

RED PALM MITE INFORMATION

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Red palm mite, *Raoiella indica* Hirst (Acari: Tenuipalpidae), is a pest of coconut, areca palm, and date palms in Egypt, India, Iran, Israel, Mauritius, Pakistan, Philippines, Sri Lanka, Sudan and is probably widespread in tropical and subtropical regions in the Old World. The first Western Hemisphere report of the red palm mite was in 2004 from the eastern Caribbean island of Martinique. Since then the mite has been confirmed from Saint Lucia and Dominica in 2005; from Trinidad-Tobago, Guadeloupe, St. Martin, the Dominican Republic, and Puerto Rico in 2006; and from the US Virgin Islands, Jamaica, Granada, Haiti and Venezuela in 2007. In December 2007, the red palm mite was confirmed in Palm Beach Gardens, Broward County, Florida – this is the first record of the pest in the continental US. In all instances, this species has established itself on various palm species (Arecaceae), with **significant** outbreaks on coconut palms, *Cocos nucifera* L. Significant infestations have also been observed in the Caribbean on banana plants (*Musa* spp., Musaceae), heliconias (Heliconiaceae) and ginger (Zingiberaceae).



The explosive appearance of red palm mite in the Caribbean region makes it a **serious pest risk** for the subtropical areas of the United States, tropical Central and South America and the entire Caribbean region. South Florida is particularly at risk since red palm mite disperses via wind currents such as hurricanes, and transportation of infested plants or leaves.

The mites are usually found on the undersides of leaves, often in large groups of hundreds of individuals and are visible with the naked eye. The red palm mite is bright red with long spatulate setae (hairs). All life stages, including the eggs, are red, and adult females often exhibit black patches across their backs. The exuvial remains (cast skins) are white and are often more numerous than the living mites in very productive populations. The red palm mite can be distinguished from spider mites (Tetranychidae) by the red color, long spatulate setae and flattened bodies. Feeding mites cause localized yellowing of the leaves followed by tissue necrosis, especially in high densities, and could be confused with lethal yellowing in some palms.

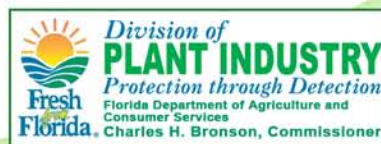


Transport of infested plants or plant material appears to be the major mode of spread for this mite. Before finding the mite in Florida, seed coconuts and handicrafts (hats, bowls, etc.) destined for Florida have been found to harbor live mites and viable eggs. Under natural conditions, the red palm mite disperses on the wind along with most other plant feeding mites, so a strong tropical storm or hurricane could also distribute the red palm mite over a wide area.



There are pesticides that can control the red palm mite. Federal and state agriculture officials are working with the University of Florida's Institute of Food and Agricultural Sciences (UF/IFAS) to develop treatment protocols. Long term plans are to find biological control agents that will keep the red palm mite in check. Some of the possible biological control agents that have been useful in the Eastern Hemisphere include predatory mites (Phytoseiidae), predatory beetles (Chrysomelidae), lacewings (Chrysopidae) and other mite predators.

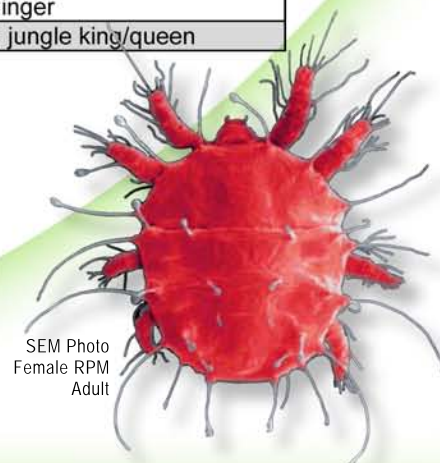
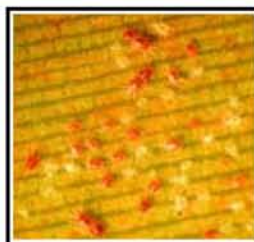
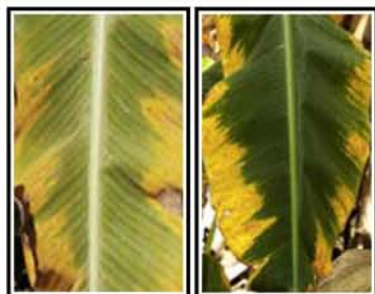
(L. McComie, MOA-Trinidad & Tobago)



For more information:
Contact Your County Extension Office at
<http://solutionsforyourlife.ufl.edu/map/index.html>
Visit www.doacs.state.fl.us/pi
Call Toll-free Helpline Number 888-397-1517

***Raoiella indica* (Red palm mite) Caribbean Host List**

Family	Scientific Name	Common Name(s)
Arecaceae	<i>Acoelorrhaphe wrightii</i> (Grises. & H. Wendl.)	Everglades palm
Arecaceae	<i>Adonidia merrilli</i> (Becc.) Becc. (= <i>Veitchia</i>)	Manila palm, Christmas palm
Arecaceae	<i>Aiphanes</i> spp.	multiple crown palm, ruffle palm
Arecaceae	<i>Areca catechu</i> L.	betel nut palm
Arecaceae	<i>Areca</i> spp.	
Arecaceae	<i>Bactris plumeriana</i> Mart.	coco macaco, prickly pole
Arecaceae	<i>Caryota mitis</i> Lour.	fishtail palm
Arecaceae	<i>Chamaedorea</i> spp.	chamaedorea palm
Arecaceae	<i>Cocos nucifera</i> L.	coconut palm
Arecaceae	<i>Dictyosperma album</i> (Bory) H. Wendl. & Drude ex Scheff.	princess palm, hurricane palm
Arecaceae	<i>Dypsis decaryi</i> (Jum.) Beentje & J. Dransf.	triangle palm
Arecaceae	<i>Dypsis lutescens</i> (H.Wendl.) Beentje & J.Dransf. (= <i>Chrysalidocarpus</i>)	areca palm, golden cane palm, butterfly palm
Arecaceae	<i>Licuala grandis</i> H. Wendl.	Licuala palm, ruffled fan palm
Arecaceae	<i>Livistona chinensis</i> (Jacq.) R. Br.	Chinese fan palm
Arecaceae	<i>Phoenix canariensis</i> hort. ex Chabaud	Canary Island date palm
Arecaceae	<i>Phoenix dactylifera</i> L.	date palm
Arecaceae	<i>Phoenix reclinata</i> Jacq.	Senegal date palm
Arecaceae	<i>Pritchardia pacifica</i> B.C. Seem. & H. Wendl.	Fiji fan palm
Arecaceae	<i>Pseudophoenix sargentii</i> H.Wendl. ex Sarg.	buccaneer palm
Arecaceae	<i>Pseudophoenix vinifera</i> (Mart.) Becc.	Cacheo, katié
Arecaceae	<i>Ptychosperma elegans</i> (R.Br.)Blume	solitaire palm, Alexander palm
Arecaceae	<i>Ptychosperma macarthurii</i> (H.Wendl. ex H.J.Veitch) H.Wendl. ex Hook.f.	Macarthur palm
Arecaceae	<i>Rhapis excelsa</i> (Thunb.) A. Henry ex Rehder	lady palm, bamboo palm
Arecaceae	<i>Roystonea borinquena</i> O.F. Cook.	royal palm
Arecaceae	<i>Syagrus romanzoffiana</i> (Cham.) Glassman	queen palm
Arecaceae	<i>Syagrus schizophylla</i> (Mart) Glassman	arikury palm
Arecaceae	<i>Washingtonia robusta</i> H. Wendl	Mexican fan palm
Heliconiaceae	<i>Heliconia psittacorum</i> L. f.	parrot flower
Heliconiaceae	<i>Heliconia caribaea</i> Lam.	wild plantain, Balisier
Heliconiaceae	<i>Heliconia rostrata</i> Ruiz & Pavon	lobster claw heliconia
Heliconiaceae	<i>Heliconia bihai</i> (L.) L.	Macaw flower
Musaceae	<i>Musa acuminata</i> Colla	edible banana, plantain
Musaceae	<i>Musa balbisiana</i> Colla	wild banana
Musaceae	<i>Musa uranoscopus</i> Lour	red-flowering banana
Musaceae	<i>Musa x paradisiaca</i> L.	edible banana, plantain
Musaceae	<i>Musa sapientum</i> L. (synonym of the above)	edible banana, plantain
Musaceae	<i>Musa corniculata</i> Rumph.	red banana
Musaceae	<i>Musa</i> spp.	banana, plantain
Pandanaceae	<i>Pandanus utilis</i> Bory	screw pine
Strelitziaceae	<i>Strelitzia reginae</i> Banks ex Dryard	bird of paradise, crane flower
Strelitziaceae	<i>Ravenala madagascariensis</i>	traveler's tree
Zingiberaceae	<i>Etlingera elatior</i> (Jack.) M. Sm. (= <i>Nicolaia</i>)	red torch ginger
Zingiberaceae	<i>Alpinia purpurata</i> (Vieill.) K. Schum	red ginger, jungle king/queen



SEM Photo
 Female RPM
 Adult