




Recording whitefly species (Hemiptera: Aleyrodidae) and their host plants from Brazil

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ABSTRACT: Whiteflies (Hemiptera: Aleyrodidae) comprise a group of phytophagous insects, with worldwide distribution. This group has 1,556 described species, with members concentrated in the tropics. In Brazil, as the literature on species of Aleyrodidae and associated plants is limited, our study presents species of whiteflies and their host plants collected in some Brazilian regions. New host plants or new occurrence locations for species already known in the country are presented, in addition to the record of *Aleurotulus laneus* Martin, a species not yet reported in Brazil.

Key words: Aleyrodinae, Aleurodicinae, whitefly host plants.

INTRODUCTION

Whiteflies are tiny insects that feed on the phloem sap of plants (Walker and Perring 1994). They belong to the Hemiptera order, Aleyrodidae family, and have 1,556 species in 161 genera, included in the subfamilies Aleurodicinae, Aleyrodinae and Udamoselinae (Mound and Halsey 1978; Martin and Mound 2007). The subfamily Aleurodicinae is distributed mainly in the New World, while the subfamily Aleyrodinae has a worldwide distribution (Evans 2008).

Although most whiteflies species are found in the tropics, some are also present in temperate regions, where they attack crops and forest plants, thereby causing significant damage, mainly under protected cultivation conditions (Knapp et al. 2020). The losses caused by whiteflies are difficult to estimate because of the large number of crops they attack, their extremely wide geographical distribution, the variety of cultivation systems they can occur in and especially their ability to transmit viruses, which cause much more damage than the damage caused by the insects (Knapp et al. 2020).

The developmental stages of Aleyrodidae appear to be uniform and comprise the egg, four nymphal instars and the adult stage (Walker et al. 2010). The eggs have a pedicel, an extension of the chorion inserted by the female into the plant during oviposition and fixed by secretion (Buckner et al. 2002). The early first instar or crawler has well-developed legs and, after hatching, walks on the leaf's surface in search of a suitable place to insert its stylet, remaining in that place until the end of its development; nymphs from other instars have reduced legs and are unable to move (Walker et al. 2010). At the end of the fourth instar (puparium), adults emerge and can live for several weeks (Byrne and Bellows 1991). After the emergence of the adult, the exuvium remains attached to the leaf, called pupal case, and it is used for morphological identification of Aleyrodidae (Martin 1987).

In the literature, catalogs describing whitefly species do exist, with data on their geographic distribution and host plants, as well as identification guides (Mound and Halsey 1978; Martin 1987, 2004, 2005; Hodges and Evans 2005; Martin and

Mound 2007; Evans 2008). There are also studies on Aleyrodidae fauna in certain countries, but in Brazil, the literature on Aleyrodidae species and associated plants is scarce.

Thus, the objective of our study was to record different species of whiteflies and their host plants collected from some Brazilian regions, to highlight new host plants and new locations and record a species not yet reported in the country.

MATERIAL AND METHODS

The species presented herein refer to collections made by the authors and material received from collectors from various regions of Brazil for identification. The leaves containing pupal cases were herborized, and the pupal cases were mounted on microscopic slides, according to Hodges and Evans (2005). The slides were deposited at the Departamento de Entomologia e Fitopatologia, Universidade Federal Rural do Rio de Janeiro, Rio de Janeiro, RJ, Brazil. Except for the species in which the name of the entomologist responsible for identification appeared, all others were identified by the second author (AFL).

Samples of plants (exsiccates) were deposited in the Herbarium of Instituto Agrônomo de Campinas (IAC) (<http://herbario.iac.sp.gov.br/>), and information on them was made accessible through the search of the 'name of the species' and/or 'accession number', accompanying the acronym of the Herbarium (IAC). The current nomenclature, including spelling, authorship and botanical families, was verified at the following reference sites: Flora do Brasil 2020 (<http://floradobrasil.jbrj.gov.br/>) and The Plant List (<http://theplantlist.org/>). The identification of plant species was carried out by the third author (LCB).

RESULTS AND DISCUSSION

Subfamily Aleurodicinae

Aleurodicus flavus Hempel

Sampled plant: *Labramia bojeri* A.DC. (IAC 51937)

Collection location: Ubatuba (SP), 2012

Remarks: species described by Hempel (1922) on *Cocos nucifera* L., in Brazil. *Labramia bojeri* is a new host plant record for this whitefly.

Distribution: Brazil (Evans 2008)

Hosts: *Cocos nucifera* (Arecaceae); *Begonia* sp. (Begoniaceae); *Triumfetta semitriloba* Jacq (Malvaceae) (Mound and Halsey 1978); *Labramia bojeri* (Sapotaceae) (new record)

Aleurodicus mirabilis (Cockrell)

Sampled plant: *Annona squamosa* L. (IAC 24791)

Collection location: Bauru (SP), 2012

Remarks: species described by Cockrell in 1898 as *Aleurodes mirabilis*, on an undetermined plant, in Mexico (Mound and Halsey 1978). Garcia et al. (2013) recorded the occurrence of the species at high infestations in custard apple (*Annona squamosa* L.), in the municipality of Bauru (SP), Brazil.

Distribution: Mexico, Colombia, Trinidad (Mound and Halsey 1978), and Brazil (Evans 2008)

Hosts: *Annona cherimola* Mill., *Annona muricata* L., *Annona squamosa*, *Cananga odorata* (Lam.) Hook.f & Thomson, *Polyalthia longifolia* (Sonn.) Thwaites (Annonaceae); *Licania tomentosa* (Chrysobalanaceae); *Hevea brasiliensis* (Willd. Ex A. Juss.) Müll. Arg. (Euphorbiaceae); *Laurus nobilis* L. (Lauraceae) (Evans 2008)

***Aleurodicus pulvinatus* (Maskell)**

Sampled plants: *Licania tomentosa* Benth. (IAC 45304), *Myrciaria dubia* (H.B.K.) Mc Vaugh (IAC 54721)

Collection locations: Valinhos (SP), 2006; Presidente Prudente (SP), 2014; Belém (PA), 2017

Remarks: species described by Maskell in 1895 as *Aleurodes pulvinata*, on *Jatropha* sp., in Trinidad (Mound and Halsey 1978). *Myrciaria dubia* is a new host plant record for *A. pulvinatus*.

Distribution: Barbados, Belize, Brazil, Costa Rica, Ecuador, Guyana, Mexico, Nevis, Panama, St. Kitts, Trinidad, Venezuela (Evans 2008)

Hosts: *Echinodorus* sp. (Alismataceae), *Montrichardia arborescens* (L.) Schott (Araceae), *Cocos nucifera* (Arecaceae), *Chrysobalanus icaco* L., *Licania tomentosa* (Benth.) Fritsch (Chrysobalanaceae), *Vismia brasiliensis* Choisy, *Vismia* sp. (Hypericaceae), *Terminalia catappa* L. (Combretaceae), *Hura crepitans* L., *Jatropha* sp. (Euphorbiaceae), *Cajanus cajan* (L.) Millsp (Fabaceae), *Lacistema* sp. (Lacistemataceae), *Nectandra* sp.; *Persea americana* Mill. (Lauraceae), *Ficus* sp. (Moraceae), *Musa* sp. (Musaceae), *Psidium guajava* L. (Myrtaceae), *Piper nigrum* L. (Piperaceae), *Coccoloba belizensis* Standl., *Coccoloba uvifera* (L.) L. (Polygonaceae), *Coffea canephora* Pierre ex A Froehner, *Guettarda combsii* Urb., *Guettarda* sp., *Isertia hypoleuca* Benth (Rubiaceae), *Theobroma* sp. (Malvaceae), *Petrea* sp. (Verbenaceae) (Evans 2008), *Myrciaria dubia* (Myrtaceae) (new record)

***Bakerius attenuatus* Bondar**

Sampled plant: *Chiococca alba* (L.) Hitchc. (IAC 38260)

Collection location: Ubatuba (SP), 2014

Remarks: species described by Bondar (1923) on *Chromelia oligantha* Müll. Arg., in the state of Bahia, Brazil. *Chiococca alba* is a new host plant record for this species.

Distribution: Brazil

Hosts: *Chomelia oligantha* (Bondar 1923), *Chiococca alba* (Rubiaceae) (new record)

***Costalimada brasiliensis* Martin**

Sampled plant: *Lafoensia pacari* A.St.-Hil. (IAC 39391)

Collection location: Piracicaba (SP), 2014

Remarks: genus and species were described by Martin (2011), on *Lafoensia pacari*, in Belo Horizonte, state of Minas Gerais, Brazil. In addition to the presence of this whitefly in Minas Gerais, the state of São Paulo has been added.

Distribution: Brazil (MG) (Martin 2011), (SP) (new record)

Host: *Lafoensia pacari* (Lythraceae) (Martin 2011)

***Dialeurodicus cockerelli* (Quaintance)**

Sampled plants: *Psidium* sp.; *Pilocarpus* sp.; *Eugenia uniflora* L. (IAC 57539); *Psidium cattleianum* Sabine (IAC 55107)

Collection locations: Embu-Guaçu (SP), 1998; São Paulo (SP), 2014; Piracicaba (SP), 2014

Andrew Jensen ident 1998; A.F. Lima ident. 2014

Remarks: species described by Quaintance in 1900 as *Aleurodicus cockerellii*, in undetermined Myrtaceae, in Campinas (SP), Brazil (Mound and Halsey 1978). The genera *Pilocarpus* and *Eugenia uniflora* are new records of the host plants of *D. cockerelli*.

Distribution: Brazil (Evans 2008)

Hosts: *Psidium cattleianum* (Mound and Halsey 1978), *Eugenia uniflora* (Myrtaceae) (new record), *Pilocarpus* sp. (Rutaceae) (new record)

***Leonardius lahillei* (Leonardi)**

Sampled plant: *Phoradendron undulatum* (Pohl ex DC.) Eichler (IAC 46965)

Collection location: Jundiá (SP), 2000

Jon Martin ident 2006

Remarks: species described by Leonardi in 1910 as *Aleurodicus lahillei*, in an undetermined plant, in Argentina (Mound and Halsey 1978). This was the first record of *P. undulatum* as a host plant for *L. lahillei*.

Distribution: Argentina, Brazil, Colombia, Puerto Rico (Evans 2008).

Hosts: *Oryctanthus occidentalis* (L.) Eichler, *Phrygilanthus* sp., *Struthanthus flexicaulis* (Mart. ex Schult. f.) Mart. (Loranthaceae), *Prunus* sp. (Rosaceae), *Phoradendron* sp. (Mound and Halsey 1978; Evans 2008), *P. undulatum* (Santalaceae) (new record)

Paraleyrodes bondari Peracchi

Sampled plant: *Citrus sinensis* (L.) Osbeck (IAC 42959)

Collection location: Limeira (SP), 2008

Remarks: species described by Peracchi (1971), on *Citrus* sp., in the state of Rio de Janeiro (RJ), Brazil. Raga et al. (2011) reported its occurrence on *Morinda citrifolia* L. (Rubiaceae), in Boa Vista, state of Roraima, Brazil.

Distribution: United States of America, Belize, Brazil, Honduras, Puerto Rico, Venezuela, Madeira, Mauritius, Reunion, Taiwan, Comoros Islands, Hawaii (Evans 2008).

Hosts: *Cocos nucifera* (Arecaceae), *Trichilia* sp. (Meliaceae), *Citrus* sp. (Rutaceae) (Evans 2008), *Morinda citrifolia* (Raga et al. 2011), *Citrus sinensis* (Rutaceae)

Subfamily Aleyrodinae

Aleuroglandulus subtilis Bondar

Sampled plants: *Caladium bicolor* Vent. (IAC 2409), *Xanthosoma sagittifolium* (L.) Schott, *Chiococca alba*, *Xanthosoma taioba* E.G.Gonç.

Collection locations: Valinhos, Campinas (SP), 2005; Ubatuba (SP), 2014; Monte Alto (SP), 2018

Remarks: species described by Bondar (1923) on *Chomelia oligantha*, Bahia (BA), Brazil. *Chiococca alba* and *X. taioba* constitute new records of host plants for *A. subtilis*.

Distribution: United States of America, Bahamas, Brazil, Colombia, Costa Rica, Cuba, Dominica, El Salvador, Guatemala, Guadeloupe, Haiti, Honduras, Jamaica, Mexico, Panama, Peru, Puerto Rico, Venezuela (Evans 2008)

Hosts: *Alocasia* sp., *Caladium bicolor*, *Colocasia antiquorum* Schott, *Colocasia esculenta* (L.) Schott, *Xanthosoma sagittifolium*, *Xanthosoma undipes* (K.Koch & C.D.Bouché) K.Koch (Araceae), *Chamaedorea tepejilote* Liebm., *Synechanthus warscewiczianus* H.Wendl. (Arecaceae), *Euphorbia heterophylla* L., *Jatropha* sp. (Euphorbiaceae), *Clitoria laurifolia* Poir, *Erythrina* sp., *Galactia acapulcensis* Rose, *Schizolobium* sp. (Fabaceae); *Persea americana*, *Persea borbonia* (L.) Spreng (Lauraceae), *Psidium guajava* (Myrtaceae), *Gouania lupuloides* (L.) Urb. (Rhamnaceae), *Chomelia oligantha*, *Gardenia* sp. (Rubiaceae) (Evans 2008), *Chiococca alba* (Rubiaceae) (new record), *Xanthosoma taioba* (Araceae) (new record)

Aleuoparadoxus sp.

Sampled plant: *Rapanea guianensis* Aubl (IAC 45162)

Collection location: Ubatuba (SP), 2013

Remarks: the genus *Aleuoparadoxus* was described by Quaintance & Baker in 1914, and *Aleyrodes iridescens* Bemis was chosen as the type species (Mound and Halsey 1978).

Aleurothrixus aepim (Goeldi)

Sampled plants: *Manihot esculenta* Crantz (IAC 56922) (Euphorbiaceae); *Physalis angulata* L. (IAC 55965); *Solanum americanum* Mill. (IAC 47677) (Solanaceae)

Collection locations: Monte Alegre do Sul (SP), 2010, 2011, 2015; Jundiá (SP), 2013, 2015; Cruz das Almas (BA), 2017

Remarks: species described by Goeldi in 1886 on *Manihot palmata* Müll.Arg as *Aleurodes aepim*, in the state of Rio de Janeiro, Brazil (Mound and Halsey 1978). Infestations of this species have been reported in cassava crops in the southern state of Santa Catarina (Lorenzi et al. 2015)⁴, on *Schinus terebinthifolia* Raddi (Anacardiaceae), *Allophylus edulis* (A.St.-Hil., A.Juss. & Cambess.) Radlk (Sapindaceae) and *Solanum americanum* (Solanaceae), in the state of Rio Grande do Sul (Marsaro Júnior et al. 2015), and on *Ixora macrothyrsa* (Teijsm. & Binn.) T. Moore and *I. coccinea* L., in the state of Rio de Janeiro (Trindade et al. 2015). *Physalis angulata* is referred to as the host of this whitefly for the first time.

Distribution: Argentina, Brazil, Uruguay (Evans 2008).

Hosts: *Baccharis oxyodonta* DC., *Mikania scandens* (L.) Willd. (Asteraceae), *Ipomoea* sp. (Convolvulaceae), *Manihot esculenta*, *Manihot palmata* (Euphorbiaceae), *Psidium guajava* (Myrtaceae), *Coffea arabica* L. (Rubiaceae), *Citrus* sp. (Rutaceae) (Evans 2008), *Ixora macrothyrsa*, *I. coccinea* (Rubiaceae) (Trindade et al. 2015), *Solanum americanum* (Solanaceae) (Marsaro Júnior et al. 2015), *Physalis angulata* (Solanaceae) (new record)

Aleurothrixus floccosus (Maskell)

Sampled plants: *Malpighia emarginata* DC. (IAC 57679); *Guapira opposita* (Vell.) Reitz (IAC 56313)

Collection location: Ubatuba (SP), 2015

Remarks: species described by Maskell in 1895 as *Aleurodes floccosa*, on *Guaiacum officinale*, in Jamaica (Mound and Halsey 1978). Trindade et al. (2019) reported infestations in *Handroanthus ochraceus* and *Mangifera indica*, in the state of Rio de Janeiro, Brazil. *Malpighia emarginata* and *G. opposita* are new records of the host plants of *A. floccosus*.

Distribution: United States of America, Antigua, Argentina, Bahamas, Barbados, Bermuda, Bolivia, Brazil, Chile, Colombia, Costa Rica, Colombia, Cuba, Dominica, Dominican Republic, Ecuador, El Salvador, Guadeloupe, Guatemala, Guinea, Guyana, Haiti, Honduras, Jamaica, Martinique, Mexico, Montserrat, Nicaragua, Panama, Paraguay, Puerto Rico, Suriname, Trinidad & Tobago, Uruguay, Venezuela, Virgin Islands, Canary Islands, France, Iran, Italy, Madeira, Morocco, Portugal, Sicily, Spain, Angola, Congo, Gabon, Guinea, Liberia, Nigeria, Reunion, Japan, Taiwan, India, Thailand, Guam, Tahiti (Evans 2008)

Hosts: *Anacardium* sp., *Mangifera indica*, *Schinus terebinthifolia*, *Spondias dulcis* Parkinson, *Spondias mombin* L. (Anacardiaceae), *Annona reticulata* L., *Annona squamosa* (Annonaceae), *Plumeria rubra* L. (Apocynaceae), *Dieffenbachia seguine* (Jacq.) Schott, *Dieffenbachia* sp. (Araceae), *Periploca nigrescens* Afzel. (Apocynaceae), *Baccharis genistelloides* (Lam.) Pers., *Emilia sonchifolia* (L.) DC. ex DC., *Chromolaena odorata* (L.) R.M.King & H.Rob. (Asteraceae), *Catalpa longissima* (Jacq.) Dum.Cours., *Handroanthus capitatus* (Bureau & K.Schum.) Mattos (Bignoniaceae), *Cordia collococca* L. (Boraginaceae), *Bursera simaruba* (L.) Sarg. (Burseraceae), *Canna indica* L. (Cannaceae), *Chrysobalanus icaco* (Chrysobalanaceae), *Carex* sp., *Cyperus cruentus* Rottb., *Cyperus odoratus* L., *Cyperus echinatus* (L.) Alph. Wood, *Cyperus rotundus* L., *Cyperus* sp., *Cyperus strigosus* L. (Cyperaceae), *Diospyros kaki* L.f. (Ebenaceae), *Calliandra haematocephala* Hassk. (Fabaceae), *Calophyllum brasiliense* Cambess. (Clusiaceae), *Persea americana* (Lauraceae), *Gloriosa superba* L. (Colchicaceae), *Malpighia emarginata* (Malpighiaceae), *Sida rhombifolia* L. (Malvaceae), *Khaya nyasica* Stapf ex Baker f., *Swietenia* sp. (Meliaceae), *Musa × paradisiaca* L. (Musaceae), *Morella cerifera* (L.) Small (Myricaceae), *Eugenia uniflora*, *Acca sellowiana* (O.Berg) Burret, *Psidium cattleianum*, *Psidium guajava*, *Psidium* sp. (Myrtaceae), *Bougainvillea* sp., *Guapira discolor* (Spreng) Little (Nyctaginaceae), *Coccoloba diversifolia* Jacq., *Coccoloba uvifera* (Polygonaceae), *Licania tomentosa*, *Rubus odoratus* L. (Rosaceae), *Coffea arabica* (Rubiaceae), *Citrus aurantiifolia* (Christm.) Swingle, *C. aurantium* L., *C. maxima* (Burm.) Merr., *C. limon* (L.) Osbeck, *C. reticulata* Blanco, *C. sinensis*, *C. paradisi* Macfad, *C. × microcarpa* Bunge, *Citrus* sp. (Rutaceae), *Pouteria caimito* (Ruiz & Pav.) Radlk., *Manilkara* sp., *Manilkara zapota* (L.) P. Royen (Sapotaceae), *Solanum melongena* L. (Solanaceae), *Avicennia germinans* (L.) L. (Acanthaceae), *Phoradendron* sp. (Santalaceae), *Guaiacum officinale* (Zygophyllaceae) (Evans 2008), *Malpighia emarginata* (Malpighiaceae) (new record), *Guapira opposita* (Nyctaginaceae) (new record)

⁴Lorenzi, E.F.P., Lima, A.F., Peruch, L.A.M. and Racca Filho, F. (2015). Espécies de moscas-brancas em lavouras de mandioca no sul de Santa Catarina. In 16º Congresso Brasileiro de Mandioca e 1º Congresso Latino-Americano e Caribenho de Mandioca, Foz do Iguaçu, PR, 2015. Anais, p. 1-4.

Aleurothrixus lucumai Costa Lima

Sampled plant: *Chiococca alba*

Collection location: Ubatuba (SP), 2015

Remarks: species described by Costa Lima (1942), in *Manilkara zapota* and *Pouteria caimito*, in the state of Rio de Janeiro, Brazil. This is the first record of *C. alba* as a host of this whitefly.

Distribution: Brazil (Mound and Halsey 1978)

Hosts: *Manilkara zapota*, *Pouteria caimito* (Sapotaceae) (Evans 2008), *Chiococca alba* (Rubiaceae) (new record)

Aleurothrixus myrtacei Bondar

Sampled plant: *Myrciaria dubia*

Collection location: Belém (PA), 2017

Remarks: species described by Bondar (1923) in unidentified Myrtaceae, in the state of Bahia, Brazil. *Myrciaria dubia* is a new host of *A. myrtacei*.

Distribution: Barbados, Brazil, Colombia, Cuba, Grenada, Guadeloupe, Guatemala, Honduras, Puerto Rico, Suriname, St. Lucia, Trinidad & Tobago, Venezuela (Evans 2008)

Hosts: *Gardenia* sp., *Gardenia jasminoides* J.Ellis (Rubiaceae); *Eugenia* sp., *Psidium guajava* (Evans 2008), *Myrciaria dubia* (Myrtaceae) (new record)

Aleurotrachelus trachoides (Back)

Sampled plant: *Capsicum frutescens* L. (IAC 38910)

Collection location: Ilhéus (BA), 2016

Remarks: species described as *Aleyrodes trachoides* by Back in 1912, in *Solanum seaforthianum* Andrews, in Cuba (Mound and Halsey 1978).

Distribution: United States of America, Antigua, Bahamas, Barbados, Brazil, Colombia, Costa Rica, Cuba, Dominica, Dominican Republic, El Salvador, Guadeloupe, Guatemala, Guyana, Haiti, Honduras, Jamaica, Martinique, Mexico, Nicaragua, Panama, Peru, Puerto Rico, Suriname, Trinidad, Venezuela, Virgin Islands, Gambia, Reunion Island, Fiji, Guam, Tahiti, Hawaii (Evans 2008)

Hosts: *Annona muricata*, *Annona reticulata* (Annonaceae), *Tabernaemontana divaricata* (L.) R.Br. ex Roem. & Schult. (Apocynaceae), *Syngonium podophyllum* Schott, *Xanthosoma sagittifolium* (Araceae), *Chamaedorea elegans* Mart., *Chamaedorea* sp., *Cocos nucifera*, *Dypsis lutescens* (H.Wendl.) Beentje & J.Dransf., *Adonidia merrillii* (Becc.) Becc. (Arecaceae), *Bidens pilosa* L., *Mikania cordifolia* (L.f.) Willd. (Asteraceae), *Handroanthus capitatus*, *Tabebuia pallida* (Lindl.) Miers (Bignoniaceae), *Cordia alliodora* (Boraginaceae), *Canna indica* (Cannaceae), *Casuarina* sp. (Casuarinaceae), *Licania michauxii* Prance (Chrysobalanaceae), *Ipomoea batatas* (L.) Lam, *Ipomoea* sp., *Merremia* sp. (Convolvulaceae), *Dioscorea* sp. (Dioscoreaceae), *Bauhinia divaricata* L., *Canavalia ensiformis* (L.) DC., *Leucaena* sp. (Fabaceae), *Calophyllum brasiliense* (Clusiaceae), *Hypericum hypericoides* (L.) Crantz (Hypericaceae), *Tectona grandis* L.f. (Lamiaceae), *Persea americana* (Lauraceae), *Hibiscus elatus* Sw. (Malvaceae), *Miconia solearis* (Naudin) Gamba & Almeda (Melastomataceae), *Ficus membranacea* C.Wright, *Ficus retusa* L. (Moraceae), *Ardisia escallonioides* Schlttdl. & Cham. (Primulaceae), *Psidium guajava* (Myrtaceae), *Petiveria alliacea* L. (Phytolaccaceae), *Coccoloba uvifera* (Polygonaceae), *Morinda citrifolia*, *Psychotria nervosa* Sw., *Randia aculeata* L. (Rubiaceae), *Citrus limon* (Rutaceae), *Pouteria sapota* (Jacq.) H.E.Moore & Stearn (Sapotaceae), *Capsicum annuum* L., *Capsicum frutescens*, *Capsicum* sp., *Cestrum nocturnum* L., *Datura stramonium* L., *Solanum lycopersicum* L., *Solanum* sp., *Nicotiana* sp., *Solanum melongena*, *Solanum americanum*, *Solanum seaforthianum*, *Solanum torvum* Sw. (Solanaceae), *Theobroma cacao* L. (Malvaceae), *Citharexylum* sp. (Verbenaceae) (Evans 2008)

Aleurotulus laneus Martin

Sampled plant: *Rapanea guianensis* Aubl.

Collection location: Ubatuba (SP), 2013

Remarks: species described by Martin (2005), in *Lasiacis* sp., in Belize. This is the first report of this whitefly in Brazil, with *R. guianensis* being its new host.

Distribution: Belize (Martin 2005), Brazil (new record)

Host: *Lasiacis* sp. (Poaceae) (Martin 2005), *Rapanea guianensis* (Primulaceae) (new record)

Aleurotulus nephrolepidis (Quaintance)

Sampled plant: *Pteris* sp. (Pteridaceae)

Collection location: Campinas (SP), 1982

Jon H. Martin ident 1982

Remarks: species described as *Aleurodes nephrolepidis* by Quaintance in 1900, in *Nephrolepis* sp., in United States of America (Mound and Halsey 1978).

Distribution: United States of America, Brazil, England, Hungary, Scotland, Spain, Canary Islands, Madagascar (Mound and Halsey 1978)

Hosts: *Asplenium cuneatum* Lam. (Aspleniaceae), *Blechnum occidentale* L., *Blechnum brasiliense* Desv. (Blechnaceae), *Diplazium proliferum* (Lam.) Thouars (Athyriaceae), *Dryopteris flaccida* (Blume) Kuntze, *Nephrodium confluens* F.Muell. ex Baker, *Cyrtomium falcatum* (L.f.) C.Presl (Dryopteridaceae), *Nephrolepis* sp. (Nephrolepidaceae), *Oleandra articulata* (Sw.) C.Presl, *O. distenta* Kunze (Oleandraceae), *Acrostichum capense*, *Pteris biaurita*, *Pteris togoensis*, *Pteris quadriolata* (Pteridaceae), *Anemia* sp. (Schizaeaceae), *Stenosemia aurita* (Sw.) C.Presl (Tectariaceae), *Christella dentata* (Forssk.) Brownsey & Jermy (Thelypteridaceae) (Mound and Halsey 1978)

Aleyrodes proletella (L.)

Sampled plant: *Oxalis* sp. (Oxalidaceae)

Collection location: Jundiá (SP), 2010

Remarks: species described as *Phalaena (Tinea) proletella* by Linnaeus in 1758, in *Brassica* sp. (Mound and Halsey 1978).

Distribution: United States of America (intercepted in CA, MA, NY, but not known to be established in the United States of America), Bermuda, Brazil, Mexico, Puerto Rico, Virgin Islands, Austria, Azores, Belgium, Canary Islands, Czech Republic, Egypt, England, Finland, France, Germany, Hungary, Iran, Italy, Poland, Portugal, Russia, Spain, Sweden, Switzerland, Sovietic Union, Yugoslavia, Angola, Canary Islands, Kenya, Mozambique, Sierra Leon, Zimbabwe, Hong Kong, New Zealand (Evans 2008)

Hosts: *Cichorium intybus* L., *Chondrilla juncea* L., *Emilia sonchifolia*, *Lactuca indica* L., *Lactuca serriola* L., *Lactuca* sp., *Lactuca muralis* (L.) Gaertn., *Sonchus arvensis* L., *Sonchus oleraceus* (L.) L., *Sonchus* sp. (Asteraceae), *Brassica oleracea* L., *Raphanus raphanistrum*, *Rorippa indica* (L.) Hiern (Brassicaceae), *Campanula grandis* Fisch. & C.A.Mey., *Campanula persicifolia* L. (Campanulaceae), *Euphorbia esula* L. (Euphorbiaceae), *Oxalis* sp. (Oxalidaceae), *Chelidonium majus* L. (Papaveraceae), *Ficaria verna* Huds. (Ranunculaceae), *Citrus* sp. (Rutaceae) (Evans 2008)

Bemisia tuberculata Bondar

Sampled plant: *Manihot esculenta* Crantz

Collection locations: Amaporã (PR); Rochedo, Anastácio (MS), 2007, 2008; Mogi Mirim (SP), 2010

Remarks: species described by Bondar (1923), in cassava. Infestations of this species have been reported in cassava crops in southern Santa Catarina (Lorenzi et al. 2015).

Distribution: Brazil, Nicaragua, Puerto Rico (Evans 2008).

Hosts: *Euphorbia hypericifolia*, *Manihot esculenta* (Euphorbiaceae), *Erythrina* sp. (Fabaceae), *Gossypium hirsutum* L. (Malvaceae) (Evans 2008)

Crenidorsum aroidephagus Martin & Aguiar

Sampled plant: *Syngonium* sp.

Collection location: Campinas (SP), 2009

Remarks: species described by Martin & Aguiar (Martin et al. 2001), in *Epipremnum aureum* (Linden & André) G.S.Bunting, in Madeira, Portugal.

Distribution: United States of America, Barbados, Belize, Brazil, Colombia, Costa Rica, Cuba, Dominica, Dominican Republic, Guatemala, Mexico, Panama, Puerto Rico, Trinidad, Venezuela, Madeira Island, France, Germany, India, Philippines, Fiji, Hawaii (Martin et al. 2001)

Hosts: *Anthurium crenatum* (L.) Kunth, *A. lindenianum* K.Koch & Augustin, *A. longissimum* Pittier, *Anthurium* spp., *Culcasia scandens* P.Beauv., *Epipremnum aureum*, *Monstera deliciosa* Liebm., *Nephtytis* sp., *Philodendron gloriosum* André, *Philodendron* spp., *Rhaphidophora korthalsii* Schott, *Spathiphyllum* sp., *Syngonium podophyllum* Schott, *Syngonium* cf. *salvadorensis* Schott, *Syngonium* spp., *Xanthosoma sagittifolium* (Araceae) (Martin et al. 2001)

Parabemisia myricae (Kuwana)

Sampled plant: *Citrus sinensis*

Collection location: Cruz das Almas (BA), 2014

Remarks: species described as *Bemisia myricae* by Kuwana in 1927, in *Myrica rubra* (Lour.) Siebold & Zucc, *Morus alba* L., *Citrus* spp. and other plants, in Japan (Mound and Halsey 1978). In Brazil, *P. myricae* was detected for the first time in the 1990s, in the state of São Paulo, infesting *Citrus* spp.; later, it was detected in the states of Tocantins, Rio de Janeiro, and Mato Grosso do Sul (MS), also in citrus (Racca-Filho and Lima 2006⁵, Sottoriva et al. 2011).

Distribution: United States of America, Venezuela, Egypt, Iran, Israel, Italy, Morocco, Spain, Turkey, China, Japan, Taiwan, India, Hawaii (Evans 2008), Hong Kong, Malaysia (Hamon et al. 1990), Brazil (EPPO 2022a).

Hosts: *Lactuca* sp. (Asteraceae), *Cyperus papyrus* L. (Cyperaceae), *Diospyros kaki* (Ebenaceae), *Elaeocarpus serratus* (Elaeocarpaceae), *Rhododendron* sp. (Ericaceae), *Quercus serrata* Murray (Fagaceae), *Engelhardtia roxburghiana* Wall. (Juglandaceae), *Cryptocarya* sp., *Machilus* sp., *Persea americana* (Lauraceae), *Ficus carica* L., *Morus alba*, *Morus* sp. (Moraceae), *Myrica rubra* (Myricaceae), *Maesa japonica* (Thunb.) Moritzi & Zoll. (Primulaceae), *Psidium guajava* (Myrtaceae), *Schoepfia schreberi* J.F.Gmel. (Olacaceae), *Coccoloba krugii* Lindau (Polygonaceae), *Prunus mume* (Siebold) Siebold & Zucc., *Prunus persica* (L.) Batsch, *Prunus salicina* Lindl. (Rosaceae), *Chiococca alba*, *Gardenia jasminoides* J.Ellis, *G. thunbergia* Thunb., *Gardenia* sp. (Rubiaceae), *Citrus aurantiifolia*, *C. aurantium*, *C. limon*, *C. sinensis*, *Citrus × nobilis* Lour, *Murraya koenigii* (L.) Spreng., *Citrus trifoliata* L., *Wendlandia thrysoidea* (Roth) Steud., *Citrus × microcarpa* Bunge (Rutaceae), *Salix babylonica* L. (Salicaceae) (Evans 2008).

Singhiella simplex (Singh)

Sampled plants: *Ficus benjamina* L., *Ficus carica*

Collection locations: São Paulo (SP), 2010; Valinhos (SP), 2013

Remarks: species described as *Aleurocanthus simplex* by Singh in 1931, in *Ficus benghalensis* L., in India (Mound and Halsey 1978). Data on the species and their occurrence in Brazil were presented by Lima et al. (2015).

Distribution: United States of America, Venezuela, Puerto Rico, Panama, Mexico, Jamaica, Guadeloupe, Dominican Republic, Colombia, Cayman Islands, Barbados, Brazil, Cyprus, France, Italy, Turkey, Taiwan, Myanmar, Korea, Israel, India, China, Hong Kong (Evans 2008; EPPO 2022b).

Hosts: *Rhododendron indicum* (L.) Sweet (Ericaceae), *Ficus altissima* Blume, *F. benghalensis* L., *F. benjamina*, *F. aurea* Nutt., *F. binnendijkii* Miq., *F. citrifolia* Mill., *F. lyrata* Warb., *F. maclellandii* King, *F. microcarpa* L.f., *F. racemosa* L. (Evans 2008; EPPO 2022b), *F. elastica* (Lima et al. 2015), *F. carica* (Moraceae)

Tetraleurodes mori (Quaintance)

Sampled plant: *Glycine max* (L.) Merrill

⁵ Racca-Filho, F. and Lima, A.F. (2006). Novas ocorrências de aleirodídeos no território brasileiro (Hemiptera: Aleyrodidae). In XXI Congresso Brasileiro de Entomologia, Recife, PE, 2006. Resumos, ID:1262-2.

Collection location: Tailândia (PA), 2014

Remarks: species described as *Aleurodes mori* by Quaintance in 1899, in *Morus* sp., in the United States of America (Mound and Halsey 1978). This is the first record of *T. mori* in soybean.

Distribution: United States of America, Belize, Brazil, Colombia, Costa Rica, Cuba, El Salvador, Guatemala, Honduras, Jamaica, Mexico, Nicaragua, Panama, Puerto Rico, Trinidad & Tobago, Venezuela, Iran, Thailand, Vietnam, Marianas Islands (Evans 2008)

Hosts: *Acer negundo* L., *A. pseudoplatanus* L., *A. rubrum* L., *Acer* sp. (Aceraceae), *Rhus copallinum* L., *Rhus* sp., *Toxicodendron radicans* (L.) Kuntze (Anacardiaceae), *Ilex opaca* Aiton, *Ilex vomitoria* Aiton, *Ilex* sp. (Aquifoliaceae), *Betula* sp., *Carpinus caroliniana* Walter, *Carpinus* sp., *Corylus* sp., *Ostrya virginiana* (Mill.) K.Koch (Betulaceae), *Catalpa* sp., *Pyrostegia venusta* (Ker Gawl.) Miers, *Stizophyllum* sp. (Bignoniaceae), *Euonymus americana* L. (Celastraceae), *Cornus florida* L., *C. foemina* Mill., *C. sanguinea* L., *Cornus* sp. (Cornaceae), *Diospyros virginiana* L., *Diospyros* sp. (Ebenaceae), *Arbutus menziesii* Pursh, *Kalmia latifolia* L., *Vaccinium* sp. (Ericaceae), *Dichrostachys cinerea* (L.) Wight & Arn (Fabaceae), *Quercus* sp. (Fagaceae), *Liquidambar styraciflua* L. (Hamamelidaceae), *Aesculus californica* (Spach) Nutt. (Sapindaceae), *Persea borbonia* (L.) Spreng., *P. carolinensis*, *Persea* sp., *Umbellularia californica* (Hook. & Arn.) Nutt. (Lauraceae), *Magnolia macrophylla* Michx., *Magnolia* sp. (Magnoliaceae), *Ficus* sp., *Maclura pomifera* (Raf.) C.K.Schneid., *Morus alba*, *M. nigra* L., *M. rubra* L., *Morus* sp. (Moraceae), *Musa* sp. (Musaceae), *Myrica cerifera* L. (Myricaceae), *Eugenia* sp., *Psidium guajava* (Myrtaceae), *Nyssa* sp. (Nyssaceae), *Forsythia* sp., *Fraxinus americana*, *F. caroliniana* Mill., *F. profunda* (Bush) Bush, *Fraxinus* sp. (Oleaceae), *Argemone mexicana* L. (Papaveraceae), *Platanus occidentalis* L. (Platanaceae), *Ceanothus* sp., *Rhamnus crocea* Nutt. (Rhamnaceae), *Malus* sp. (Rosaceae), *Cephalanthus occidentalis* L., *Pinkneya bracteata* (Bartram) Raf. (Rubiaceae), *Citrus maxima*, *C. sinensis*, *C. nobilis*, *Zanthoxylum clava-herculis* L. (Rutaceae), *Bumelia* sp., *Sideroxylon celastrinum* (Kunth) T.D.Penn., *S. lycoides* L. (Sapotaceae), *Cyrilla racemiflora* L. (Cyrillaceae), *Tilia americana* L., *T. caroliniana* Mill., *Tilia* sp. (Tiliaceae), *Celtis laevigata* Willd., *Celtis* sp., *Ulmus americana* L., *Ulmus* sp. (Ulmaceae), *Callicarpa americana* L. (Lamiaceae) (Evans 2008), *Glycine max* (Fabaceae) (new record)

Trialeurodes manihoti (Bondar)

Sampled plant: *Manihot esculenta*

Collection location: Monte Alegre do Sul (SP), 2010

Remarks: species described by Bondar (1923) in cassava, in the state of Bahia, in Brazil. Infestations of this species have been reported in cassava crops in southern Santa Catarina (SC) (Lorenzi et al. 2015).

Distribution: Brazil (Evans 2008)

Host: *Manihot* sp. (Evans 2008), *Manihot esculenta* (Euphorbiaceae) (Lorenzi et al. 2015)

Trialeurodes vaporariorum (Westwood)

Sampled plants: *Gerbera jamesonii* Bolus ex Hook.f., *Primula obconica* Hance, *Zinnia elegans* Jacq. (IAC 18279), *Solanum viarum* Dun. (IAC 1557), *S. lycopersicum* (IAC 51979), *Brassica oleracea*, *Cucurbita* spp., *Sonchus oleraceus*, *Phaseolus vulgaris* L., *Leonurus sibiricus* L., *Rosmarinus officinalis* L., *Mentha spicata* L., *Ocimum basilicum* L., *Nicotiana tabacum* L., *Pelargonium* sp., *Hibiscus syriacus* L., *Psidium guajava*, *Rosa* sp.

Collection locations: Itatiba (SP), 2003, 2004; Ubatuba (SP); Campinas (SP); Andradas (MG), 2016

Jon H. Martin ident 2003, 2004; A.F. Lima ident 2016

Remarks: species described as *Aleyrodes vaporariorum* by Westwood in 1856, in *Gonolobus* sp., *Tecoma velutina*, *Bignonia* spp., *Aphelandra* spp., *Solanum* spp. and other plants, in England (Mound and Halsey 1978). In Brazil, the first observation of high infestations of this species under field conditions, especially in areas of tomatoes and green beans, occurred in the state of São Paulo (Lourenção et al. 2008).

Distribution: worldwide (see Mound and Halsey 1978 and Evans 2008)

Hosts: polyphagous (see Mound and Halsey 1978 and Evans 2008)

Trialeurodes variabilis (Quaintance)

Sampled plant: *Carica papaya* L. (IAC 8109)

Collection locations: Campinas, Macauba, Americana (SP), 1981; Petrolina (PE), 2001; Eunápolis, Itabela (BA), 2017
David Hollis ident 1981; Judith K. Brown and Rafael Caballero ident. 2001; A.F. Lima ident. 2017

Remarks: species described as *Aleurodes variabilis* by Quaintance in 1900, in *Carica papaya*, in the United States of America (Mound and Halsey 1978). In Brazil, infestations have been recorded in the states of São Paulo, Pernambuco, Bahia, Rio de Janeiro, and Espírito Santo (Rezende et al. 1981⁶; Fancelli et al. 2004; Lourenção et al. 2007; Martins et al. 2015). Martins et al. (2015)⁷ reported their presence in the municipalities of Linhares, Sooretama and Vitória, in the state of Espírito Santo, and Itaguaí, Nova Iguaçu, Rio de Janeiro and Seropédica, in the state of Rio de Janeiro, in addition to discussing their importance in papaya culture in Brazil.

As a natural enemy, *Encarsia hispida* De Santis (Hymenoptera: Aphelinidae) parasitizes *A. variabilis* in the state of Bahia (Lourenção et al. 2007).

Distribution: United States of America, Belize, Brazil, Colombia, Costa Rica, Cuba, Dominica, Dominican Republic, Ecuador, El Salvador, French Guiana, Guadeloupe, Guatemala, Haiti, Honduras, Jamaica, Mexico, Nicaragua, Panama, Puerto Rico, St. Croix, Trinidad & Tobago, Venezuela, Virgin Islands, Iran, Korea, Hawaii (Evans 2008).

Hosts: *Acer saccharum* Marshall (Aceraceae), *Carica papaya*, *Carica* sp. (Caricaceae), *Cyperus rotundus* (Cyperaceae), *Manihot esculenta*, *Manihot carthagenensis* (Jacq.) Müll.Arg. (Euphorbiaceae), *Coccoloba floribunda* (Benth.) Lindau (Polygonaceae), *Gardenia* sp. (Rubiaceae), *Citrus aurantiifolia*, *Citrus nobilis* Lour., *Citrus reticulata*, *Citrus sinensis*, *Citrus × paradisi* (Rutaceae) (Evans 2008).

AUTHORS' CONTRIBUTION

Conceptualization: Lourenção, A. L.; **Methodology:** Lourenção, A. L., Lima, A. F. and Bernacci, L. C.; **Writing – Original Draft:** Lourenção, A. L.; **Writing – Review and Editing:** Lourenção, A. L., Lima, A. F. and Bernacci, L. C.

DATA AVAILABILITY STATEMENT

All datasets were generated or analyzed in the current study.

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⁶ Rezende, J.A.M., Costa, A.S., Lourenção, A.L. and Yuki, V.A. (1981). Ocorrência da mosca branca *Trialeurodes variabilis* em mamoeiro no Estado de São Paulo. In VII Congresso Brasileiro de Entomologia, Fortaleza, CE, 1981. Resumos, T-187.

⁷ Martins, D.S., Lima, A.F., Barcellos, B.D., Fornazier, M.J., Queiroz, R.B., Fanton, C.J., Zanuncio Junior, J.S. and Fornazier, D.L. (2015). Mosca branca (Hemiptera: Aleyrodidae) em mamoeiro (*Carica papaya* L.). In VI Simpósio do Papaya Brasileiro, Vitória, ES, 2015. Anais, p. 1-6.

REFERENCES

- Bondar, G. (1923). Aleyrodídeos do Brasil. Bahia: Secretaria da Agricultura, Indústria e Obras Públicas, Seção de Pathologia Vegetal, 182 p.
- Buckner, J. S., Freeman, T. P., Ruud, R. L., Chu, C. C. and Henneberry, T. J. (2002). Characterization and functions of the whitefly egg pedicel. *Archives of Insect Biochemistry and Physiology*, 49, 22-33. <https://doi.org/10.1002/arch.10006>
- Byrne, D. N. and Bellows, T. S. Jr. (1991). Whitefly biology. *Annual Review of Entomology*, 36, 431-457. <https://doi.org/10.1146/annurev.en.36.010191.002243>
- Costa Lima, A. M. (1942). Sobre aleirodídeos do gênero “*Aleurothrixus*” (Homoptera). *Revista Brasileira de Biologia*, 2, 419-426.
- European and Mediterranean Plant Protection Organization (EPPO). (2022a). EPPO Global Database. *Parabemisia myricae* (PRABMY). Available at: <https://gd.eppo.int/taxon/PRABMY>. Accessed in: Jan, 2022.
- European and Mediterranean Plant Protection Organization (EPPO). (2022b). EPPO Global Database. *Singhiella simplex* (SINLSI). Available at: <https://gd.eppo.int/taxon/SINLSI>. Accessed in: Jan, 2022.
- Evans, G. A. (2008). The whiteflies (Hemiptera: Aleyrodidae) of the world and their host plants and natural enemies. Beltsville: USDA/APHIS, 703 p. Available at <https://sel.barc.usda.gov:8080/1WF/World-WhiteflyCatalog.pdf.2008>. Accessed in: Jan, 2022.
- Fancelli, M., Teixeira, V. I., Costa, R. M. B., Magalhães, B. C., Lourenção, A. L., Santos Jr., H. J. G. and Caldas, R. C. (2004). Infestação de *Trialeurodes variabilis* (Quaintance) (Hemiptera: Aleyrodidae) em genótipos de mamoeiro em Petrolina, Estado de Pernambuco. *Neotropical Entomology*, 33, 513-516. <https://doi.org/10.1590/S1519-566X2004000400019>
- Garcia, M. J. M., Fischer, I. H., Lourenção, A. L., Lima, A. F., Bueno, R. C. O. F. and Souza, E. S. (2013). Ocorrência de mosca-branca em *Annona squamosa* no estado de São Paulo. *Ciência Rural*, 43, 2139-2141. <https://doi.org/10.1590/S0103-84782013005000140>
- Hamon, A. B., Nguyen, R. and Browning, H. (1990). The bayberry whitefly, *Parabemisia myricae*, in Florida (Homoptera: Aleyrodidae: Aleyrodinae). Florida: University of Florida. *Entomology Circular*, n. 328.
- Hempel, A. (1922). Algumas espécies novas de Hemípteros da família Aleyrodidae. *Revista do Museu Paulista*, 2, 3-10.
- Hodges, G. S. and Evans, G. A. (2005). An identification guide to the whiteflies (Hemiptera: Aleyrodidae) of the Southeastern United States. *Florida Entomologist*, 88, 518-534. [https://doi.org/10.1653/0015-4040\(2005\)88\[518:AIGTTW\]2.0.CO;2](https://doi.org/10.1653/0015-4040(2005)88[518:AIGTTW]2.0.CO;2)
- Knapp, M., Palevsky, E. and Rapisarda, C. (2020). Insect and mite pests. In: Gullino, M. L., Albajes, R. and Nicot, P. C. (Eds.). *Integrated pest and disease management in greenhouse crops* (p. 101-146). Switzerland: Springer.
- Lima, A. F., Racca Filho, F. and Trindade, T. D. (2015). Mosca-branca-do-ficus, *Singhiella simplex* (Singh). In: Vilela, E. and Zucchi, R. A. (Eds). *Pragas introduzidas no Brasil: insetos e ácaros* (p. 358-370). Piracicaba: FEALQ.
- Lourenção, A. L., Alves, A. C., Fugii, C. G. Q. and Matos, E. S. (2008). Outbreaks of *Trialeurodes vaporariorum* (West.) (Hemiptera: Aleyrodidae) under field conditions in the State of São Paulo, Brazil. *Neotropical Entomology*, 37, 89-91. <https://doi.org/10.1590/S1519-566X2008000100014>
- Lourenção, A. L., Fancelli, M., Costa, V. A. and Ribeiro, N. C. (2007). Parasitismo em *Trialeurodes variabilis* (Quaintance) (Hemiptera: Aleyrodidae) por *Encarsia hispida* De Santis (Hymenoptera: Aphelinidae) em mamoeiro, no Brasil. *Neotropical Entomology*, 36, 147-149. <https://doi.org/10.1590/S1519-566X2007000100019>
- Marsaro Júnior, A. L., Racca-Filho, F., Raga, A. and Costa, V. A. (2015). New records of whiteflies (Hemiptera: Aleyrodidae) in Rio Grande do Sul State, Brazil. *Idesia*, 33, 143-145. <https://doi.org/10.4067/S0718-34292015000100015>
- Martin, J. H. (1987). An identification guide to common whitefly pest species of the world (Homoptera, Aleyrodidae). *Tropical Pest Management*, 33, 298-322. <https://doi.org/10.1080/09670878709371174>

- Martin, J. H. (2004). Whiteflies of Belize (Hemiptera: Aleyrodidae). Part 1 – introduction and account of the subfamily Aleurodicinae Quaintance & Baker. *Zootaxa*, 681, 1-119. <https://doi.org/10.11646/zootaxa.681.1.1>
- Martin, J. H. (2005). Whiteflies of Belize (Hemiptera: Aleyrodidae). Part 2 – a review of the subfamily Aleyrodinae Westwood. *Zootaxa*, 1098, 1-116. <https://doi.org/10.11646/zootaxa.1098.1.1>
- Martin, J. H. (2011). Description of a new genus and species of whitefly from *Lafoensia pacari* in Brazil (Hemiptera, Aleyrodidae, Aleurodicinae). *Zootaxa*, 2790, 54-60. <https://doi.org/10.11646/zootaxa.2790.1.4>
- Martin, J. H., Aguiar, A. M. F. and Baufeld, P. (2001). *Crenidorsum aroidophagus* Martin & Aguiar sp. nov. (Sternorrhyncha: Aleyrodidae), a New World whitefly species now colonising cultivated Araceae in Europe, Macaronesia and The Pacific Region. *Zootaxa*, 4, 1-8. <https://doi.org/10.11646/zootaxa.4.1.1>
- Martin, J. H. and Mound, L. A. (2007). An annotated check list of the world's whiteflies (Insecta: Hemiptera: Aleyrodidae). *Zootaxa*, 1492, 1-84. <https://doi.org/10.11646/zootaxa.1492.1.1>
- Mound, L. A. and Halsey, S. H. (1978). Whitefly of the world – A systematic catalogue of the Aleyrodidae (Homoptera) with host plant and natural enemy data. London: British Museum (Natural History)/Wiley & Sons.
- Peracchi, A. L. (1971). Dois aleirodídeos pragas de *Citrus* no Brasil (Homoptera: Aleyrodidae). *Archivos do Museu Nacional do Rio de Janeiro*, 54, 145-151.
- Raga, A., Marsaro Júnior, A. L., Racca-Filho, F. and Costa, V. A. (2011). Novos registros de Aleyrodidae (Hemiptera) no Estado de Roraima, Brasil. *Arquivos do Instituto Biológico*, 78, 439-441. <https://doi.org/10.1590/1808-1657v78p4392011>
- Sottoriva, L. D. M., Roel, A. R., Lima, A. F., Souza, R. O., and Souza, A. P. (2011). Levantamento de aleirodídeos em Campo Grande (MS) e região. *Revista Agrarian*, 4, 251-257.
- Trindade, T. D., Nascimento, L. K. F. and Muniz, A. C. (2015). Contribuição ao estudo de insetos (Arthropoda: Insecta) associados ao gênero *Ixora* L. (Angiospermae: Rubiaceae) no Brasil. *Ornamental Horticulturae*, 21, 161-164. <https://doi.org/10.14295/aohl.v21i2.733>
- Trindade, T. D., Trevisan, H. and Carvalho, A. G. (2019). Aleyrodidae in three forest fragments in the state of Rio de Janeiro, Brazil. *Arquivos do Instituto Biológico*, 86, 1-6. <https://doi.org/10.1590/1808-1657000672017>
- Walker, G. P. and Perring, T. M. (1994). Feeding and oviposition behavior of whiteflies (Homoptera: Aleyrodidae) interpreted from AC electronic feeding monitor wave forms. *Annals of Entomological Society of America*, 87, 363-374. <https://doi.org/10.1093/aesa/87.3.363>
- Walker, G. P., Perring, T. M. and Freeman, T. P. (2010). Life history, functional anatomy, feeding and mating behavior. In: Stansly, P. A. and Naranjo, S. E. (Eds). *Bemisia: bionomics and management of a global pest* (p. 109-160). Cham: Springer.