

IDENTIFICATION OF SPIDER MITES (ACARI: TETRANYCHIDAE) BY DNA SEQUENCES: A CASE STUDY IN NORTHERN VIETNAM

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ABSTRACT - Identification of spider mite species has been an important but complicated issue in pest control. We studied the species composition of spider mites collected in agricultural fields of northern Vietnam by using mitochondrial cytochrome oxidase subunit I sequences as a case study of the DNA barcoding identification technique for spider mites. Specimens were identified by comparing obtained DNA sequences with known sequences deposited in DNA databases. If phylogenetic analysis was used together, the DNA barcoding approach was useful for species identification of spider mites, especially for the genus *Tetranychus*. Using DNA barcoding, we classified most of the Vietnamese samples into *Tetranychus kanzawai* Kishida, *T. urticae* Koch and *T. truncatus* Ehara.

Keywords - Tetranychidae, *Tetranychus*, molecular diagnostics, DNA barcoding, DNA sequences, mitochondrial DNA, cytochrome oxidase subunit I, Vietnam.

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