

## *Epilachna vigintioctopunctata* (Coleoptera: Coccinellidae)

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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### ***Epilachna (Henosepilachna) vigintioctopunctata* (Coleoptera: Coccinellidae) (28-spot ladybird, Hadda beetle)**

Why	Identified in the EPPO tomato study. It is a serious pest of solanaceous crops.
Where	<p><b>EPPO region:</b> absent. <b>Note:</b> Wikipedia mentions that <i>E. vigintioctopunctata</i> occurs in Russia. The reference given (AgroAtlas 2003-2009) refers to <i>E. vigintioctomaculata</i>. No record of <i>E. vigintioctopunctata</i> in Russia was found. One mention on the English page of the Zoological Institute of the Russian Academy of Science seems to be a mistranslation of the Russian page, which lists only <i>E. vigintioctomaculata</i> (ZIN, ND).</p> <p><b>Asia:</b> Bangladesh, Bhutan, China (south-eastern half), India, Indonesia, Japan, Korea, Rep., Laos, Malaysia, Myanmar, Nepal, Pakistan, Singapore, Sri Lanka, Taiwan, Thailand, Vietnam (CABI CPC)</p> <p><b>South America:</b> Brazil (CABI CPC, Schroder et al., 1983)</p> <p><b>Oceania:</b> Australia, Fiji, French Polynesia, New Caledonia, Niue, Samoa, Solomon Islands, Tonga, Vanuatu (CABI CPC), New Zealand (Biosecurity NZ, 2010a &amp; b)</p>
Climatic similarity	High. 11 common climates considering the countries listed above, but probably 8-9. It has established in New Zealand, which has a temperate-type climate, and is present in most of Australia. In China (CABI CPC), it seems to be present in the south-eastern part of the country, broadly south of a line Sichuan to Hebei.
On which plants	Eggplant, potato, tobacco, tomato, and other solanaceous plants (NBAIL, 2013). CABI CPC also lists beans and loofah, and Naz et al. (2012) <i>S. nigrum</i> , <i>S. surretanses</i> , <i>Datura</i> , and <i>Physalis</i> sp. In Bangladesh, <i>E. v.</i> was found on the following cucurbit crops: <i>Momordica charantia</i> (bitter gourd), <i>Cucurbita moschata</i> (sweet gourd), <i>Luffa acutangula</i> (ribbed gourd), <i>Trichosanthes asguina</i> (snake gourd), cucumber and <i>Momordica dioica</i> (teasle gourd) (DAE, 2010). Shiri and Katakuro (1999) note that Solanaceae are preferred hosts, with some cucurbits also being hosts.
Damage	Eggs, larvae, pupae are on leaves. Adults are mobile and may be on fruit. <i>E. vigintioctopunctata</i> is a major pest of eggplant in India (NBAIL, 2013) and identified as a serious pest in Naz et al. (2012).
Dissemination	Adults fly (up to 500 m) and the pest is also moved in plant material and hitchhiker (Biosecurity NZ, 2010a). It has been introduced in New Zealand (Biosecurity NZ, 2010 a&b). It seems to have also been introduced in Brazil recently (Schroeder et al., 1993 – from abstract, full text not available).
Pathway	Plants for planting, fruits and vegetables (especially if green parts attached) of host plants from countries where <i>E. vigintioctopunctata</i> occurs.
Possible risks	Eggplant, tomato, potato are major crops in the EPPO region. The climatic similarity according to the EPPO Study between the area where it occurs and the EPPO region is high. Eradication in New Zealand was attempted but failed (Biosecurity NZ, 2010b).
Categorization	From PQR: Eastern Africa A1 2001, Southern Africa A1 2001, Chile 1995. It was regulated in New Zealand for tomatoes from Tonga and Australia (Biosecurity NZ, 1998, 2000).
Sources	<p>AgroAtlas. 2003-2009. Website of the project «Interactive Agricultural Ecological Atlas of Russia and Neighboring Countries. Economic Plants and their Diseases, Pests and Weeds».  <a href="http://www.agroatlas.ru/en/content/pests/Epilachna_vigintioctomaculata/">http://www.agroatlas.ru/en/content/pests/Epilachna_vigintioctomaculata/</a></p> <p>Biosecurity NZ. 2010a. Hadda beetle. <i>Epilachna vigintioctopunctata</i>.  <a href="http://www.biosecurity.govt.nz/files/pests/hadda-beetle/hadda-beetle-fact-sheet.pdf">http://www.biosecurity.govt.nz/files/pests/hadda-beetle/hadda-beetle-fact-sheet.pdf</a></p> <p>Biosecurity NZ. 2010b. Hadda beetle established in Auckland. <a href="http://www.biosecurity.govt.nz/media/25-03-10/hadda-beetle-auckland">http://www.biosecurity.govt.nz/media/25-03-10/hadda-beetle-auckland</a></p> <p>DAE. 2010. Final report on "Pest Risk Analysis (PRA) of citrus and cucurbits of Bangladesh and listing quarantine pests". <a href="http://www.dae.gov.bd/pdf/Publication/Final-Report_Pest-Risk-Analysis-DAE-June2010.pdf">http://www.dae.gov.bd/pdf/Publication/Final-Report_Pest-Risk-Analysis-DAE-June2010.pdf</a></p>

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