Molecular diagnosis of *Trichodorus* and *Paratrichodorus* species

Duarte, I.M.[1], Almeida, M.T.M.[1], Brown, D.J.F.[2], Oliveira, C.M.G.[3,4], Riga, E.[5], Karanastasi, E.[6] & Neilson, R.[3] (2004).

[1]Departamento de Biologia, Universidade do Minho, Campus de Gualtar, 4710-057 Braga, Portugal
[2]Central Lboratory of General Ecology, 2 Gagarin street, 1113 Sofia, Bulgaria
[3]Scottish Crop Research Institute, Invergowrie, Dundee DD2 5DA, Scotland, UK
[4]Instituto Biológico, Campinas, SP, Brasil
[5]Washington State University, IAREC, Prosser, WA
[6]Benaki Phytopathological Institute, kifisia, Athens, Greece

ABSTRACT

Some trichodorid species are known to vector specific strains of *Tobacco Rattle Virus* (TRV) that have a deleterious effect upon several economically important crops, e.g. potato and tobacco. Given the complex relationship that exists between trichodorids and the various TRV strains, it is imperative that a rapid and accurate identification to species level is achieved for the effective use of control measures within a crop husbandry regime. Morphological identification is sometimes subjective and requires well-trained specialists. Furthermore, there is a decline in the taxonomic skill-base of a number of invertebrate groups, including nematodes, within Europe. The present study reports the application of a PCR-RFLP method that explores the variability of the 18S rDNA gene to robustly discriminate trichodorid species belonging to *Trichodorus* and *Paratrichodorus*. A PCR product, 614 bp in length, located at the 3' end of the 18S rDNA gene was digested with seven restriction enzymes that generated patterns that were both consistent among populations of the same species and yet discriminated trichodorids at the species level. The proposed protocol was tested with eleven trichodorid species from Portugal and six non-indigenous trichodorid species and proved to be effective.

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