



Host Plants of Invasive Whiteflies - Rugose Spiralling Whitefly, *Aleurodicus rugioperculatus* Martin and Bondar's Nesting Whitefly, *Paraleyrodes bondari* Peracchi

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Abstract: Coconut tree is infested by various insect pests throughout the year. Among the array of coconut pests, the sucking pests, notably invasive whiteflies, present a significant threat to coconut yield. The Rugose spiralling whitefly (RSW), *Aleurodicus rugioperculatus* Martin and Bondar's nesting whitefly (BNW), *Paraleyrodes bondari* Peracchi, have inflicted significant damage across the major coconut-growing districts of Tamil Nadu since 2016 and 2018, respectively. These two are invasive pests that are polyphagous in nature. In its native habitat, it mostly attacks coconut trees and other broad-leaved hosts, but now its widening host range includes economic and horticultural crops as well as weed populations posing a significant threat to the farming community. Between December 2020 and October 2021, an extensive survey was conducted at fortnightly intervals in the southern districts of Tamil Nadu, namely Thoothukudi, Tenkasi, Tirunelveli, and Kanyakumari. The survey aimed to examine the expanding host range of RSW and BNW, revealed the presence of *A. rugioperculatus* in 46 host plants across 25 families and *P. bondari* in 25 host plants across 19 families, which included plantation crops, fruits, vegetables, spices, tubers, tree species, ornamental plants, and weed plants.

Keywords: Survey, *Aleurodicus rugioperculatus*, *Paraleyrodes bondari*, Host plants

The rugose spiralling whitefly (RSW), *Aleurodicus rugioperculatus* (Hemiptera: Aleyrodidae) is a serious exotic pest that causes much damage to coconut growing tracts of India. It was originally identified by Martin (2004) from Belize, Central America, which later spread to Mexico, Guatemala and Florida in Central and North America (Evans 2008). *Aleurodicus rugioperculatus* was reported as a serious pest on gumbo limbo trees, olive tree leaves and the underside of coconut fronds in 2009 in the Florida region (Stocks and Hodges 2012). In India, it has been reported from Tamil Nadu, Karnataka, Kerala and Andhra Pradesh (Selvaraj et al 2017). In Tamil Nadu, first identified during July-August, 2016 at Pollachi taluk of Coimbatore district (Selvaraj et al 2017). Later, the pest was reported from coastal regions of Andhra Pradesh during October-November, 2016 (Rao et al 2018). Chakravarthy et al (2017) reported *A. rugioperculatus* in Karnataka, Kerala, Tamil Nadu, Maharashtra, Gujarat, Himachal Pradesh and Sikkim. Mondal et al (2020) observed significant infestation of *A. rugioperculatus* in the coconut plantations at Mandouri in June 2019, which was the first report on the occurrence of this deadly insect in the Nadia

region of West Bengal. Recently also reported in the Saurashtra region of Gujarat in coconut (Jethva et al 2020). Selvaraj et al (2017, 2019) reported approximately 40 host plants including coconut, banana, mango, sapota, guava, cashew, ramphal, oil palm, maize, Indian almond, water apple, jack fruit and many other ornamental plants such as bottle palm, Indian shot, false bird of paradise and butterfly palm. Nandhini and Srinivasan (2022) documented 67 host plants, with ornamental plants leading (17), followed by fruit crops (14), medicinal plants (9), and vegetables (5). Additionally, identified host plants in categories like fibre crops, biofuels, flower crops, and more, each represented by varying numbers.

The bondar's nesting whitefly (BNW), *P. bondari* (Hemiptera: Aleyrodidae) was first reported in coconut plantations of Kayamkulam, Kerala in 2018. It feeds on more than 25 host plants (Josephraj Kumar et al 2019) which is also creating menace in the coconut gardens of Tamil Nadu recently. The nymphs and adults of *P. bondari* construct nesting chambers of woolly wax and the adults will be remaining on the nests for egg laying. The woolly wax nests will be seen on the under surface of the leaves. Omongo et al

(2018) reported the attack of *P. bondari* on cassava in Uganda. Raghuteja et al (2023) recorded host plants of bondar's nesting whitefly including Coconut, Oil palm, Banana, Cinnamon, False rubber, Mango, Jackfruit, Guava, Temple pod, and Hibiscus. Coconut and Oil palm exhibited the highest incidence and intensity, while *Hibiscus* showed the lowest incidence level recorded.

MATERIAL AND METHODS

Surveys were conducted on the host plants of invasive whiteflies regularly at fortnightly intervals in the southern districts of Tamil Nadu viz., Thoothukudi, Tenkasi, Tirunelveli and Kanyakumari (5 locations/ district) (Table 1) from December 2020 to October 2021. These surveys focused on host plants situated near coconut plantations infested with invasive whiteflies. Twenty plants of each host underwent examination to confirm the presence of Rugose spiralling whitefly and Bondar's nesting whitefly. Host plants were documented meticulously using portable cameras. These included plants bearing all life stages of *Aleurodicus rugioperculatus* and *Paraleyrodes bondari*. They were categorized into three groups: those containing only egg stages without progressing to nymphal and adult stages, those supporting eggs and nymphal stages but with no adult emergence, and those facilitating the complete development of Rugose spiralling whitefly and Bondar's nesting whitefly life stages, displaying eggs, nymphs, and adult colonies of both pests. Plants were carried out by referencing plant botany and weed science manuals, along with consultations with experts from the Department of Horticulture and Agronomy at V.O.C. Agricultural College and Research Institute, TNAU, Killikulam, Tamil Nadu, India. The various host plants attacked by invasive whiteflies were recorded during the survey and documented.

RESULTS AND DISCUSSION

The 46 host plants belonging to 25 families including plantation crops, fruits, vegetables, tubers, tree crops, ornamentals and weed species were identified as the host plants for *A. rugioperculatus* (Table 1). The host plants include 3 plantation crops viz., coconut, oil palm, fan palm, 11 fruit crops like banana, guava, water apple, citrus, sapota, mango, custard apple, soursop, mulberry, fig, avocado, 4 vegetables such as brinjal, bhendi, chilli, cucumber, 1 spice crop (curry leaf), 2 tubers (tapioca, taro), 9 tree species, 4 ornamentals and 12 weeds. Among the 46 host plants, 34 plant species comprise of all life stages of rugose spiralling whitefly whereas, egg and adult stages are only seen in 7 and 5 host plants, respectively (Table 2) (Plate 1). The incidence of rugose spiralling whitefly was severe in coconut and

banana ecosystem in the four districts of southern Tamil Nadu. The host plants of *A. rugioperculatus* was already reported by Alagar et al. (2020) who noticed 28 plant species under 21 families as host plants. Elango et al (2019) reported 20 host plants harbouring rugose spiralling whitefly from Coimbatore, Tiruppur, Erode, Theni, Pudukkottai and Kanyakumari districts. Srinivasan et al (2016) indicated 15 host plants of *A. rugioperculatus* belonging to 13 families in western zone of Tamil Nadu, Pollachi of Coimbatore district. Shanasa et al (2016) reported 17 host plant species under 11 families comprising of *A. rugioperculatus* in Kerala. In Pollachi, Tamil Nadu *A. rugioperculatus* was observed from coconut, arecanut, guava, wild almond, pepper, cocoa, mango, teak, banana, *Bauhinia*, *Annona squamosa*, *Ficus* sp., fish tail palm, etc (Chakravarthy et al 2017). In total, the pest has been observed on 118 host species comprising of edible plants, ornamentals, palm species, fruit crops and weed plants in Florida (Stocks and Hodges 2012, Francis et al 2016).

The studies on the host plants of *P. bondari* in different locations of southern districts of Tamil Nadu viz., Thoothukudi, Tenkasi, Tirunelveli and Kanyakumari (Table 1) indicated that 25 host plants belonging to 19 families were observed, including Arecaceae (1), Musaceae (1), Myrtaceae (1), Moraceae (2), Sapotaceae (2), Rutaceae (2), Annonaceae (1), Sapindaceae (1), Euphorbiaceae (2), Combretaceae (1), Meliaceae (1), Lamiaceae (1), Fabaceae (2), Oleaceae (1), Zingiberaceae (1), Verbenaceae (2), Asparagaceae (1), Solanaceae (1) and Poaceae (1). In addition, 16 new hosts of *P. bondari* viz., mulberry, sapota, citrus, egg fruit, rambutan, curry leaf, tapioca, Indian almond, neem, cassia, gliricidia, jasmine, red ginger, lantana, snake plant, Indian acalypha were also identified in the present study which was not earlier reported by other researchers (Plate 2). Seventeen host plants harbour all the life stages of *P. bondari* and 2 and 6 hosts consist of bondar's nesting whitefly eggs and adults, respectively (Table 2). The host plants of *P. bondari* reported by earlier workers include coconut, banana, guava, bhendi, chilli, *Populus alba*, *Duranta erecta* at Coimbatore and coconut at Namakkal (Banumathi et al 2020), coconut, guava, banana, noni, ficus, portia tree and an unidentified plant in Lakshadweep Islands (Selvaraj et al 2020), *Annona* sp., *Atrocarpus heterophyllus*, *Bridelia retusa*, *Capsicum annum*, *Cinnamomum verum*, *Cocos nucifera*, *Leucaena leucocephala*, *Macaranga peltata*, *Mangifera indica*, *Morinda citrifolia*, *Musa* sp., *Psidium guajava* and *Tectona grandis* in Kerala, Karnataka and Andaman and Nicobar Islands (Vidya et al 2019).

Table 1. Survey location, GPS coordinates and Host plants of Rugose spiralling whitefly and Bondar's nesting whitefly

District and location		GPS coordinates of the location		Host Plants	
Thoothukudi				Rugose spiralling whitefly	Bondar's nesting whitefly
Vellanputhukulam	8.4730° N, 77.8717° E			Coconut, Banana, Guava, Sapota, Tapioca, Taro, Neem, Indian Almond, Native goosberry, Creeping panic grass, Shoe flower, Prickly chaff flower, Thumbai, Black night shade, Chilli, Curry leaf, Indian acalypha, Fig.	Coconut, Banana, Sapota, Gliricidia, Neem, Indian acalypha.
Pandarapuram	8.4281° N, 77.8989° E			Coconut, Banana, Sapota, Mango, Teak, Tapioca, Brinjal, Chilli, Black night shade, Thumbai, Bhendi, Curry leaf, Indian Acalypha, Neem, Indian mulberry.	Coconut, Banana, Guava, Indian acalypha, Pipal tree, Teak, Neem.
Udangudi	8.4271° N, 78.0260° E			Coconut, Sapota, Mango, Tapioca, Chilli, Black night shade, Indian acalypha, Neem, Thumbai, Gliricidia.	Coconut, Indian acalypha, Creeping panic grass, Gliricidia, Teak, Banana, Tapioca.
Kayamozhi	8.5141° N, 78.0471° E			Coconut, Guava, Sapota, Chilli, Black night shade, Indian mallow, Croton, Teak, Pipal tree, Thumbai, Indian almond, Curry leaf, Bhendi, Brinjal.	Coconut, Banana, Indian acalypha, Pipal tree, Teak, Cassia tree.
Karunkulam	9.3723° N, 78.7551° E			Coconut, Sapota, Black night shade, Indian mallow, Teak, Croton, Thumbai, Indian almond, Curry leaf, Bhendi, Brinjal, Indian acalypha.	Coconut, Banana, Sapota, Pipal tree, Teak, Neem, Cassia tree, Curry leaf.
Tenkasi					
Vadagarai	9.0410° N, 77.2740° E			Coconut, Banana, Guava, Indian almond, Neem, Teak, Milk weed, Smooth crotalaria, Mango, Pipal tree, Thumbai, Black night shade, Brinjal, Bhendi, Chilli, Curry leaf.	Coconut, Guava, Banana, Sapota, Mulberry, Tapioca, Gliricidia, Indian acalypha, Jasmine, Pipal tree.
Pattakurichi	8.9660° N, 77.3576° E			Coconut, Banana, Guava, Citrus, Sapota, Brinjal, Bhendi, Pipal tree, Croton, Creeping panic grass, Thumbai, Indian almond, Indian mallow.	Coconut, Guava, Banana, Sapota, Pipal tree, Teak, Neem, Bird eye chilli, Indian acalypha, Curry leaf.
Melagaram	8.9511° N, 77.2965° E			Coconut, Banana, Citrus, Bhendi, Croton, Pipal tree, Native gooseberry, Thumbai, Teak.	Coconut, Guava, Banana, Bird eye chilli, Jasmine, Curry leaf, Indian acalypha, Tapioca.
Mathalamparai	8.9068° N, 77.3782° E			Coconut, Banana, Guava, Sapota, Chilli, Bhendi, Mango, Shoe flower, Neem, Brinjal, Teak, Milk weed, Curry leaf, Indian almond.	Coconut, Guava, Banana, Curry leaf, Cassia tree, Jasmine, Tapioca, Indian acalypha.
Ilanji	8.9613° N, 77.2793° E			Coconut, Banana, Guava, Citrus, Mango, Sapota, Black night shade, Brinjal, Bhendi, Curry leaf, Neem, Teak, Pipal tree, Shoe flower, Gliricidia, Thumbai, Indian almond.	Coconut, Guava, Banana, Sapota, Cassia tree, Jasmine, Common lantana, Indian acalypha, Creeping panic grass, Neem.
Tirunelveli					
Panagudi	8.3199° N, 77.5767° E			Coconut, Guava, Banana, Citrus, Sapota, Mango, Custard apple, Brinjal, Chilli, Curry leaf, Neem, Pipal tree, Cassia tree, Croton, Black night shade, Milk weed, Indian mallow, Smooth crotalaria, Thumbai, Gliricidia, Mulberry.	Coconut, Banana, Guava, Sapota, Citrus, Custard apple, Bird eye chilli, Common lantana, Indian acalypha, Creeping panic grass, Jasmine, Neem.
Nanguneri	8.4961° N, 77.6465° E			Coconut, Guava, Banana, Citrus, Sapota, Mango, Custard apple, Brinjal, Bhendi, Chilli, Neem, Pipal tree, Croton, Milk weed, Indian mallow, Smooth crotalaria, Indian acalypha, Thumbai, Gliricidia.	Coconut, Banana, Sapota, Guava, Custard apple, Tapioca, Curry leaf, Indian acalypha.
Thisayanvilai	8.3343° N, 77.8635° E			Coconut, Banana, Guava, Indian almond, Teak, Neem, Milk weed, Indian mallow, Smooth crotalaria, Mulberry, Indian acalypha, Thumbai, Chilli, Neem, Native gooseberry, Indian mulberry, Gliricidia, Mango.	Coconut, Banana, Sapota, Guava, Neem, Indian acalypha, Gliricidia, Bird eye chilli, Jasmine, Pipal tree.

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Table 1. Survey location, GPS coordinates and Host plants of Rugose spiralling whitefly and Bondar's nesting whitefly

District and location	GPS coordinates of the location	Host Plants	
		Rugose spiralling whitefly	Bondar's nesting whitefly
Valliyur	8.4014° N, 77.6174° E	Coconut, Banana, Guava, Indian almond, Neem, Teak, Milk weed, Smooth crotalaria, Croton, Gliricidia, Native gooseberry, Mango, Pipal tree, Thumbai, Mulberry, Creeping panic grass, Brinjal, Bhendi, Chilli, Curry leaf.	Coconut, Banana, Sapota, Guava, Tapioca, Curry leaf, Cassia tree, Jasmine, Teak, Gliricidia, Pipal tree.
Rosmiapuram	8.3514° N, 77.5652° E	Coconut, Banana, Smooth crotalaria, Brinjal, Chilli, Thumbai, Mulberry, Curry leaf, Citrus, Teak, Milk weed, Croton, Prickly chaff flower.	Coconut, Banana, Guava, Indian acalypha, Creeping panic grass, Pipal tree.
Kanyakumari			
Seethapal	8.2529° N, 77.4526° E	Coconut, Palmyra, Fan palm, Banana, Guava, Soursop, Wild jute, Neem, Avocado, Pipal tree, Cassia tree, Giant lily, Croton, Milk weed, Indian mallow, Indian acalypha, Creeping panic grass, Smooth crotalaria, Thumbai, Gliricidia, Wild indigo	Coconut, Banana, Guava, Sapota, Cassia tree, Gliricidia, Indian acalypha, Creeping panic grass, Neem, Rambutan.
Derisanamcope	8.2875° N, 77.4421° E	Coconut, Palmyra, Fan palm, Banana, Guava, Water apple, Sapota, Custard apple, Sapota, Mulberry, Fig, Bhendi, Chilli, Brinjal, Curry leaf, Taro, Indian almond, Teak, Neem, Malay gooseberry, Wild indigo, Native gooseberry, Wild cinnamon, Crape myrtle, Croton, Lobster claw, Shoe flower, Giant lily, Indian baywatch, Thumbai, Gliricidia, Indian mallow.	Coconut, Banana, Guava, Custard apple, Indian almond, Rambutan, Common lantana, Golden dew drop, Teak.
Erumpukadu	8.1491° N, 77.3916° E	Coconut, Palmyra, Fan palm, Banana, Guava, Water apple, Fig, Bhendi, Chilli, Brinjal, Curry leaf, Taro, Teak, Neem, Wild cinnamon, Crape myrtle, Croton, Shoe flower, Indian acalypha, Thumbai, Indian almond, Smooth crotalaria.	Coconut, Banana, Guava, Mulberry, Sapota, Citrus, Egg fruit, Rambutan, Indian acalypha, Pipal tree.
Villukuri	8.2225° N, 77.3535° E	Coconut, Palmyra, Banana, Guava, Fig, Bhendi, Chilli, Brinjal, Neem, Crape myrtle, Croton, Curry leaf, Citrus, Indian almond, Mango, Wild indigo, Milk weed, Cassia tree.	Coconut, Banana, Guava, Egg fruit, Bird eye chilli, Snake plant, Gliricidia, Red ginger.
NGO colony	8.1426° N, 77.4336° E	Coconut, Guava, Fig, Bhendi, Chilli, Brinjal, Neem, Croton, Shoe flower, Curry leaf, Citrus, Indian almond, Wild indigo, Milk weed, Thumbai, Smooth crotalaria, Croton.	Coconut, Banana, Guava, Sapota, Egg fruit, Custard apple, Curry leaf, Tapioca, Indian almond, Rambutan.

Table 2. Host plants and Life stages of rugose spiralling whitefly, *A. rugioferculatus* and Bondar's Nesting whitefly, *P. bondari*

Common name	Botanical name	Family	Life stage		
			Egg	Nymph	Adult
i) Complete life stages					
Coconut	<i>Cocos nucifera</i> L.	Arecaceae	+	+	+
Palmyra	<i>Borassus flabellifer</i>	Arecaceae	+	+	+
Banana	<i>Musa</i> spp.	Musaceae	+	+	+
Guava	<i>Psidium guajava</i> L.	Myrtaceae	+	+	+
Water apple/ Rose apple	<i>Syzygium samarangense</i> (Blume) Merr. & L.M. Perry	Myrtaceae	+	+	+
Citrus	<i>Citrus</i> spp.	Rutaceae	+	+	+
Sapota	<i>Manilkara zapota</i> L.	Sapotaceae	+	+	+
Mango	<i>Mangifera indica</i> L.	Anacardiaceae	+	+	+
Custard apple	<i>Annona squamosa</i> L.	Annonaceae	+	+	+
Soursop	<i>Annona muricata</i>	Annonaceae	+	+	+

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Table 2. Host plants and Life stages of rugose spiralling whitefly, *A. rugioperculatus* and Bondar's Nesting whitefly, *P. bondari*

Common name	Botanical name	Family	Life stage		
			Egg	Nymph	Adult
Mulberry	<i>Morus</i> spp.	Moraceae	+	+	+
Fig	<i>Ficus</i> spp.	Moraceae	+	+	+
Avocado	<i>Persea americana</i> Mill.	Lauraceae	+	+	+
Brinjal	<i>Solanum melongena</i> L.	Solanaceae	+	+	+
Bhendi	<i>Abelmoschus esculentus</i> (L.) Moench	Malvaceae	+	+	+
Chilli	<i>Capsicum annuum</i> L.	Solanaceae	+	+	+
Curry leaf	<i>Murraya koenigii</i> (L.) Spreng	Rutaceae	+	+	+
Tapioca	<i>Manihot esculenta</i> Crantz.	Euphorbiaceae	+	+	+
Indian Almond	<i>Terminalia catappa</i> L.	Combretaceae	+	+	+
Teak	<i>Tectona grandis</i> L.	Lamiaceae	+	+	+
Neem	<i>Azadirachta indica</i> A. Juss.	Meliaceae	+	+	+
Pipal tree	<i>Ficus religiosa</i> L.	Moraceae	+	+	+
Native goosberry	<i>Physalis minima</i> L.	Solanaceae	+	+	+
Cassia tree	<i>Senna siamea</i> (Lam.) H. S. Irwin & Barneby	Fabaceae	+	+	+
Wild cinnamon	<i>Cinnamomum malabatum</i> (Burm.f.) Blume	Lauraceae	+	+	+
Lobster claw	<i>Heliconia rostrata</i> Ruiz & Pav	Heliconiaceae	+	+	+
Croton	<i>Croton sparsiflorus</i> Morong	Euphorbiaceae	+	+	+
Wild indigo/ Fish poison	<i>Tephrosia purpurea</i> (L.) Pers	Fabaceae	+	+	+
Milk weed	<i>Euphorbia</i> spp.	Euphorbiaceae	+	+	+
Prickly chaff flower	<i>Achyranthes aspera</i> L.	Amaranthaceae	+	+	+
Creeping panic grass	<i>Brachiaria reptans</i> (L.) C.A. Gardner & C.E. Hubb.	Poaceae	+	+	+
Smooth crotalaria	<i>Crotalaria pallida</i> Aiton	Fabaceae	+	+	+
Gliricidia	<i>Gliricidia sepium</i> (Jacq.)	Fabaceae	+	+	+
Fan palm	<i>Chamaerops humilis</i> L.	Arecaceae	+	+	+
ii) Incomplete life stages					
Wild jute	<i>Corchorus</i> spp.	Malvaceae	+	-	-
Black nightshade	<i>Solanum nigrum</i> L.	Solanaceae	+	-	-
Crape myrtle	<i>Lagerstroemia indica</i> L.	Lythraceae	+	-	-
Indian baywatch	<i>Syzygium polyanthum</i> (Wight) Walp.	Myrtaceae	+	-	-
Giant lily	<i>Crinum asiaticum</i> L.	Amaryllidaceae	+	-	-
Malay gooseberry	<i>Phyllanthus acidus</i> Skeels	Phyllanthaceae	+	-	-
Taro	<i>Colocasia esculenta</i> (L.) Schott.	Araceae	+	-	-
Thumbai	<i>Leucas aspera</i> (Wild.) Link	Lamiaceae	-	-	+
Indian Acalypha	<i>Acalypha indica</i> L.	Euphorbiaceae	-	-	+
Indian mallow	<i>Abutilon indicum</i> L.	Malvaceae	-	-	+
Shoe flower	<i>Hibiscus rosa-sinensis</i> L.	Malvaceae	-	-	+
Indian mulberry	<i>Morinda coreia</i> Buch. -Ham.	Rubiaceae	-	-	+
Host plants of Bondar's Nesting whitefly, <i>P. bondari</i>					
i) Complete life stages					
Coconut	<i>Cocos nucifera</i> L.	Arecaceae	+	+	+
Banana	<i>Musa</i> spp.	Musaceae	+	+	+
Guava	<i>Psidium guajava</i> L.	Myrtaceae	+	+	+

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Plate 1. Host plants of rugose spiralling whitefly, *Aleurodicus rugiopectus* Martin



Plate 2. Hosts plants of Bondar's nesting whitefly, *Paraleyrodes bondari* Peracchi

Table 2. Host plants and Life stages of rugose spiralling whitefly, *A. rugioeperculatus* and Bondar's Nesting whitefly, *P. bondari*

Common name	Botanical name	Family	Life stage		
			Egg	Nymph	Adult
Mulberry	<i>Morus</i> spp.	Moraceae	+	+	+
Sapota	<i>Manilkara zapota</i> L.	Sapotaceae	+	+	+
Citrus	<i>Citrus</i> spp	Rutaceae	+	+	+
Custard apple	<i>Annona squamosa</i> L.	Annonaceae	+	+	+
Egg fruit	<i>Pouteria campechiana</i> (Kunth) Baehni.	Sapotaceae	+	+	+
Rambutan	<i>Nephelium lappaceum</i> L.	Sapindaceae	+	+	+
Bird eye chilli	<i>Capsicum annuum</i> L.	Solanaceae	+	+	+
Curry leaf	<i>Murraya koenigii</i> L. Spren	Rutaceae	+	+	+
Tapioca	<i>Manihot esculenta</i> Crantz.	Euphorbiaceae	+	+	+
Indian almond	<i>Terminalia catappa</i> L.	Combretaceae	+	+	+
Jasmine	<i>Jasminum sambac</i> (L.) Aiton	Oleaceae	+	+	+
Cassia tree	<i>Senna siamea</i> (Lam.) H. S. Irwin & Barneby	Fabaceae	+	+	+
Golden dew drop	<i>Duranta erecta</i> L.	Verbanaceae	+	+	+
Common lantana	<i>Lantana camara</i> L.	Verbenaceae	+	+	+
ii) Incomplete life stages					
Red ginger	<i>Alpinia purpurata</i> (Vieill.) K. Schum.	Zingiberaceae	+	-	-
Snake plant	<i>Dracaena</i> spp.	Asparagaceae	+	-	-
Neem	<i>Azadirachta indica</i> A. Juss.	Meliaceae	-	-	+
Teak	<i>Tectona grandis</i> L.	Lamiaceae	-	-	+
Pipal tree	<i>Ficus religiosa</i> L.	Moraceae	-	-	+
Gliricidia	<i>Gliricidia sepium</i> (Jacq.)	Fabaceae	-	-	+
Indian acalypha	<i>Acalypha indica</i> L.	Euphorbiaceae	-	-	+
Creeping panic grass	<i>Brachiaria reptans</i> (L.) C.A. Gardner & C.E. Hubb.	Poaceae	-	-	+

*(+ Present, - absent)

CONCLUSION

This study sheds light on whitefly host plants, notably *Aleurodicus rugioperculatus* and *Paraleyrodes bondari* in southern districts of Tamil Nadu. Surveys spanning 2020-2021 revealed whitefly infestations across diverse crops and plant species were documented. The invasive pests *A. rugioperculatus* and *P. bondari* have already been reported in coconuts, causing significant damage in Tamil Nadu. However, recent observations reveal that these pests have invaded 46 host plants across 25 families and 25 host plants across 19 families, respectively. This highlights the alarming situation for crop growers, as these pests could potentially spread to other cultivation areas as well. Categorizing host plants by life stages enhances our grasp of whitefly ecology and its impact, aiding in population monitoring and management strategies.

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