

First report of *Aculops lycopersici* (Tryon, 1917) (Acari: Eriophyidae) on Pepino in Turkey

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Abstract

The tomato russet mite, *Aculops lycopersici* (Tryon, 1917) (Acari: Eriophyidae) is reported for the first time on Pepino (*Solanum muricatum* Aiton) in Ordu and Samsun provinces in Turkey.

Short paper

Aculops lycopersici (Tryon, 1917) (Acari: Eriophyidae) is known as tomato russet mite or tomato rust mite. It was described as *Phyllocoptes lycopersici* Tryon in 1917 from samples collected in Queensland, Australia. The same mite was later described as a new species by Massee (1937) with the same name, and later by Keifer (1940) as *Phyllocoptes destructor* (synonymized by Keifer, 1952). Geographical distribution of *A. lycopersici*, first described from Queensland, Australia, has been expanded to include the Afro-tropical region, Australian region, East Palaearctic (east of the border line here defined), Near East (Asian Turkey, Caucasian Russian Republics, Georgia, Armenia, Azerbaijan, Lebanon, Syria, Israel, Jordan, Sinai Peninsula (Egypt), Arabian Peninsula, Iran, Iraq), Nearctic region,

Neotropical North African region (not including the Sinai Peninsula), oriental regions (de Lillo, 2004; Anonymous, 2012a). *Aculops lycopersici* occurs on some Solanaceae (Jeppson *et al.*, 1975; Özman-Sullivan & Öcal, 2005), few Convolvulaceae and Rosaceae. It is mostly known as a pest of tomatoes, but also damages potato (*Solanum tuberosum* L.), eggplant (brinjal) (*Solanum melongena* L.), tobacco (*Nicotiana tabacum* L.), bell pepper (*Capsicum annuum* L.), Jerusalem cherry (*Solanum pseudocapsicum* L.), petunia (*Petunia hybrida* L.), tomatillo (*Physalis philadelphica* Lam.), cherry pepper (*Capsicum annuum* var. *annuum* L.), hairy nightshade (*Solanum sarrachoides* (Sendtner)), black nightshade (nightshade) (*Solanum nigrum* L.), small flowered nightshade (*Solanum nodiflorum* Jacq.), popolo (*Solanum nelsonii* Dunal.), horse nettle (*Solanum carolinense* L.), jimson weed (*Datura stramonium* L.), tolgua (*Datura meteloides* Dunal.), Chinese thorn apple (*Datura quercifolia* Kunth), amethyst (*Browallia speciosa* Hook.), poha (cape gooseberry) (*Physalis peruviana* L.) (Perring, 1996; Duso *et al.*, 2010), hot pepper (*Capsicum frutescens* L.), sweet potato (*Ipomoea batatas* (L.)), long-spined thornapple (*Datura ferox* L.), thornapple (*Datura innoxia* P.Mill.), wild tomato (*Lycopersicon peruvianum* L.), red currant tomato (*Lycopersicon pimpinellifolium* (L.)), native gooseberry (*Physalis minima* Linn.), Jamaican Forget Me Not (*Browallia americana* L.) (Solanales: Solanaceae) (Craemer, 2002), field bindweed (*Convolvulus arvensis* L.), Morning Glory (*Pharbitis nil* L.) (Perring, 1996; Duso *et al.*, 2010; Anonymous, 2012b) and tall Morning Glory (*Ipomoea purpurea* L.) (Solanales: Convolvulaceae) (Hoy, 2011), wild blackcurrant (*Ribes americanum* Mill.), wild gooseberry (*Ribes hirtellum* Michx.) and blackberry (*Rubus caesius* L.) (Rosales: Rosaceae) (Perring, 1996; Duso *et al.*, 2010). Larrain (2002) recently found this mite on pepino (*Solanum muricatum* Aiton) in Chile.

In August 2010 and September 2011, *Aculops lycopersici* and its typical symptoms such as bronzing of leaves, withering and change of stem color from green to brown were found on *S. muricatum* plants in Kayabaşı village in Ordu and Terme province in Samsun, both in the Black Sea Region of Turkey. The leaves expected to be contaminated were collected in individual polyethylene bags in August 2010 and September 2011 and brought to the laboratory. The mites on the leaves were collected by brush under a microscope. Eriophyids were preserved in vials containing 70% ethanol. The mites were moved separately to watch glasses containing lactophenol as a clearing medium. Each mite was mounted in a drop of Hoyer's medium and the microscope slides were dried at 60°C. The slide mounts were studied under different magnifications (Walter & Krantz, 2009). The mites were identified according to Keifer *et al.* (1982). The species was confirmed by Mariusz Lewandowski. These were the first records of *A. lycopersici* infection on pepino in Turkey. Since there is no literature on *A. lycopersici* of pepino fruit grown in Turkey, this plant was recorded as a new host for Turkey.

In Turkey, the species was initially recorded on open-air tomato crops in Adana and İçel provinces (Şekeroğlu & Özgür, 1984), and later

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on tomato plants in field and glasshouses at Adana, İçel, Antalya, Manisa, İzmir, Samsun, Tokat provinces of Turkey (Öncüer *et al.*, 1992; Can & Çobanoğlu, 2004; Madanlar & Öncüer, 1994; Yaşarakıncı & Hıncal, 1997; Yoldaş *et al.*, 1999; Hıncal *et al.*, 2002; İnal, 2005; Yanar *et al.*, 2008; Günçan *et al.*, 2010). Tomato russet mite was also found on *S. nigrum* in the tomato fields in Tokat province (Yanar *et al.*, 2008). So it seems likely that the presence of this species on *S. muricatum* in Ordu and Samsun provinces, where plants of the Solanaceae family can be grown, should not be surprising. However, there are currently no records from any plants in Ordu and from *S. muricatum* in Turkey.

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