

Spodoptera albula (Lepidoptera: Noctuidae)

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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***Spodoptera albula* (Lepidoptera: Noctuidae) (Costa Rican armyworm, unbarred *Spodoptera* moth, gray-streaked armyworm, gusano rayado)**

Why	Identified in the EPPO tomato study. It is one of many American <i>Spodoptera</i> species reported as attacking tomato.
Where	<p>EPPO region: absent</p> <p>North America: USA (Florida, Southern Texas) (Montezano et al., 2013) Southern USA to South America (Bugguide, 2009) Heppner (1998) mentions it occurs in extreme Southern Florida, and strays north to central Florida (see below).</p> <p>Central America: Costa Rica, Honduras, Nicaragua (CABI CPC) throughout Caribbean and Central America (Montezano et al., 2013). Note this species is not mentioned in King and Saunders (1984), on pests in Central America.</p> <p>Caribbean: Cuba?, Puerto Rico? (CABI CPC) throughout the Caribbean and Central America (Montezano et al., 2013) Guadeloupe, Martinique St-Kitts, Antigua, Dominica, St-Lucia, St-Vincent, Grenada. Throughout the Greater Antilles (incl. Dominican Republic) (Zagatti et al., 1995-2006), Jamaica, Cuba, Hispaniola (Haiti plus Dominican Republic), Puerto Rico, Virgin Islands, French West Indies, St. Vincent Group (Patterson, ND citing others)</p> <p>South America: Colombia, French Guiana? (CABI CPC) "from Venezuela south to Paraguay and southern Brazil" (Montezano et al., 2013, citing others). Brazil (Zenke et al., 2010). Chile (Montezano et al. 2013, citing Angulo et al. 2008 – not available). Colombia, French Guyana (Zagatti et al., 1995-2006) –</p> <p>Note: <i>S. albula</i> is a quarantine pest for Brazil (QL Brazil 2010); however it is present there (Zenker et al., 2010) and this does not seem a new introduction (Teixeira et al., 2001).</p>
Climatic similarity	Medium-low. 5 common climates considering the countries and areas listed above, but according to Heppner (1998) it is present only in the south of Florida.
On which plants	At least 55 plant species, from 29 families (larvae), including <i>Capsicum annuum</i> , <i>Solanum tuberosum</i> , <i>Solanum lycopersicon</i> , <i>Nicotiana tabacum</i> , <i>Solanum melongena</i> and others such as cotton, cabbage, sesame, soybean, peanuts, sunflower, papaya, forestry seedling production (complete table in Montezano et al., 2013 citing others), <i>Amaranthus</i> (Bugguide, 2009), many incl. tomato, sweet pepper, tobacco, pea (CABI CPC).
Damage	<i>Spodoptera</i> have a similar biology (Heppner, 1998). Eggs are laid on leaves. Larvae feed on leaves, fruit and sometimes stems, generally at night. Pupae in soil. Detailed study of immature stages in Montezano et al. (2013). Tropical and of little economic importance according to Heppner (1998 – for Florida). They overwinter in the extreme south of the USA and migrate north during warm summers (although <i>S. albula</i> is encountered at most in Central Florida).
Dissemination	Adults fly. Heppner (2008) mention that <i>S. latifascia</i> migrates in summer within the USA.
Pathway	Fruit? plants for planting? of host plants and soil from countries where <i>S. albula</i> occurs.
Possible risks	Many hosts 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 medium-low. It seems to be one of the most tropical species retained for Step 3.
Categorization	Quarantine pest for Brazil 2010, Japan 2011 (from the IPP)
Sources	<p>BugGuide. 2009. http://bugguide.net/ (Accessed January 2014)</p> <p>King ABS and Saunders JL. 1984. The invertebrate pests of annual food crops in Central America. Overseas Development Administration, London.</p> <p>http://books.google.dk/books?id=qMwOAOAAIAAJ&pg=PA149&lpg=PA149&dq=agrotis+repleta+king&source=bl&ots=xopGOSMmfD&sig=wjUkG49Wwcre-l9xl7AA6UImE4g&hl=en&sa=X&ei=eGP3Uc-yHunJ0AX78oD4BQ&ved=0CDIQ6AEwAg#v=onepage&q=agrotis%20repleta%20king&f=false (Accessed January 2014)</p>

Montezano DG, Specht A, Bortolin TM, Fronza E, Sosa-Gómez DR, Roque-Specht VF, Pezzi P, Luz PC, Barros NM. 2013. Immature stages of *Spodoptera albula* (Walker) (Lepidoptera: Noctuidae): Developmental parameters and host plants. An. Acad. Bras. Ciênc. [online]. 2013, vol.85, n.1, pp. 271-284. <http://www.scielo.br/pdf/aabc/v85n1/0001-3765-aabc-85-01-271.pdf> (Accessed January 2014)

Patterson B. ND. Checklist of the Lepidoptera of the Antilles. <http://mothphotographersgroup.msstate.edu/Antilles/AntillesChecklist.shtml> (Accessed January 2014)

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Quarantine lists for Brazil 2010, Japan 2011 (from the IPP)

Teixeira EP, Novo JPS, Stein CP, Godoy IJ. 2001. Primeiro Registro da Ocorrência de *Spodoptera albula* (Walker) (Lepidoptera: Noctuidae) Atacando Amendoim (*Arachis hypogaea* L.) no Estado de São Paulo. Neotrop. Entomol. vol.30 no.4 Londrina Dec. 2001.

Zagatti P, Lalanne-Cassou B, le Duchat d'Aubigny J. 1995-2006. Catalogue of the lepidoptera of the French Antilles. INRA Database. <http://www7.inra.fr/papillon/indexeng.htm> (Accessed January 2014)

Zenker MM, Botton M, Teston JA, Specht A. 2010. Noctuidae moths occurring in grape orchards in Serra Gaúcha, Brazil and their relation to fruit-piercing. Rev. Bras. entomol.[online]. 2010, vol.54, n.2, pp. 288-297.

Not found: Angulo AO, Olivares TS, Weigert GTH. 2008. Estados inmaduros de lepidópteros noctuidos de importancia agrícola y forestal en Chile y claves para su identificación (Lepidoptera: Noctuidae). 3a edición. Concepción: Universidad de Concepción, 154 p.