

BOARD MEETING HIGHLIGHTS

For the November 18, 2021, Meeting

F/ETCA BOARD OF DIRECTORS

Peggy Huang, **Chair**,
YORBA LINDA

Joseph Muller, **Vice Chair**,
DANA POINT

Trevor O'Neil,
ANAHEIM

Farrah Khan,
IRVINE

Scott Voigts,
LAKE FOREST

Patricia Kelley,
MISSION VIEJO

Mark A. Murphy,
ORANGE

Anthony Beall,
RANCHO SANTA MARGARITA

John Taylor,
SAN JUAN CAPISTRANO

David Penaloza,
SANTA ANA

Austin Lumbard,
TUSTIN

Donald P. Wagner,
COUNTY OF ORANGE, 3RD DIST.

Doug Chaffee,
COUNTY OF ORANGE, 4TH DIST.

Lisa Bartlett,
COUNTY OF ORANGE, 5TH DIST.

Ryan Chamberlain, Ex-Officio
Member, CALTRANS DIST. 12

SJHTCA BOARD OF DIRECTORS

Patricia Kelley, **Chair**,
MISSION VIEJO

Will O'Neill, **Vice Chair**,
NEWPORT BEACH

Richard Hurt,
ALISO VIEJO

Arlis Reynolds,
COSTA MESA

Richard Viczorek,
DANA POINT

Farrah Khan,
IRVINE

Janine Heft,
LAGUNA HILLS

Fred Minagar,
LAGUNA NIGUEL

Cynthia Conners,
LAGUNA WOODS

John Taylor,
SAN JUAN CAPISTRANO

David Penaloza,
SANTA ANA

Donald P. Wagner,
COUNTY OF ORANGE, 3RD DIST.

Lisa Bartlett,
COUNTY OF ORANGE, 5TH DIST.

Ryan Chamberlain, Ex-Officio
Member, CALTRANS DIST. 12

SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR AGENCY BOARD APPROVES BOND REFUNDING THAT COULD YIELD MORE THAN \$100 MILLION IN SAVINGS

The San Joaquin Hills Transportation Corridor Agency (SJHTCA) Board of Directors unanimously approved a bond refunding transaction that could result in significant savings.

Current low interest rates have provided the SJHTCA an opportunity to authorize a refunding of \$1.05 billion of its Series 2014A bonds that are callable at par in 2025. The move will not extend any bond maturity dates and is expected to decrease annual debt payments, resulting in reduction of debt service payments of more than \$100 million, net of all transaction costs.

The bond refunding transaction will be based on the model that the Foothill/Eastern Transportation Corridor Agency (F/ETCA) utilized for its successful bond refunding earlier this year, which saved the Agency \$220 million—adding to the \$400 million in savings the Agency realized from previous transactions.

SJHTCA's bond refunding transaction will allow for increased cash flow and reflects the Board's continued sound financial management and strong commitment to fiscal stewardship and providing opportunities for future Boards to pay down bonds early.

Earlier this month, S&P Global Ratings recognized the management and financial strength of the Agency and upgraded the SJHTCA's senior-lien and junior-lien bonds to A and A- respectively, with outlook stable — a significant rating upgrade in light of the continued economic impacts of pandemic.

Both Agencies remain in a strong financial position as Orange County's economy emerges from the impacts of the pandemic.

FOOTHILL/EASTERN TRANSPORTATION CORRIDOR AGENCY WINS PRESTIGIOUS AWARD FOR BOND REFUNDING TRANSACTION

The F/ETCA was awarded the "Deal of the Year" for the Far-West Region category from Bond Buyer for the Agency's innovative bond refunding transaction that took place earlier this year. Bond Buyer selected F/ETCA as the winner because of the significant savings relative to conventional alternatives, and also because the F/ETC transaction was then used as a model for other issuers.

As a winner in the Far-West Region category, the F/ETCA is also a finalist for Bond Buyer's national "Deal of the Year" award, which will be announced in December.



Vector of the Month, Tropical Rat Mite



Mites are very small arthropods that usually need to be viewed under a microscope. Some mites serve as parasites to vertebrates, but most feed on plants, or feed/attack other arthropods. Without their normal hosts, the tropical rat mite, the northern fowl mite, and tropical fowl mite, will feed on humans.

The tropical rat mite (*Ornithonyssus bacoti*) is a parasite of roof rats (*Rattus rattus*) and Norway rats (*Rattus norvegicus*), which are commensal rodent species found in association with humans and living accommodations worldwide. Many collection records are known of *O. bacoti* from a wide variety of mammals including numerous ones from wild rodents and also a few from squirrels species, rabbits, skunks, and foxes. When these primary hosts are absent, *O. bacoti* will migrate into living areas or structures to feed on human or animal hosts. They can crawl long distances to secure a blood meal.

Mites locate potential hosts by seeking out carbon dioxide (result of respiration) and heat, therefore making them drawn to areas with greatest human activity, such as kitchens, work areas, family rooms, and bedrooms. They are also attracted to frequently used furniture (sofas, beds, etc.) and will bite occupants as they sleep.

One must get rid of rat infestations in order to rid of the tropical rate mites. Rats should be controlled with snap traps and glue boards if indoors. Be aware that killing rats may increase mite activity, since they will search for other hosts.

Look for areas of rodent activity and remove any stored food caches, fecal pellets, and nesting material (which can be found behind large objects, inside old furniture, storage boxes lined with any soft material like shredded paper, rags, insulation, old clothing, or furniture stuffing). Wear plastic gloves and a dust mask to prevent inhaling dust contaminated with feces or urine. Before disposing of the material in a plastic bag, spray the area lightly with a disinfectant (Lysol) and gather up the materials with disposable paper towels. Seal the bag tightly and throw it away in the trash.

Mites in carpet and furniture can be vacuumed. Pesticide room foggers can be used to temporarily control mites on exposed surfaces. Be sure to follow pesticide label directions. In a bedroom, remove all lines, vacuum the mattress, and cover it with a sheet, use a fogger (pesticide), and wash the sheets, and then replace the sheet that covered the mattress. Once treatment is complete, the room can be safely entered.

Detecting and Controlling Biting Mites Within Structures

By: Andrew Mason Sutherland ,Published on: December 17, 2020 Most pest management professionals have served clients who swore they were being bitten by unseen pests. Perhaps the usual suspects (bed bugs, fleas, and mosquitoes) were ruled out by thorough inspection and monitoring devices. But what about mites? There are several species of mites known to bite humans within homes and other structures, many times causing significant physical symptoms and psychological distress. Clients can easily fall prey to misinformation online when learning about these tiny pests, however, so be prepared to educate them and help them solve their problem.



Figure 1. Adult tropical rat mite. (Credit: Jack Kelly Clark)

In all cases, biting mites found indoors are blood-sucking nest parasites of other animals living nearby, especially rodents or birds. The most common species in California, the tropical rat mite (*Ornithonyssus bacoti*) (Figure 1), is often associated with the nests and runways of roof rats and other commensal rodents. Also common are northern fowl mites (*Ornithonyssus sylviarum*), known to inhabit nests of commensal birds, such as pigeons, starlings, sparrows, and swallows. Less common but perhaps increasing in prevalence is the chicken mite or red mite (*Dermanyssus gallinae*).

All three of these common species will take blood meals from humans, especially if their primary hosts have been controlled, removed, or have migrated away. For instance, successful rat control programs (Figure 2) may result in hundreds of starving rat mites wandering nearby areas in search of blood. If rats were nesting in wall voids, attics, subareas, or living spaces, then there is a good chance the resident rat mites will be attracted to the humans in the structure when the rats are no longer around.

A similar phenomenon occurs when migratory birds leave nests in autumn if nests are situated in window alcoves, eaves, or other areas abutting a living space. With the rise in popularity of backyard chickens (Figure 3), primary hosts for both northern fowl mites and chicken mites, problems can occur when coops are adjacent to walls of the home or near windows or exterior doors. Mite populations associated with chickens reportedly peak and are most likely to affect humans in spring and summer, while rat mite issues tend to be most common in late summer and autumn. Problems can occur any time of year, of course, when the primary host has been removed.

Detecting Mites



Figure 2. Roof rat captured in live trap. (Credit: N Quinn)

Mites may become trapped on sticky traps and glue boards placed at floor-to-wall junctions and in corners; look at the edges of the glue deposit on these traps with a 10X hand lens. Another detection trick is to use double-sided tape. With the client's permission and guidance, apply double-sided tape to walls and furniture legs near areas where bites have occurred; wandering mites may become stuck on the edge of the tape. Sticky traps and tape may not preserve mites well enough for positive identification, but they can confirm that mites are present and may be responsible for the bites.

Such monitoring tools can also give clues as to where the nest of the primary host is or was. In multi-unit housing situations, the source of these wandering mites may be in adjacent units, the hallway, stairwells, or utility areas. In single-family homes, the source may even be outside, such as a bird or rat nest in the landscape. Tropical rat mites are known to travel along pipes, utility wires, tree branches, fencing, and exteriors of structures to find new hosts.

Identifying Mites

The best way to confirm a biting mite issue is to capture a specimen. Though very small (about 1/16 inch (1.5 mm) or less in diameter), all three common species can be observed without magnification. Mites may be yellowish or whitish before feeding but will be dark red when engorged with blood. Ask the client about areas of the home where bites are most common. When active, mites may be seen crawling on walls, floors, or furniture. For positive identification, mites should be captured alive and preserved in rubbing (isopropyl) alcohol or ethanol (at least 70%). This can be accomplished with the help of a fine wet paintbrush and a ready vial of alcohol.

Identification to species requires clearing and slide mounting of the specimen and close examination by an acarologist (mite specialist). Some county vector control programs can identify mite specimens and some entomologists can prepare and photograph specimens, but there are few acarologists in California who may be able to provide identification services. Be prepared for such positive identification to take a week or longer.

Managing Mites

Once mites have been confirmed, management should focus on removal of the primary hosts and their nests. Humans are incidental hosts and are not known to support reproducing populations of *Ornithonyssus* and *Dermanyssus*. That means that, in theory, once the rat or bird hosts have been eliminated from the structure, the mites will slowly die. Depending on temperature, season, and mite life stage, however, this could take weeks. Some experts report that tropical rat mites can survive without primary hosts for six weeks or longer, feeding incidentally on humans and their pets that entire time, often causing red itchy welts.



Figure 3. Backyard chickens can be a source of biting mites. (Credit: J Ersan)

If the source of the mites is known, exclusion services can be offered to seal the pest's access points. Regular vacuuming and surface cleaning will remove or kill wandering mites and so should be recommended to your client or provided as part of your service. Also, pulling beds away from the walls can be very effective. As soft-bodied arthropods, mites are vulnerable to contact insecticides such as soaps and oils, but these products may not be labeled for indoor use and may damage wall coverings, flooring, and other furnishings. Some professionals have had success with essential oil products and even claim they provide short term repellency, but research has not been conducted to confirm these observations.

Residual insecticides, especially pyrethroids, may be effective against mites, and some are labeled for use indoors. Such products should be applied between suspected mite sources and areas where bites occur, in narrow bands on surfaces unlikely to be touched by residents. Insecticides will not solve a biting mite problem if the primary hosts are still present. In all cases, refer to product labels to ensure legal application site, method, and rate, and to prevent damage to furnishings.

Biting mites may be more common than we realize, escaping detection due to their small size and their cryptic habits. Much research still needs to be done to better understand the biology and ecology of these pests as well as to develop effective monitoring and management tools. Sometimes, mites cannot be detected, and rodents and birds are seemingly not present, but your client's dermal symptoms ("bites") persist. In such cases, it may be prudent to consider other causes of dermatitis, such as environmental irritants, reactions to medications or drugs, stress, some medical conditions, or even delusional infestation (aka delusory parasitosis), a psychiatric condition.

ORANGE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT

MONTHLY REPORT: Yorba Linda

November



	Monthly	Year to Date (YTD)	County Monthly	County YTD
OPERATIONS				
Service Requests Completed:	13	172	322	4,908
Mosquitoes:	12	135	232	3,750
Rats:	1	25	46	577
Rifa:	0	10	41	522
Number of Swimming Pools Treated/Inspected:	16	360	563	8,243
Hours Spent Treating/Inspecting Gutters	6.5	122	259	6,745.0
Undergrounds Treated:	0	129	932	24,528
Acres of Flood Channels Treated:	0.9	13.333	45.8	1002.5051
Acres of RIFA Treated/Inspected:	159	2,495	4,024	62,876
Number of Inspection Treatments:	49	431	1,511	16,463
LABORATORY				
Adult Mosquitoes Collected:	43	2087	10,997	197,671
Collected From Trustee Home:	0	0	0	0
Invasive Aedes	0	48	126	4,494
Mosquito Pools (Samples) Tested:	3	87	306	5,835
WNV Positive Samples:	0	0	2	51
WNV Positive Birds:	0	1	0	7
Number of Human Infections/Deaths:	0	0	1	2
Fleas, Ticks, and Others Tested:	-	-	-	2,173
COMMUNICATIONS				
Outreach Events Attended:	0	0	0	13
General Presentations:	0	2	0	39
Educational Program Presentations:	0	0	15	123
Calls Received	-	-	132	2,821

PROJECTS IN COLLABORATION WITH OCMVCD

None at this time

COUNTY RESPONSE LEVEL / AVERAGE RATING:

Normal Season (1.0 to 2.5)
Elevated Risk (2.6 to 4.0)
High Risk (4.1 to 5.0)

TOTAL 7

AVERAGE 2.33