Development of bilingual material to facilitate early detection and control of the azalea lace bug

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Azalea Lace Bug
Biology and management in commercial nurseries and landscapes

Robin Rosetta — EM 9066 • July 2013

Azalea lace bug (*Stephanitis pyrioides*, Figure 1) is a damaging pest of azaleas belonging to the family of insects called Tingidae or lace bugs. This introduced pest, native to Japan, was first detected in New Jersey in 1915. It spread quickly to other mid-Atlantic and southeastern states. *S. pyrioides* was confirmed in 2008 in Washington State and 2009 in Oregon. Damage from this new introduction was noticed first on evergreen azalea plants in landscapes.

Figure 1. Azalea lace bug adult with light and dark patterns on its wings.

Description and life cycle

Azalea lace bug overwinters in the egg stage. Eggs are generally laid along the midrib on the underside of leaves and covered with dark brown excrement (Figure 2, page 2). Adults can lay 300 eggs, at the rate of 5 to 7 eggs per day.

In the Willamette Valley, azalea lace bugs emerge from their eggs beginning in mid-May to early June. There are five instars, or stages, of the immature bugs. Complete development from egg to adult ranges from 22 days at 30°C (86°F) to 97 days at 15°C (59°F). Development is not successful at 33°C (91.4°F). Two to four generations per year have been reported, based on geographic location and climate. It is not yet known how many generations occur in the Pacific Northwest (PNW).

Upon emergence, the immature lace bugs, or nymphs, are nearly translucent (Figure 3, page 2). They quickly change to a light yellowish-green. As they age, they darken, particularly on the abdomen, and become spiny (Figure 4, page 2). Wing buds can be seen on the fourth and fifth instar nymphs.

Adult lace bugs are around ¼ inch long. Their wings are covered with a network of veins and lightly colored with white and black patterns creating a windowpane effect (Figure 1). The head capsule is round and bulbous as seen from the side.

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English version fact sheet available as a free download. This fact sheet complements the poster, providing more detailed text about the insect, its origin, lifecycle and management options.

Azalea Lace Bug
Chinche de encaje de la azalea
Stephanitis pyrioides

Symptoms and Damage || Síntomas y Daños

Lace bug adult on leaf with stippling and fecal spots.
Adulto de la chinche sobre una hoja que presenta síntomas de punteado y manchas de excrementos.

Lace bug nymphs tend to stay in clusters.
Las ninfas de la chinche tienden a permanecer en grupos.

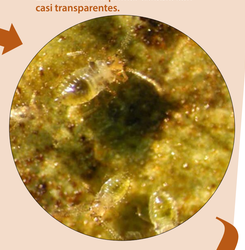
Examine the lower surface of leaves to find groups of lace bug nymphs.
Examine la superficie inferior de las hojas para identificar la presencia de grupos de ninfas de la chinche.

High populations of the lace bug cause severe damage on azalea, turning leaves nearly white.
La presencia de numerosas chinches causa daños severos, dejando las hojas casi blancas.

On rhododendrons, severe damage looks similar to iron chlorosis, with yellow leaves and green veins.
Daño severo en los rododendros es similar a los síntomas por falta de hierro; las hojas se tornan amarillas con venación verde.

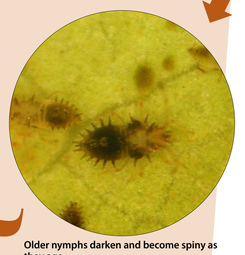
Life Cycle || Ciclo de Vida

Eggs along leaf midrib covered with brown excrement
Huevos cubiertos con excremento del insecto a lo largo de la nervadura central en el envés de la hoja



Newly emerged nymphs are nearly translucent.
Las ninfas en su primer estadío son casi transparentes.

Adult has light and dark patterns on its wings
Adulto con diseños característicos blancos y negros en sus alas



Older nymphs darken and become spiny as they age.
A medida que maduran las ninfas se tornan más oscuras y parecen tener espinas.

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The poster is made of vinyl and has metal grommets at each corner to make outdoor placement possible. It is available to the public for purchase through the OSU Publications & Multimedia Catalog. The content is a succinct version of the fact sheets. It is meant to aid in recognizing azalea lace bug eggs, nymphs, adults, and the damage they cause to the plants.

Chinche de encaje de la azalea
Una nueva plaga de las azaleas y los rododendros

Robin Rosetta y Luisa Santamaria — EM 9066-S • diciembre 2013

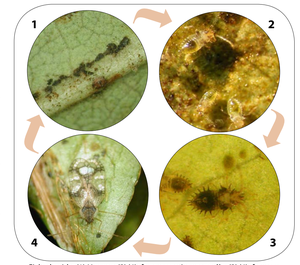
La chinche de encaje (*Stephanitis pyrioides*) de la azalea, también conocida como "azalea lace bug" en inglés [figura 1] es una nueva plaga que causa daños considerables en las azaleas. La presencia de este insecto se confirmó por primera vez en Oregon en el año 2009 en azaleas ubicadas en jardines residenciales.

Figura 1. Ejemplar adulto de la chinche de encaje de la azalea mostrando sus alas con diseños característicos blancos y negros.

Ciclo de vida del insecto

Huevos. La chinche de encaje de la azalea pone sus huevos en el envés (superficie inferior) de la hoja, a lo largo de la nervadura central, y los cubre con excremento de color café oscuro [figura 2, página 2]. El insecto sobrevive el invierno en éste estadío.

Ninfas. En el valle de Willamette en Oregon, las chinches de encaje empiezan a salir de los huevos (eclosión) a mediados de mayo hasta principios de junio, pero puede ocurrir más temprano si hay variaciones de temperatura en la primavera. Al emerger, las chinches son casi transparentes, pero rápidamente adquieren un color lima o verde-amarillento [figura 3, página 2]. A los insectos jóvenes e inmaduros se les conoce como ninfas. Las ninfas pasan por cinco fases de crecimiento. A medida que envejecen se oscurecen, sobre todo en el abdomen, donde empiezan a desarrollar estructuras que se asemejan a espinas [figura 4, página 2].



Ciclo de vida. (1) Huevos; (2) Ninfas en su primer estadio; (3) Ninfa en su ultimo estadio; (4) Adulto

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Spanish version fact sheet available as a free download. This fact sheet is not a direct translations of the English version. Instead, the same information is presented in a manner that was deemed most appropriate for the subset of the intended audience.

Background

The azalea lace bug is an invasive pest detrimental to to the aesthetics of azaleas in Oregon. Informing the public, and nursery and landscape industries about signs and symptoms associated with the azalea lace bug is the first step in controlling their numbers and the damage they cause. The poster-fact sheet format serves not only to notify the target audience, but to educate them on the subject. Also, due to the increase in Spanish-speaking populations of the public and workforce, it was important that the material be available in both English and Spanish.

Material Development

In collaboration with Robin Rosetta, these teaching materials were developed in conjunction with Extension & Experiment Station Communications (EESC). The fact sheets were peer reviewed by two independent reviewers knowledgeable of the subject matter. The translation was also independently reviewed. The layout and design was agreed upon by the authors and EESC to ensure appropriateness as a teaching tool. The Spanish fact sheet and poster were tested with different audiences during three different workshops. The positive evaluations and acceptance of the material by the audience informed the authors to pursue publication of this material through EESC.

Discussion

As damage by azalea lace bug becomes more common, it is imperative that early diagnosis and control methods are implemented. By producing a weatherproof poster as guide and constant reminder to the public and industry workers, we want to help the audience recognize the signs and symptoms in the early stages and apply control methods in a timely fashion. The posters and fact sheets provide sufficient, up-to-date information to help the target audience effectively recognize and control damage from the azalea lace bug.

English Fact Sheet

Poster Order Form

Spanish Fact Sheet

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