

# This Is Not Your Father's Downy Mildew – An Alert for SW Florida

By Vincent Celeste and Philip Paul

## Alert:

An article by Gregory Constant in the Nov/Dec 2010 American Rose relates his experience with a “sudden” “*loss of over 50 rose bushes*”. This experience is eerily familiar to the experience of one of the authors ( Vinny ) who lost over 20 mini bushes and several large bushes, also in the summer of 2009, and then later, with similar incidents in a number of rose gardens in the Sarasota-Bradenton area in 2010, including problems faced by the second author (Phil). Both of the authors confess to initially feeling helpless and wondering if they should continue growing roses in light of an initial inability to stop the problem.

In 2005 we were confronted by the sudden appearance of “Chili Thrips” (see the Nov 2005 Bulletin on the Members section for an account of our first exposure) and subsequently learned the importance of early identification, rapid response, and the use of preventative actions such as the use of Conserve ®. We are once again confronted by a new extremely serious problem that is expected to be with us forever.

Unlike the chili thrip problem which involved the identification of a known pest which “arrived” in Florida, there is no certain “name” for the new problem which may be either a mutation or introduction of a foreign pathogen. We need to concentrate on the symptoms. Research has turned up reports on the web from professional growers regarding these symptoms in as varied locations as roses nurseries in Japan to a tree farm in Vancouver. One article states that anyone who does not understand the source of the problem “will continue to use ineffective remedies with no results”.

Immediately below is a list of symptoms to aid in recognition, followed by quick responses needed if the problem is identified, and then pictures (on next page) to aid in recognition follow them.

## The symptoms

You should become familiar with photos of some of the symptoms below. The symptoms have been compared to :

- ◇ a form of “dieback” which attacks “with a vengeance” and can kill a bush, often within a week.
- ◇ root rot (normally a “greenhouse” or seedling problem) ,
- ◇ downy mildew,
- ◇ blister rust,
- ◇ canker.
- ◇ **A consistent symptom is the appearance of lesions or bruises on the middle of stems**, the lesion may first be noticed as a light rose color and then progress to black. The lesions spread both up and down the canes. Once started, the entire cane can turn black or dark brown in less than a week. If the stems blacken to the graft it is unlikely the plant will recover.
- ◇ The symptoms are frequently encountered after a rainy period **but can occur at any temperature,**

- ◇ Roots may be over-hydrated.
- ◇ After pruning, new leaf sets appear mutated.
- ◇ Old Garden roses appear to not be as susceptible as modern roses which include Knockouts
- ◇ An additional symptom noted by the first author, which may or may not be related was the sudden appearance of “pale circles” on leaves (see last two images below).

## Responses / Remedies

If you have identified the symptoms you need to act quickly. The pathogen is **not a fungus** (see What is it? below) so most fungicides are not effective, The following have worked and there are no reports of resistance developing from them. If you have an affected plant do all of the following and repeat until the problem is resolved.

- ◇ Infected canes (those with lesions) should be cut off at a point just below lowest die back (green part of cane). If either side of the cut displays damage cut further down Do it just as soon as observed, time works against you. Think of amputating gangrene.
- ◇ Immediately bag and remove all blackened rose canes as well as the roots .
- ◇ Bag and remove all cut rose material. **GET IT OUT OF THE GARDEN!**
- ◇ Spray affected plants and all the ground around the plant with a **copper based fungicide. CuPro** (a fungicide / bactericide) is the affordable fungicide of choice but any other copper spray product can be used to kill the pathogen if you do not have CuPro.
- ◇ **Do NOT mix** this with **any** other chemical when spraying. Follow the directions on the label exactly!
- ◇ Be very careful of any chemical contact with body, especially the eyes.
- ◇ Wear protective gear , these are harsh chemicals.
- ◇ Spray leaves and ground around the plant with fungicides containing **mancozeb or manzate** (either of these can be mixed with other spray ingredients except for copper and alliette).

If you do not have the symptoms you can practice avoidance techniques **when you prune your roses** in the next two months by:

- ◇ Spray canes and **ground** heavily with CuPro
- ◇ Remove all leaf litter and dead canes from your beds.
- ◇ It is important to note that a critical step is to have the necessary spray material on hand before it is needed.

CuPro can be obtained from Rosemania, Southern Ag, and is on order at Mariposa. Expect to pay approximately \$40 for a 3 lb container (use 3/4 tsp per gallon).

Liquid Copper is available as above and at Home Depot, Lowes. Expect to pay around \$16 for a pint (use 1 Tbsp per gallon)

(pictures on page 7)

# This Is Not Your Father's Downy Mildew – (continued from page 6)

Photos of damage to roses in the Bradenton—Sarasota region in 2009



Photo of sever damage submitted to ASK A CR



Photo of white canker damage submitted to ASK A CR



Photo of a “dieback” in a member’s Garden by Connie Verbicky



Close Up of Canker from a CR Call  
Photo by Connie Vierbicky  
Pale “circles” on a members rose leaves.



Compare to picture below of downy mildew on grape Leaves  
Photo by V Celeste

Photos of Downy Mildew Infestation for comparison



Downy and Powdery Mildew on grape leaves



oospores on bottom of leaf (sporulation)  
Photo by Baldo Vilegas



Downy Mildew On Rose Leaf (Univ Calif)