**Response to reviews for the article “First report of *Phyllocoptes fructiphilus* Kiefer, the vector of the Rose Rosette Virus, in Florida”:**

Xavier Martini, Austin Fife, Samuel Bolton, Mathews Paret, Jessica Leigh Griesheimer:  
  
Thank you for submitting your paper, "First report of Phyllocoptes fructiphilus Keifer, the vector of the Rose Rosette Virus, in Florida," to the Journal for consideration.  Expert referees have now reviewed it, and there are a number of minor points (see enclosed comments) that need some attention before the Editors are able to recommend acceptance of your paper. We ask you to submit your revision using our online system.

When resubmitting your paper you must provide a point by point list of your response to the reviewers' and Editor's comments on your paper including where you have made changes to your manuscript.

Before you resubmit your paper, please carefully proof-read the manuscript to minimize typographical, grammatical, bibliographical errors and make sure it is properly formatted according to the author instructions.  In addition to submitting a final version please submit a copy that highlights any changes to the text in red.

I look forward to receiving your revised manuscript.

Kind regards,  
Dr. Kirsten Pelz-Stelinski  
University of Florida  
[pelzstelinski@ufl.edu](mailto:pelzstelinski@ufl.edu)

**Response to Decision Letter from the authors:**

**Thank you for your time and patience as we revise the article. We appreciate your feedback.**

**I hope that these revisions helped to clarify the writing and addressed the errors and concerns mentioned in the revision. We are extremely grateful for your patience and thoughtful comments.**

**Thank you for your time and patience,**

**--Austin Fife**

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Reviewer A:

A well written note about the work to determine id this mite is in Florida. I have put a few comments for consideration.

I would also encourage the authors to use the spanish translation for the disease/virus that has already been published by the NCPN in their fact sheet on RRD instead of their translated name.

Recommendation: Accept Submission  
  
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**Responses to Reviewer A:**

**Thank you for reviewing our article. We have made the following changes based on your remarks:**

**Lines 33-34:** ‘they followed the range expansion of the non-native noxious weed Rosa multiflora (Thunb.) towards the east coast’ **Comment**: “Although this is part of the story, the final rapid spread into commercial roses seems to be In part to the spread of asymptomatic but infected roses in commercial channels”

**Response from authors: We agree that asymptomatic infections have played a role in the spread of RRD into commercial roses. Unfortunately, we are not aware of any available methods which are able to detect asymptomatic infections at this time, which is why we have not included this commentary in the manuscript.**

**Lines 35-36:** ‘RRD was detected in Florida in 2014 on 15 plants’ **Comment:** “Were these found on recently imported plants or established plants…I think it was on plants at a nursery and they imported the plant material to grow them out to selling size….”

**Response from authors: Sentence was reworded to say ‘In 2013 a nursery in Quincy, Gadsden County, FL detected witches’ brooms and other RRD symptoms on 15 roses which had been imported from out of state.’**

**Line 45:** ‘Rose species’ **Comment:** “I thought you sampled cultivated roses and not rose species”

**Response from the authors: Changed to say ‘Rose cultivar/species’. This collecting process is part of a larger sampling project/survey. The samples which contained *P. fructiphilus* were cultivars, but our sampling efforts on a larger scale are not limited to cultivated roses. We decided to release a first report to inform the region and raise awareness of the issues at hand.**

**Line 43:** ‘*P. fructiphilus*’ **Comment:** “Your sieving process would most likely eliminate the predator mites as they are much larger than Pf – so how did you count the number/type of predatory mites?”

**Response from the authors: Lines 51 to 57 were rewritten to address our treatment of predatory mites. Lines 53 to 55 clarifies: ‘The 53 μm and 25 μm sieves were processed separately; the 53 μm sieve retains larger mites while the 25 μm sieve retains smaller mites, including *P. fructiphilus*.’**

**Line 53:** ‘*ml*’ **Comment:** “mL”

**Response from the authors: Corrected to “mL”**

**Line 66:** ‘*However, none*’ **Comment:** “~~However,none~~, None”

**Response from the authors: Deleted “However”**

**Line 73:** ‘significant increase in the P. fructiphilus population between the two sampling dates’ **Comment: “**How did you standardize the counts? Per gram of tissue? Were these counts from the same type of tissue?”

**Response from the authors: added the following to line 45: “The average sample contained 26.8 ± 1.5 g of undried plant tissue”. The initial experiment was designed to be a qualitative survey of predatory mite species present on roses in the region, looking for native biocontrol candidates. We since have expanded our focus and changed our protocols to measuring the dry weight of our plant materials.**

**Lines 106-107:** ‘Virus Rosetón Rosal, el agente causal de la Enfermedad Rosetón Rosal (ERR) (Bunyavirales: Emaraviridae).’ **Comment:** “Please note that in the NCPN publication about RRD the name of RRD is translated as follows: arrosetamiento de la rosa (EAR) – I would suggest you use the same name in Spanish”

**Response from the authors: Name changed to reflect NCPN publication terminology. Thank you, we were unaware of any Spanish language publications on the topic. I would be interested to read any other publications in Spanish you may be aware of.**

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Reviewer B:

Very important report, I did not notice if the article included photos of the rose plants, but it could be helpful to have a photo to help the reader to understand under the circunstances were the mites were present.  I did not see a list of identification of the species or varieties of the roses that were sample, hope the authors consider to mention or list them as well. MInor comments, please see the file attached.

Recommendation: Accept Submission  
  
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**Responses to Reviewer B:**

**Thank you for taking your time to review our article. We have made the following changes based on your remarks:**

**Line 43:** ‘eriophyid’ **Comment**: “There are 3 known species of eriophyid mites moving in the central and east of the U.S., the other 2 species may be in the area as well…”

**Response from authors: Correct. The species identity of *P. fructiphilus* was checked and confirmed by Dr. Sam Bolton of FDACS. We have not encountered either *Eriophyes eremus* nor *Phyllocoptes adalius* at this time, but we are on the lookout for different eriophyid species.**

**Line 64:** ‘roses’ **Comment**: “Would be excellent if it is indicated the species and varieties of the roses samples”

**Response from authors: Added ‘knockout’ (Line 36) and ‘Pink Double Knock Out®’ (Lines 64) to clarify the cultivars examined in this report.**

**Line 70:** ‘roses’ **Comment**: “Species, varieties”

**Response from authors: added ‘Pink Double Knock Out®’**

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Reviewer C:

The manuscript by Fife et al. provides a clear description of the first finding and subsequent survey for Phyllocoptes fructiphilus, the only known vector of rose rosette virus. A number of comments and suggestions for clarifying the text are included in the attached 'Track Changes' version of the submitted file. Correction of the orthography for the virus name (both taxonomic and common name), and labeling of the dorsal and ventral views of the mite are the most important points.

This manuscript is certainly worthy of publication of a suitably revised version.

Recommendation: Revisions Required  
  
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**Responses to Reviewer C:**

**We are grateful for your help reviewing this article. We have made the following changes based on your remarks:**

**Line 24:** ‘plant-feeding’ **Comment**: “All eriophyoid (including eriophyid) mites are phytophagous, so ‘plant-feeding’ is not strictly necessary.”

**Response from authors: ‘plant-feeding’ deleted**

**Line 25:** ‘Eriophyoid’ **Comment**: “Although ‘eriphyoid’ (Acari, Eriophyoidea) and ‘eriophyid’ (family Eriophyidae) are correct in referring to *Phyllocoptes fructiphilus*, the difference may be confusing to non-specialists. You could simplify and use only ‘eriophyid’ as used elsewhere in this communication (e.g. l.24, l.59).”

**Response from authors: changed to ‘eriophyid’**

**Line 27:** ‘*Rose rosette virus* (RRV)’ **Comment**: “Strictly speaking, the taxonomic species (a theoretical construct) - correctly ‘*Rose rosette emaravirus’* - does not have a vector, and is unable to infect plants. That is due to the virus (common name = ‘rose rosette virus’ – all lower case) is the physical entity which infects plants and has a vector. Note also that only the virus common name can be abbreviated. If it is desired to use the species name here, and to introduce the virus abbreviation, the most appropriate way would be ‘*Rose rosette emaravirus* (rose rosette virus, RRV).’”

**Response from authors: Thank you. Changed to ‘*Rose rosette emaravirus* (rose rosette virus, RRV).’**

**Line 34: ‘***Rosa multiflora*’ **Comment:** “Note that *Rosa multiflora* is commonly used as a rootstock for garden roses – so not always a noxious weed.”

**Response from the authors: Removed ‘noxious weed’. Excellent point, otherwise ‘Seven Sisters’ could be considered a weed!**

**Lines 53-57:** ‘the traps mites that are less than average size of *P. fructiphilus*’ **Comment:** “Perhaps better to say that *P. fructiphilus* are retained by the 25 µm screen.”

**Response from the authors: Lines rewritten to say ‘retain’ and clarify sieving methodology**

**Lines 80-83:** ‘U.S. rose industry stands to lose millions in the coming years.’ **Comment:** “Plus also the loss of many established plantings, affecting both homeowners and commercial landscape sites.”

**Response from the authors: edited to say ‘There is a critical need to develop methods to manage P. fructiphilus and RRV, or homeowners, commercial landscapers, and U.S. rose industry stands to lose millions of dollars and established plantings in the coming years.’**

**Line 90:** ‘primary’ **Comment:** “Actually the only known vector”

**Response from the authors:**

**Line 90:** ‘*Rose rosette emaravirus*’ **Comment:** “The correct taxonomic name; the virus common name is ‘rose rosette virus’, without any capitalization or italic font.”

**Response from the authors:**

**Line 91:** ‘Bunyavirales: Fimoviridae, Emaravirus’ **Comment:** “Unlike plants and animal taxonomy, all levels of plant virus taxonomy are presented in italic font.”

**Response from the authors: Thank you. Italicized.**

**Line 142:** ‘Gray areas’ **Comment:** “Is it correct that there is only one grey dot (in Fig. 1B)? Does each dot correspond to a single plant, rather than a ‘site’? The text indicates 33 plants, and there appear to be 33 ‘dots’, of which all but one are orange.”

**Response from the authors: corrected line 70 to indicate ’33 sites’. Many of the locations had more than one rose plant, forming hedgerows. Only one sample was taken from each site. No eriophyid mites were detected in the sample from the site with the gray dot.**

**Fig. 2: Comment:** “labeling of the dorsal and ventral views of the mite are the most important points”

**Response from the authors: Text changed in Line 157 to ‘(B) Enlargement of prodorsal shield to show detail (scalebar = 20 µm).’ to clarify. Both views are dorsal views of the mite. Figure 2A is the dorsal aspect of the whole mite, and Figure 2B is an enlargement of the prodorsum. The prodorsal shield is a key character which identifies this mite as *P. fructiphilus*, which is why we decided to enlarge this detail.**

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Reviewer D:

The MS is well written and made an important discovery related to RRD which is a serious issue in other parts of the US. FL has one the largest rose industry and this findings is very critical so that the growers are aware. This MS should be published.

Few comments to consider:

Line 32: Change to U.S. to be consistent.

Line 35: Were the plants with symptom found from nursery or landscape? If nursery.

Line 38: “acting as a vector for the disease”. Were the RRD present in the landscape or nursery? If not present, how can you survey mites on the RRD plants?

Line 39: Please say where Leon Co. is located?

Lines 63-66: “These roses were tested for RRV with RT-qPCR and Reverse Transcription Recombinase Polymerase Amplification (RT-RPA) (Babu et al. 2016, 2017). However, none of the plants infested with P. fructiphilus were positive for RRV.” Were the RT-qPCR and RT-RPA techniques capable of detecting RRV on asymptomatic plant tissue? If yes. This is important and please keep this sentence. Also, concisely indicate the primers and essential procedures pertaining to this technique used here. If not, please delete. This is not adding anything instead will confuse readers.

Lines 73-74: Same comment as indicated before.

Lines 75-76: “…RRV is currently not established in Florida” The review think that this is bold statement. It may be true for the region of FL where the sampling was conducted. How can the authors say that RRV is not present in entire FL? Have you tested roses from different parts of the state? It is possible that the plant may not show symptoms but still carry the virus. Please clarify.

Lines 73 and 93: Please be careful when you say “no virus was found”. Maybe, add a phrase “based the detection tool developed to date.” Or something similar.

Fig. 1C: Axis lines are not visible.

Recommendation: Revisions Required  
  
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**Line 32:** ‘United States’ **Comment:** “Change to U.S. to be consistent.”

**Response from the authors: changed to ‘U.S’ for consistency**

**Line 35:** ‘RRD was detected in Florida in 2014 on 15 plants’ **Comment:** “Were the plants with symptom found from nursery or landscape? If nursery.”

**Line 38:** ‘acting as a vector for the disease’. **Comment:** “Were the RRD present in the landscape or nursery? If not present, how can you survey mites on the RRD plants?”

**Line 39:** **Comment:** “Please say where Leon Co. is located?”

**Response from the authors, Re: Line 35, 38 and 39: Lines rewritten to say ‘In 2013 a nursery in Quincy, Gadsden County, FL detected witches’ brooms and other RRD symptoms on 15 knockout roses which had been imported from out of state. 8 symptomatic plants were tested and found positive for RRD. *P. fructiphilus* were not detected on the roses at that time (Babu et al. 2014).’ The plants displayed symptoms in a nursery and were tested, but no mites were detected by that team at the time (2014). The surveys for mites on roses began in 2018, which is when the first *P. fructiphilus* were detected on plants as a bycatch while searching for predatory mites. The roses sampled were not showing symptoms at the time and have not shown any symptoms to date (6/3/2020).**

**Lines 63-66:** ‘These roses were tested for RRV with RT-qPCR and Reverse Transcription Recombinase Polymerase Amplification (RT-RPA) (Babu et al. 2016, 2017). However, none of the plants infested with P. fructiphilus were positive for RRV.’ **Comment:** “Were the RT-qPCR and RT-RPA techniques capable of detecting RRV on asymptomatic plant tissue? If yes. This is important and please keep this sentence. Also, concisely indicate the primers and essential procedures pertaining to this technique used here. If not, please delete. This is not adding anything instead will confuse readers.”

**Response from the authors: Lines eliminated. You are correct, these methods are not capable of detecting RRV in asymptomatic tissues.**

**Lines 73-74: Comment:** “Same comment as indicated before.”

**Response from the authors: Lines eliminated**

L**ines 75-76:** ‘…RRV is currently not established in Florida’ **Comment:** “The review think that this is bold statement. It may be true for the region of FL where the sampling was conducted. How can the authors say that RRV is not present in entire FL? Have you tested roses from different parts of the state? It is possible that the plant may not show symptoms but still carry the virus. Please clarify.”

**Response from the authors: Lines eliminated**

**Lines 73 and 93:** **Comment:** “Please be careful when you say 'no virus was found’. Maybe, add a phrase ‘based the detection tool developed to date.’ Or something similar.”

**Response from the authors: changed to ‘None of the mite-infested roses showed symptoms of RRD and none tested positive for RRV based on detection tools developed to date.’**

**Fig. 1C:** **Comment:** “Axis lines are not visible.”

**Response from the authors: The number of mites was placed above each bar and the axis lines were eliminated because it was difficult to discern the small bar when axis lines were present.**