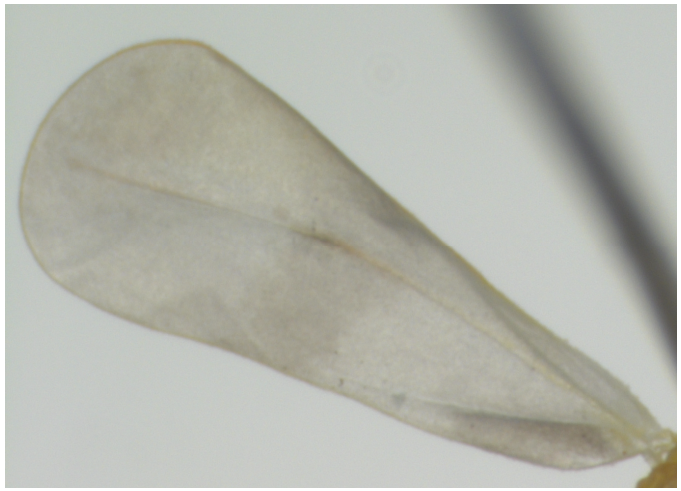
Netherlands Food and Consumer Product Safety Authority
Ministry of Economic Affairs

National Plant Protection Organization, the Netherlands

Quick scan number: QS. Ent/2015.2

	Quick scan date: 15 May 2015	
1	What is the scientific name (if possible up to species level + author, also include (sub)family and order) and English/common name of the organism? Add picture of organism/damage if available and publication allowed.	*Singhiella simplex* (Singh), (Hemiptera: Aleyrodidae) (synonyms: *Aleurocanthus simplex*, *Pealius simplex, Pealius indicus, Dialeurodes glomerata).* English name: the fig whitefly.  Left: pupal case;  Right: the adult has greyish banded forewings.

2	What prompted this quick scan? Organism detected in produce for import, export, in cultivation, nature, mentioned in publications, e.g. EPPO alert list, etc.	The organism was detected in a consignment of plants of *Ficus* originating from Costa Rica in March 2015.
3	What is the current area of distribution?	*Singhiella simplex* is native to the Oriental region where it is known from Myanmar, China and India; it has been introduced in the USA (Florida) and Puerto Rico (Hodges 2007, Evans 2008, Mannion et al. 2008). It was observed in Israel in 2011 (Kondo & Evans 2013). *S. simplex* has also been recorded from Mexico, Jamaica, Brazil, the Cayman Islands and Colombia (Myartseva et al. 2013). In 2014 the Republic of Cyprus informed the EPPO Secretariat about the presence of the species on its territory in the districts of Nicosia and Mimasol (EPPO, 2015a).
4	What are the host plants?	It is known as a pest of *Ficus* spp. (Moraceae). Known hosts include *F. altissima, F. aurea, F. benghalensis, F. benjamina, F. lyrata, F. maclellandii, F. racemosa F. binnendijkii, F. citrifolia en F. microcarpa* (EPPO 2015b; Kondo & Cortés 2014, Mannion 2008). This whitefly has been most commonly found infesting *Ficus benjamina* (Legaspi et al. 2011, Mannion 2010a). A record of *Rhododendron indica* (Evans 2008) need to be confirmed (EPPO 2015b). A few species that appear not to be affected by this whitefly include *F. microcarpa* "Green island", *F. religiosa*, *F. carica, F. lyrata* (but listed by EPPO 2015b); *F. pumila* and *F. elastica* "Burgundy" (Mannion 2010b).
5	Does the organism cause any kind of plant damage in the current area of distribution and/or does the consignment demonstrate damage suspected to have been caused by this organism? Yes/no + plant species on which damage has been reported + short description of symptoms. Please indicate also when the organism is otherwise harmful (e.g. predator, human/veterinary pathogen vector, etc.).	Adults and immature stages feed on the foliage (EPPO, 2015a). Unlike many other whiteflies, immature stages can be found on both the lower and upper surface of leaves. Feeding may cause yellowing of leaves, severe defoliation and branch dieback (Mannion 2010b). On Cyprus, the species causes incidentally defoliation on *Ficus benjamina, F. binnendijkii* and *F. microcarpa* grown for ornamental purposes in public green and private gardens. High populations are able to stunt the growth of young trees. *S. simplex* populations may reproduce rapidly and numbers of emerging adults may be quite large. In California, in some cities of Los Angeles county where *Ficus* trees were commonly planted on sidewalks and streets, clouds of adult whiteflies were observed creating a nuisance for residents (EPPO 2015b). Pictures of the pest and its damage can be viewed on the internet. http://borboletasbr.blogspot.fr/2012/07/singhiella-simplex-hemiptera.html http://www.freshfromflorida.com/Divisions-Offices/Plant-Industry/Plant-Industry-Publications/Pest-Alerts/Fig-Whitefly
6	Assess the probability of establishment in the Netherlands (NL) (i.e. the suitability of the environment for establishment). a. In greenhouses (low, medium, high) b. Outdoors (low, medium, high) c. Otherwise (e.g. storage facilities, human environment)	The species is unlikely to survive outdoors in the temperate zone in Northwest Europe because of the absence of host plants. It may be able to establish in greenhouses growing plants of *Ficus*.
7	Assess the probability of establishment in the EU (i.e. the suitability of the environment for	The observations in Cyprus indicate that the species is able to establish in the Mediterranean area.

	establishment).	
8	What are the possible pathways that can contribute to spread of the organism after introduction? How rapid is the organism expected to spread (by natural dispersal and human activity)?	The main pathways is transport of infested plant material.
9	Provide an assessment of the type and amount of direct and indirect damage (e.g. lower quality, lower production, export restrictions, threat to biodiversity, etc.) likely to occur if the organism would become established in NL and the EU, respectively?	NL: Control cost in glasshouses growing *Ficus* pot plants. EU: In the Mediterranean region, the species is expected to decrease the amenity value of *Ficus* plants grown outdoors. *Ficus* plants may be replaced by other species which can change the landscape.
10	Has the organism been detected on/in a product other than plants for planting (e.g. cut flowers, fruit, vegetables)? If "no", go to question 12	No
11	If the organism has been found on/in a product other than plants for planting (e.g. cut flowers, fruit, vegetables), what is the probability of introduction (entry + establishment)? Only to be answered in case of an interception or a find.	No
12	Additional remarks	
13	References	EPPO 2015a. First report of *Singhiella simplex* in Cyprus: addition to the EPPO Alert List https://gd.eppo.int/reporting/article-3306 (accessed on 31/iii/2015). EPPO 2015b. *Singhiella simplex* (Hemiptera: Aleyrodidae) http://www.eppo.int/QUARANTINE/Alert_List/insects/singhiella_simplex.htm (accessed on 31/iii/2015). Evans GA 2008. The whiteflies (Hemiptera: Aleyrodidae) of the world and their host plants and natural enemies. 1-708. USDA-APHIS Hodges, G 2007. The fig whitefly *Singhiella simplex* (Singh) (Hemiptera: Aleyrodidae): a new exotic whitefly found on *Ficus* species in south Florida. Division of Plant Industry, Florida Department of Agriculture and Consumer Services, http://www.freshfromflorida.com/Divisions-Offices/Plant-

		Industry/Plant-Industry-Publications/Pest-Alerts/Fig-Whitefly (accessed on 31/iii/2015) Kondo. T & RS Cortés, 2014. *Sarucallis kahawaluokalani* (Kirkaldy) (Hemiptera: Aleyrodidae), a new invasive aphid on San andres island and mainland Colombia, with notes on other adventive species. Insecta Mundi 362: 1-10. Kondo T & G Evans, 2013. *Singhiella simplex* (Singh) (Hemiptera: Aleyrodidae), a new Aleyrodid invasive species for Colombia. Boletin del Museo de Entomologia de la Unversidad del Valle 13: 31-33. Legaspi JC, C Mannion, D Amalin & BC Legaspi 2011. Life table analysis and development of *Singhiella simplex* (Hemiptera: Aleyrodidae) under different constant temperatures. Annals of the Entomological Society of America 104: 451-458. Mannion C 2008. Ficus whitefly (Singhiella simplex). https://cisr.ucr.edu/pdf/ficus_whitefly.pdf (accessed on 31/iii/2015). Mannion C 2010a. Biology and population dynamics of the Ficus Whitefly, Singhiella simplex http://conference.ifas.ufl.edu/TSTAR/presentations/Thursday/pm/0235%20C%20Mannion.pdf (accessed on 31/iii/2015). Mannion C 2010b. Ficus whitefly Management in the landscape. https://cisr.ucr.edu/pdf/ficus_whitefly_feb2010_fact_sheet.pdf (accessed on 31/iii/2015). Myartseva S N, Coronado Blanco J M, Ruiz Cancino E 2013. Primeros registros de la "mosquita blanca del Ficus" *Singhiella simplex* (Singh, 1931) (Hemiptera: Aleyrodidae) para Tamaulipas y Nayarit, Mexico. Dugesiana 20: 81-82.
14	Conclusions	This Quickscan was conducted after the interception of the fig white fly species *Singhiella simplex* on *Ficus* plants originating from Costa Rica. The species is a serious pest of ornamental *Ficus* plants but is not known as a pest of *Ficus carica* that is grown for its fruit. The pest is especially a risk for *Ficus* plants grown outdoors in southern Europe. The species appear to spread over the world probably as a consequence of trade as it has been reported from several continents outside its native origin. It has recently been found in the EU (on Cyprus) and no statutory action was taken against it. In glasshouses in northern Europe, the species may be controlled and even eradicated by application of insecticides.
15	Follow-up measures	The risk of the species will be communicated to Dutch importers and growers of *Ficus* plants.