

Investigations on virus-diseased elm trees (*Ulmus laevis* L.) in eastern Germany

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On elm trees in a public park planted in 1830 virus-like leaf symptoms and dieback were observed. Investigations focused on the identification of the casual agent. An infection with *Cherry leaf roll virus* (CLRV), *Elm mottle virus* (EMV), *Arabis mosaic virus* (ArMV) and *Tobacco ringspot virus* (TRSV), well known viruses to infect elm trees, could be excluded by bioassays and serological tests.

Flexible particles of approximately 750 nm were isolated repeatedly from diseased elms. These particles are transmissible in plant sap of diseased elm leaves to herbaceous indicator plants such as *Chenopodium* species. The virus disqualifies as a member of the Potyviridae family based on an ELISA and an RT-PCR assay using a potyvirus genus-specific broad-spectrum polyclonal antibody and family-specific primers, respectively. Also no potyvirus-like pinwheel inclusions were found in leaf cells of infected indicator plants in electron microscopic studies.