

## *Phthia picta* (Hemiptera: Coreidae)

This short description has been prepared in the framework of the EPPO Study on Pest Risks Associated with the Import of Tomato Fruit. The whole study can be retrieved from the EPPO website.

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Africa	Asia	Oceania	North America	South-Central America and Caribbean
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### ***Phthia picta* (Hemiptera: Coreidae) (Brazil: percevejo-do-tomateiro, Argentina: chinche de tomate; USA: leaf-footed bug [one of several species])**

Why	Identified in the EPPO tomato study. It is an important pest of tomato in South America. It seems that the name has changed to <i>Dallacoris picta</i> (Schaefer and Panizzi, 2000) and more recently to <i>Phthiacnemis picta</i> (Brailovsky, 2009). However, most publications refer to <i>Phthia picta</i> , and this name was kept here.
Where	<p>Distributed nearly throughout the neotropical region according to Barankowski and Slater (1986), with some records in southern USA. The distribution in Caribbean and Central America is not completely clear.</p> <p><b>EPPO region:</b> absent</p> <p><b>North America:</b> USA (California, Texas, Florida) (Barankowski and Slater, 1986), Mexico (Da Silva and Carvalho, 2001, King and Saunders, 1984, Barilovsky, 2009)</p> <p><b>Central America:</b> Guatemala, Honduras, Costa Rica (Barilovsky, 2009), Costa Rica, El Salvador, Honduras, Nicaragua (Packauskas, 2010 cited in Coreoidae Species File, ND), Guatemala, Nicaragua (specimen record in GBIF, 2013). Several publications mention Central America generally, and the pest may be present in more countries.</p> <p><b>Caribbean:</b> Cuba (Barilovsky, 2009) Cuba Puerto Rico, St. Martin (Packauskas, 2010 cited in Coreoidae Species File, ND).</p> <p>CABI CPC (2013) also contain the following records (originating from a publication from Schotman, 1989), but these are not mentioned in the publications specifically on this species: Antigua and Barbuda, Barbados, British Virgin Islands, Dominican Republic, Grenada, Jamaica, Montserrat, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Trinidad and Tobago (CABI CPC).</p> <p><b>South America:</b> Argentina, Brazil, Colombia, Surinam, Paraguay, Uruguay, Venezuela (Barilovsky, 2009). In addition to these, Packauskas (2010, cited in Coreoidae Species File, ND) mentions Guyana.</p>
Climatic similarity	Medium. 7 common climates considering the countries listed above (most due to the presence of the pest in southern USA).
On which plants	It is not clear on which plants <i>P. picta</i> breeds and on which ones it only feeds on. Da Silva et al. (2001, citing others) mention Solanaceae and Cucurbitaceae as host plants, with a preference for tomato. Barankowski and Slater (1986) notes that it breeds on <i>Solanum nigrum</i> and that other authors also reported it breeding on tomato, squash, cowpeas, <i>Datura metel</i> (or feeding on the last three?). Attacks on many other plants are reported including <i>S. sysimbrifolium</i> , <i>S. tuberosum</i> , <i>S. melongena</i> , <i>Capsicum annuum</i> , <i>Nicotiana tabacum</i> , <i>Cucurbita pepo</i> , <i>Cucurbita maxima</i> , <i>Cucumis melo</i> , <i>Momordica charantia</i> , <i>Pisum sativum</i> , <i>Phaseolus vulgaris</i> , <i>Vicia faba</i> , <i>Sesamum indicum</i> , <i>Helianthus annuus</i> , <i>Ipomoea batata</i> , <i>Gossypium hirsutum</i> , <i>Oryza sativa</i> , <i>Punica granatum</i> (Barankowski and Slater, 1986). King and Saunders (1984) list tomato, eggplant, cucurbitaceae, also rice, sweet potato, maize. CABI CPC (2013) lists pumpkin, Cucurbitaceae, tomato, sugarcane, rice as hosts, but without details.
Damage	Eggs on stems or under leaves (Schuster, ND), nymphs and adults feed on leaves, stems, blossoms and fruit, and are mobile. Economic damage result mostly from feeding on fruit, leading to uneven ripening and deformation. Feeding punctures also expose the fruit to infestation by pathogens or other insects (Da Silva et al., 2001 and 2003). <i>P. picta</i> is mentioned amongst major pest of economic importance for tomato for South America by Berlinger (1987), and is an important pest of tomato in Brazil (Da Silva et al., 2001 and 2003), from which there are many publications, also recent. In Florida, it seems to be an occasional pest on tomato and pepper, and the action threshold recommended on these crops for stink bugs and leaf-footed bugs (incl. <i>Phthia picta</i> ) is low, at 1 nymph or adult per plant (Schuster, ND). In Texas, it is recorded as being common in gardens (Texas A&M,

Dissemination	ND). <i>P. picta</i> is not identified as a pest throughout its distribution. It is not considered a pest in Honduras and Cuba according to Schaefer and Panizzi (2000), and is a minor pest of tomatoes in Central America according to King and Saunders (1994).
Pathway	Adults fly. Several life stages may be associated to fruit and associated green parts. There is an uncertainty on whether nymphs fly and could be associated to consignments of fruit. Adults fly and could leave consignments.
Possible risks	Plants for planting, fruits and vegetables (especially if green parts are attached) of host plants from countries where <i>P. picta</i> occurs.
Categorization Sources	<p>The main pest risk seems to be for tomato. Hosts on which the pest is recorded to breed occur in the EPPO region, as well as many plants on which it feeds. The climatic similarity according to the EPPO Study between the area where it occurs and the EPPO region is medium, corresponding, in the EPPO region to the Mediterranean Basin, possibly through to the Black Sea and Central Asia.</p> <p>None found</p> <p>Coreoidea Species File. ND. Version 5.0  <a href="http://coreoidea.speciesfile.org/Common/editTaxon/SearchForTaxon.aspx">http://coreoidea.speciesfile.org/Common/editTaxon/SearchForTaxon.aspx</a> (Accessed January 2014)</p> <p>Baranowski RM, Slater JA. 1986. Coreidae of Florida : (Hemiptera:Heteroptera). 82 p. Florida Dept. of Agriculture and Consumer Services, Division of Plant Industry, Gainesville, Florida. Available at: <a href="http://ufdc.ufl.edu/UF00000092/00001">http://ufdc.ufl.edu/UF00000092/00001</a>. (Accessed January 2014)</p> <p>Berlinger MJ. 1987. Pests. pp 391-441 In The Tomato Crop, A scientific basis for improvement (eds Atherton JG and Rudich J). Chapman and Hall, London - New York.</p> <p>Brailovsky H. 2009. Revision of the Phthia generic complex with a description of four new genera (Hemiptera: Heteroptera: Coreidae: Coreinae: Leptoscelini). Acta Entomologica Musei Nationalis Pragae Volume 49(1), pp. 59-74</p> <p>CABI CPC. 2013</p> <p>Da Silva and Carvalho (2001), King and Saunders (1984), Morales et al. (2003), Picanco et al. (2007), Da Silva et al. (2003), Da Silva et al. (2001)</p> <p>Da Silva R, Flores PS, Carvalho G 2001. Descrição dos estágios imaturos de <i>Phthia picta</i> (Drury) (Hemiptera: Coreidae). Neotrop. Entomol. 2001, vol.30, n.2, pp. 253-258.</p> <p>da Silva RA, Carvalho GS. 2001. Aspectos Biológicos De <i>Phthia Picta</i> (Drury, 1770) (Hemiptera: Coreidae) Em Tomateiro Sob Condições Controladas Biological Aspects Of <i>Phthia Picta</i> (Drury, 1770) (Hemiptera: Coreidae) On Tomatoes Under Controlled Conditions. Ciência Rural, Santa Maria, v.31, n.3, p.381-386, 2001</p> <p>Da Silva RA, Carvalho RA, Flores PS. 2003. Morfologia externa dos adultos de <i>Phthia picta</i> (Drury, 1770) (Hemiptera, Coreidae). Bol. Sano Veg.Plagas, 29: 249-253, 2003</p> <p>GBIF. 2013 Biodiversity occurrence data published by various. <a href="http://data.gbif.org/welcome.htm">http://data.gbif.org/welcome.htm</a> (Accessed through GBIF Data Portal, data.gbif.org, January 2014)</p> <p>Packauskas R. 2010. Catalog of the Coreidae, or Leaf-Footed Bugs, of the New World, Fort Hays Studies, Fourth Series, Number 5. Fort Hays State University (note: publication was not found, but distribution was mentioned in Coreoidea Species File, ND)</p> <p>Schaefer CW and Panizzi AR. 2000. Heteroptera of economic importance, CRC Press, Boca Raton, FL, 828 pp. <a href="http://books.google.dk/books?id=AVcBI0GL-fQC&amp;pg=PA193&amp;lpg=PA193&amp;dq=nysius+clevelandensis+biology&amp;source=bl&amp;ots=xWYygyiZVT&amp;sig=SwfKG-c128yJdli3YX44xP5dGsA&amp;hl=da&amp;sa=X&amp;ei=Ae2FUuf4D6i34wSahlCABQ&amp;ved=0CCwQ6AEwAA#v=onepage&amp;q=nysius%20clevelandensis%20biology&amp;f=false">http://books.google.dk/books?id=AVcBI0GL-fQC&amp;pg=PA193&amp;lpg=PA193&amp;dq=nysius+clevelandensis+biology&amp;source=bl&amp;ots=xWYygyiZVT&amp;sig=SwfKG-c128yJdli3YX44xP5dGsA&amp;hl=da&amp;sa=X&amp;ei=Ae2FUuf4D6i34wSahlCABQ&amp;ved=0CCwQ6AEwAA#v=onepage&amp;q=nysius%20clevelandensis%20biology&amp;f=false</a> (Accessed January 2014)</p> <p>Shuster. ND. Stink bugs &amp; Leaf-footed bugs. IFA Extension, University of Florida. <a href="http://ipm.ifas.ufl.edu/resources/success_stories/T&amp;PGuide/pdfs/Chapter4/Stink&amp;Leaffooted_Bugs.pdf">http://ipm.ifas.ufl.edu/resources/success_stories/T&amp;PGuide/pdfs/Chapter4/Stink&amp;Leaffooted_Bugs.pdf</a> (Accessed January 2014)</p> <p>Texas A&amp;M. ND. <i>Anasa tristis</i> Texas A&amp;M. Agrilife Extension. From the book Field Guide to Texas Insects, Drees, B.M. and John Jackman, 1999. <a href="https://insects.tamu.edu/fieldguide/aimg61.html">https://insects.tamu.edu/fieldguide/aimg61.html</a> (Accessed January 2014)</p>