

VIRUS PARTICLES RECOVERED FROM MEMBERS OF THE ARACEAE

Early this year samples of *Dieffenbachia* exhibiting virus-like symptoms were processed in the Plant Disease Clinic. Dr. M. Ishii examined prepared material with the aid of the Electron Microscope and found virus particles or rods present in the specimen. Subsequently samples have been collected from ornamental operations throughout the State and the results of this initial survey are as follows:

Virus particles were found consistently in *Dieffenbachia exotica*, 7 samples were positive and these represented locations from Oahu, Maui, and Hawaii. Other *Dieffenbachia* species examined were *D. picta*, one positive; *D. superba*, one positive; *D. amoena*, one positive.

A number of Chinese evergreen species were examined but only *Aglaonema crispum* had one positive sample.

The most interesting specimen was a sample of Tahitian spinach, *Xanthosoma brasiliense*. This sample collected from a home garden on Oahu, yielded the highest particle or virus rod count of all the specimens examined to date.

The most important consideration is the identity of the virus. We suspect that it is Dasheen mosaic since the virus rods conform to the particle size and shape described for this virus. The problem we now face is the specific identification based on re-infection of healthy plants representing *Dieffenbachia*, *Aglaonema*, *Xanthosoma*, *Anthurium* and *Philodendron sel-loum*. The latter is considered a bioassay host for Dasheen mosaic which may be mechanically transmitted but is also aphid borne.

It is apparent that this virus is not necessarily a new introduction to the Araceae of Hawaii. Specimens showing symptoms were collected from *Dieffenbachia* plantings that were over 5 years old and of course the fact that Tahitian spinach contained large numbers of the same

virus particles indicates that this virus has been around for some time. Dasheen, *Colocasia esculenta* and Caladium are reported as hosts for this virus in Florida.

Symptoms—

The virus disfigures and stunts infected plants but rarely kills them. A mosaic pattern, light and dark green markings, is the most characteristic symptom—usually occurring on the youngest leaf. A deformation of the plant part, disruption of its symmetry, and, in the case of variegated aroids, impairment of normal foliar color patterns may be observed. Again, the *KEY* is the *mosaic* patterns observed on the youngest leaves.

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