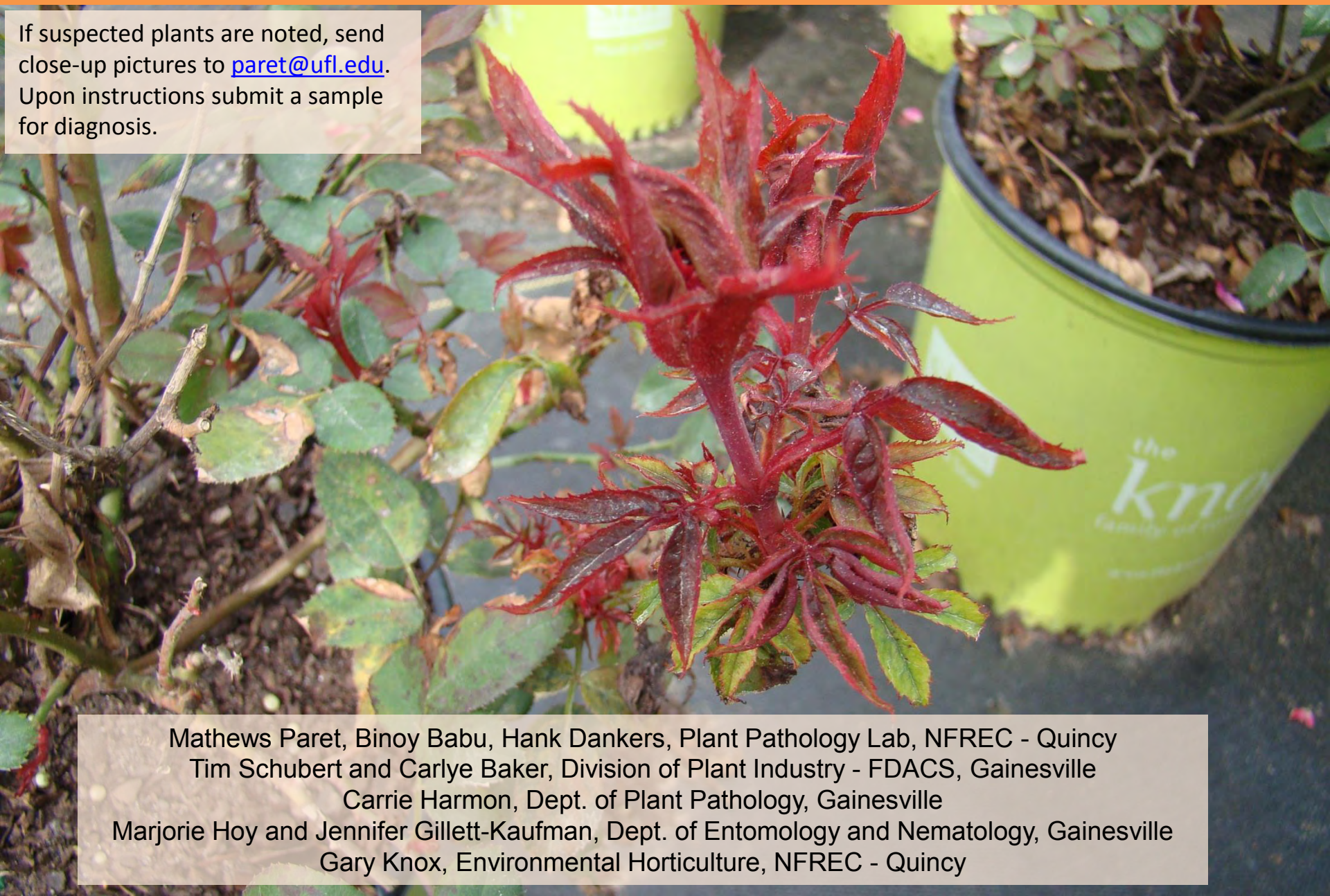
# IFAS Pest Alert: Rose Rosette Virus (RRV)



If suspected plants are noted, send close-up pictures to paret@ufl.edu. Upon instructions submit a sample for diagnosis.

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# Rose Rosette Virus (RRV) Basics

- Rose rosette (witches' broom) symptoms were first observed in 1940 in Canada on wild Roses
- Subsequently discovered in California in 1941 and many other states in the U.S.
- In 2011, the disease was confirmed to be caused by an Emaravirus. The virus was named *Rose Rosette Virus* (RRV).
- RRV is vectored by Eriophyid mite (*Phyllocoptes fructiphilus*)
- *Rose multiflora* (multiflora rose) is the most susceptible host for RRV
- The disease and the presence of RRV was confirmed for the first time in Florida in November 2013 by the Plant Disease Diagnostic Lab, NFREC, Quincy. This was subsequently confirmed by the Division of Plant Industry-FDACS lab, Gainesville.
- Three counties (Gadsden, Alachua, Levy) have confirmed cases of RRV as of Jan 15$^{th}$, 2014.

# Symptoms: Rose Rosette Virus

Witches' broom like appearance, small twisted leaves (herbicide injury can cause similar symptoms)

Rapid growth from certain sections of the stem, dying branches, thorn proliferation, unusual reddening of leaves that doesn’t change with age.

Severe thorn proliferation is characteristic to rose rosette disease

Healthy plant (No thorn proliferation): This is normal

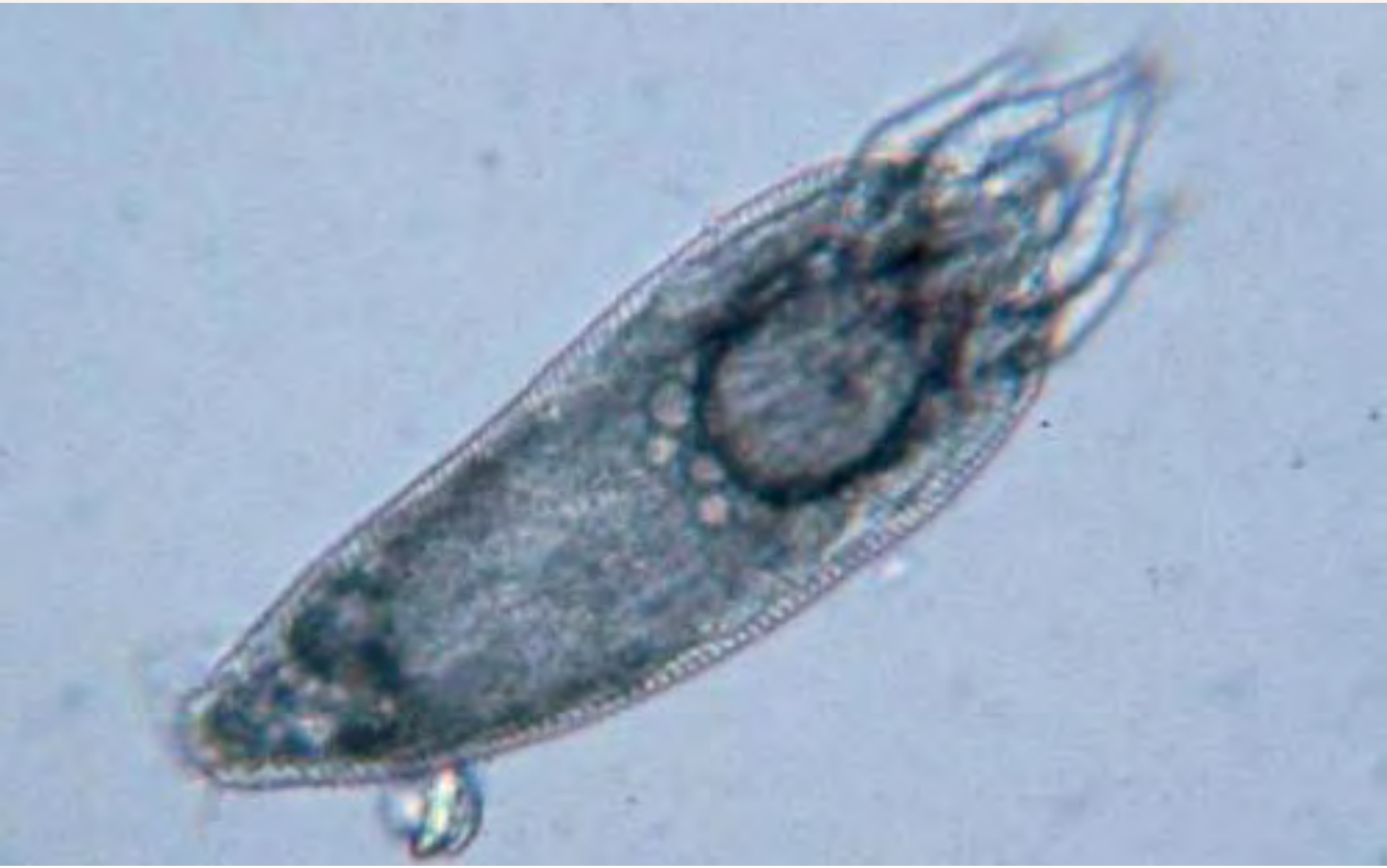
Unusual leaf shape on plants with rose rosette disease

Distorted flower bud; leaf developing from flower bud tissue

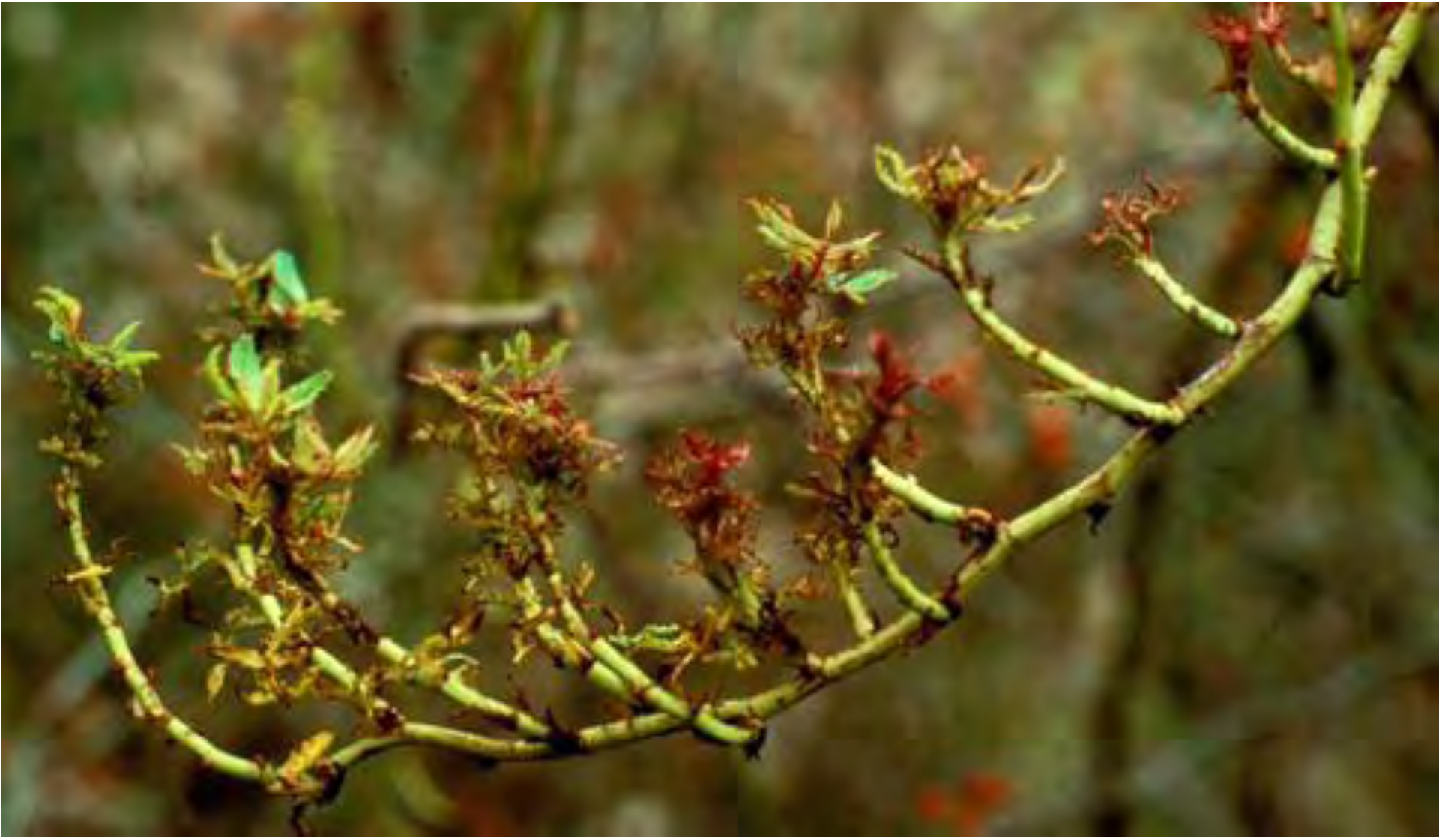
Branch proliferation and distorted leaves. Rapid elongation of branches is another characteristic symptom (not shown here).

Severe yellowing and stunting of the plant. Infected plants usually die in 1-2 years.

*Phyllocoptes fructiphilus* Keifer is a tiny eriophyid mite and cannot be seen without magnification. Photograph by USDA, Agricultural Research Service.



Feeding by the mite *Phyllocoptes fructiphilus* results in transfer of RRV to roses. Mites prefer to feed on tender new growth, and the virus modifies plant development. The mites are typically found in the apex of the rose shoots, where they feed and reproduce. Photograph by USDA, Agricultural Research Service.



**How to respond**

- Routine scouting and early identification. Submit samples for definitive confirmation.
- Destroy infected plants. There is no cure for rose rosette disease. Detection will prompt a quarantine by DPI until cleaned up.
- IPM: Cultural strategies (above) + Eriophyid mite management http://edis.ifas.ufl.edu/in999

  http://entnemdept.ufl.edu/creatures/ORN/ph_fructiphilus.htm
- Use of insecticides for Eriophyid mite management is recommended in early spring. Different Mode of Action insecticides should be rotated.
- Additional resources: www.roserosettedisease.com

**Notes:** The Eriophyid mite species described as the vector for RRV is not known to be present in Florida. Thus mite management recommendations are protective in nature.

*Rosa multiflora* is not common in Florida, but needs to be monitored, and destroyed if symptoms are noted.

# Diagnosis of Rose Rosette Virus

**For diagnosis send samples to:**

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