

# INFLUENCE OF THE TRISTEZA VIRUS ON THE PHOSPHORUS ( $P^{32}$ ) DISTRIBUTION IN GALEGO LIME (*Citrus aurantifolia* Christm) \*

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Recently Darcy M. Silva and H. P. Haag (1966) presented at Fourth conference of the International Organization Citrus Virologists, some data showing that phosphorus accumulations in diseased galego lime roots is higher than in healthy ones.

The results suggested the authors to carried out experiments cultivating galego lime in nutrient solution containing  $P^{32}$  as tracer in order to see its distribution in the plant.

Healthy and diseased seedlings were maintained in contact with  $P^{32}$  during 1, 3 and 18 hours. Radioautographs were obtained as suggested by Bergamin Filho (1959).

Radioutographs (Fig. 1 and 2 showed distribution of  $P^{32}$  in the entire healthy plant while the upper part of the diseased plants did not indicate the presence of  $P^{32}$ .

On the other side the fact that both root systems, healthy and diseased, showed an uniform distribution of  $P^{32}$  suggests some blockade on the phosphorus translocation.

## LITERATURE

1. BERGAMIM FILHO, H., 1959 — Radioautografia de tecidos. Revista de Agricultura 34: 41-49.
2. SILVA, DARCY M. & HAAG, H. P., 1966 — Influence of the tristeza virus on the mineral composition of galego lime (*Citrus aurantifolia* Christm) cultivated in nutrient solution. Abstracts of the Fourth Conference of the International Organization of Citrus Virologists. Italy. 1966.

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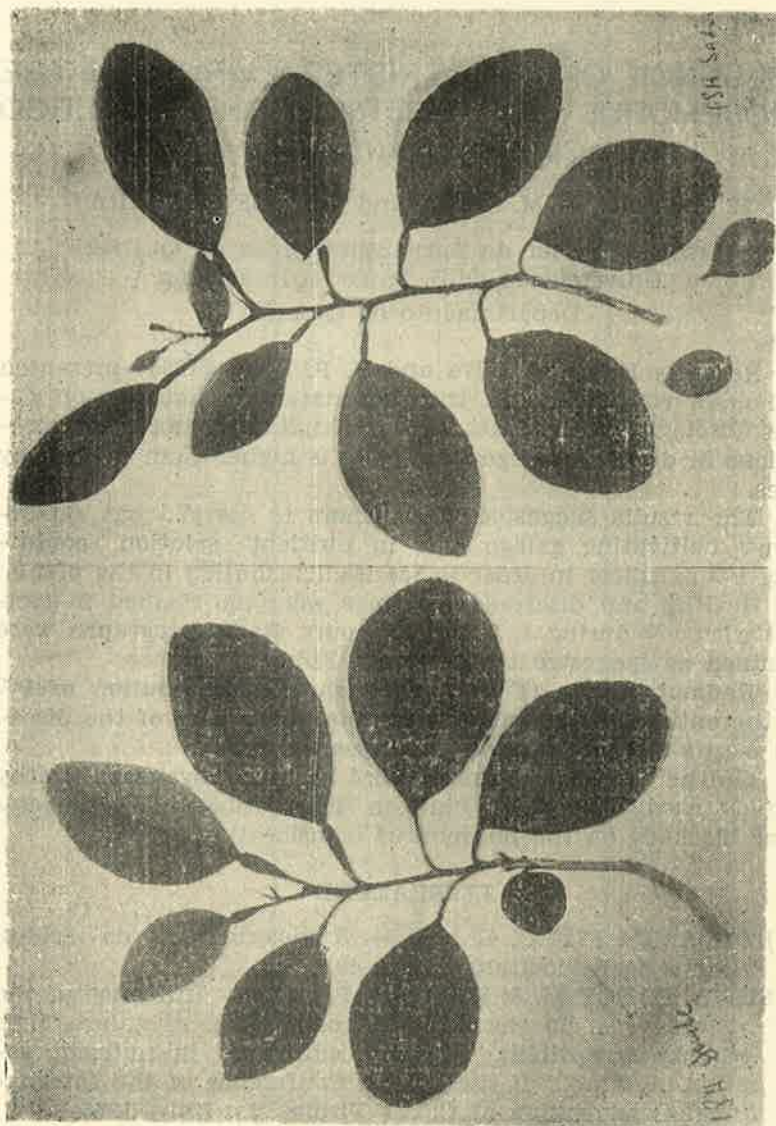


Fig. 1. At the left side diseased plant and at the right the healthy used for radioautograph

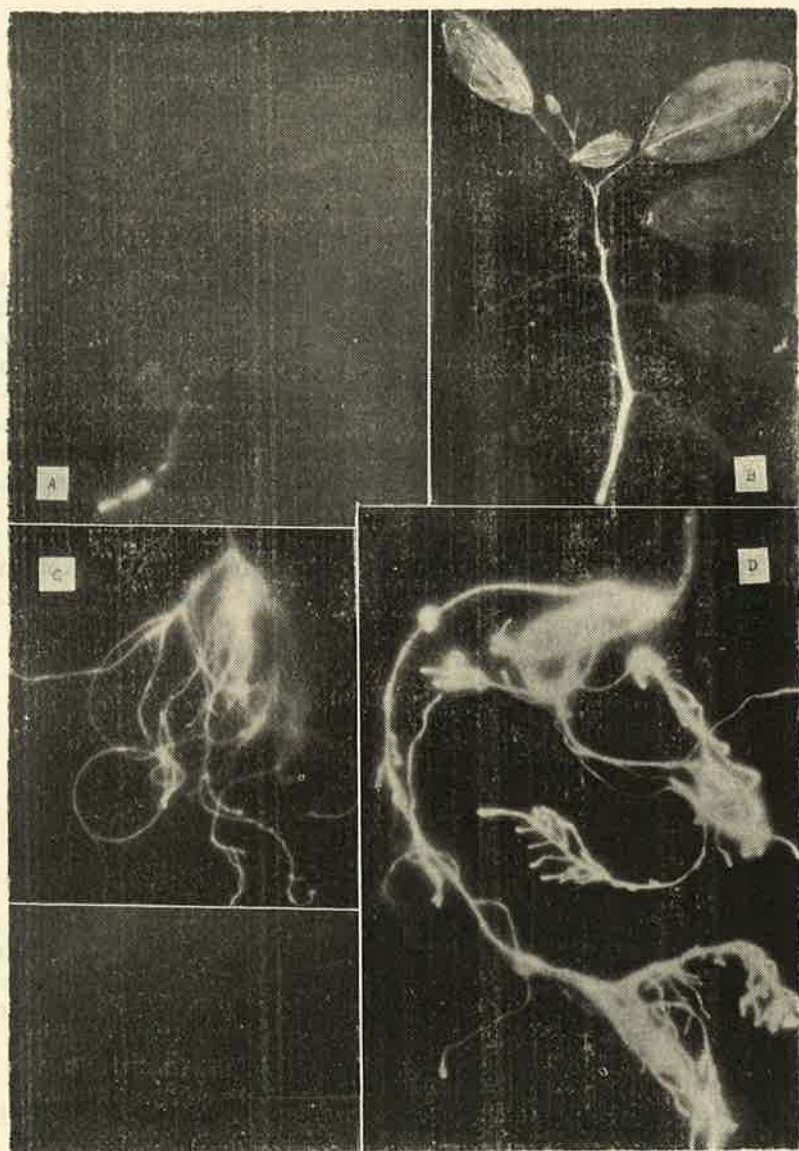


Fig. 2. Radioautograph showing  $P^{32}$  distribution on the upper part of diseased (A) and healthy (B) plant. The same on diseased (C) and healthy (D) roots

## UMA NOVA ESPÉCIE DE *Vatinae* (Mantidae) DO BRASIL

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### *Cardioptera paraopeba* sp. n.

Mas. Viridis, oculi prominentes, altiores quam latiores. Scutum frontale (?). Pronotum laeve, post dilatationem abrupte angustatum, deinde sensim icrassatum, prozona a dilatatione modice attenuata. Coxae anticae superne et inferne fortiter spinulosae, spinis superioribus numerosioribus, intus planae, laeves, partim castaneo-nigro ornatae. Elytra elongata, subparallela, hyalina, apice rotundato, area costali venis transversis irregulariter connectis, praedita, venis costalis per aream angustam, opacam, densiorem currentibus. Alae elytra eque-longae, hyalinae, area costali ut in elytris. Femora et tibiae 4 posteriora hirsuta, femora lobo humili inferne prope apicem armata. Cerci teretes. Lamina subgenitalis postice, bidentata fere omnino nigro-nitida.

|                      |         |
|----------------------|---------|
| Longitudo corporis   | 54,0 mm |
| Longitudo pronoti    | 19,2    |
| Longitudo elytrorum  | 52,0    |
| Latitudo elytrorum   | 13,0    |
| Longitudo fem. post. | 14,0    |

Pátria: Barra do Paraopeba, E. de Minas Gerais.

Col.: Vital R. de Souza.

Tipo: 1 macho, n. Proc. 17/490, pertencente ao Museu Nacional, presentemente com o Autor.

A espécie acima descrita difere de *Cardioptera brachyptera* (Burm.) pela ausência das listras marrons ao longo das veias costais, pela face interna das coxas anteriores lisas (verrugosas em *brachyptera*) e em grande parte enegrecida.

### *Cardioptera signata* (Piza)

*Tithrone signata* Piza, Revista de Agric. Piracicaba, XXXVI, n. 4, Dez. 1961: 218.

Difere de *C. brachyptera* por ser consideravelmente menor. Julgo necessário examinar mais algum material da mesma procedência (Macaiba, Rio Grande do Norte) antes de estabelecer a provável sinonímia dessa espécie.