pesticide-bans-2012-10-30/

NORAHG Response

MUNICIPAL PROHIBITIONS IN BRITISH COLUMBIA ARE DISMAL FAILURES !

A major study of British Columbia's anti-pesticide by-laws has concluded that municipal prohibitions are DISMAL FAILURES. This is because municipal officials are now circumventing their own prohibitions by taking advantage of EXCEPTION STATUSES that they have conveniently inserted in their by-laws. Municipal prohibitions have provided inconsistent and unfair EXCEPTION STATUSES for invasive weeds & destructive insects — for municipal properties and even residential homes — but NOT for lawn care businesses. Consequently, municipal prohibitions have annihilated legitimate & tax-paying businesses that operate in the professional lawn care industry. These businesses CANNOT afford the hardship & the cost of this #@!!% prohibition nonsense ! Once any prohibition is adopted, local businesses are expected to disappear into oblivion within 2 or 3 years, and vast numbers of workers are expected to become unemployed. Additionally, for those residents with the same pest problems on their home properties, they may be shxt-outta-luck relying on ANY exception. Without conventional pest control products, home properties have become pest-infested & dangerous garbage dumps because it is impossible to control invasive weeds & destructive insects by using so-called green alternative pesticides & practices. Municipal prohibitions have led to catastrophic pest carnage for tens of thousands of destroyed & ravaged properties every single year. British Columbia's municipal EXCEPTION STATUSES represent the best examples of the failures, the ridiculousness, and the destructiveness of their anti-pesticide prohibitions. Municipal prohibitions have been disgustingly arbitrary in their flagrant discrimination against professional lawn care businesses & home properties ! In order to be consistent & fair, there should be NO #@!!% EXCEPTION STATUSES whatsoever ! The results of this major study of British Columbia's anti-pesticide by-laws show conclusively that they are DISMAL FAILURES !

For more information, please explore the following links ...

√ -- Municipal Prohibition Failures In British Columbia -- Gibsons -- Golden -- Kamloops -- BLOG

http://pesticidetruths.com/2017/12/24/municipal-prohibition-failures-in-british-columbia-part-6-of-12-gibsons-golden-kamloops-2017-12-24/

√ -- The Media Library Of Municipal Prohibition Failures In British Columbia -- WEB-PAGE

http://pesticidetruths.com/toc/carnage-bc-prohibition-failures-blogs/

WE SPEAK THE WHOLE TRUTH ABOUT PROHIBITIONS FROM AN INDEPENDENT PERSPECTIVE !

We are the National Organization Responding Against HUJE that conspire to destroy the Green space and other industries (NORAHG). As a non-profit and independent organization, we are environmentalists who are dedicated to reporting about truth-challenged pesticide-hating fanatжcs (HUJE) who conspire to destroy businesses that are dependent on the use of safe and effective conventional pest control products. We also report on the work of several highly-rated leading experts who have recognized expertise, training, and background in matters concerning pest control products, and who promote environmental realism and pesticide truths.

Not surprisingly, enviro-fanatжcs have demonstrated that they are incapable of processing overwhelming scientific evidence. Should we trust these fanatжcs, who conveniently ignore scientific evidence, and attempt to impose their politicized-doctrines and twisted life-style choices against our society ?!?!

NORAHG was the brain-child of Mr William H Gathercole and his colleagues in 1991. Mr Gathercole is now retired, although his name continues to appear as founder. We dare to defy the pesticide-hating fanatжcs by exploring the whole truth from an independent perspective on The Pesticide Truths Web-Site ... http://pesticidetruths.com/ If you wish to receive free reports on issues that concern you, please contact us at ... force.of.de.nature@gmail.com WILLIAM H GATHERCOLE AND NORAH G