

**Novel insights into mitochondrial gene rearrangement in thrips
(Insecta: Thysanoptera) from the grass thrips, *Anaphothrips obscurus***

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Supplementary Information: Tables S1, S2 and Figure S1.

Supplementary Table S1. The primers used in this study

Target gene	Primer name	Nucleotide sequence (5'-3')
<i>cox1</i>	mtd6	GGAGGATTTGGAAATTGATTAGTTCC
	mtd11	ACTGTAAATATATGATGAGCTCA
	RS45C1F	GGGGGAGGTGATCCAACCCTTTATCAACAC
	RS45rrnSF	CCCTAAAGTTAGTTTATACTGCCATATCC
<i>rrnS</i>	12SA	TACTATGTTACGACTTAT
	12SB	AAACTAGGATTAGATACCC
	RS45C1R	AAGTATAGTAATGGCTCCAGCTAATACAGG
	RS45rrnSR	TAGGTTATATGTACAAATTGCCCCGTCCTC

Supplementary Table S2. The mitochondrial genomes of the species used in the phylogenetic analysis

Order/Suborder	Family/Subfamily	Species	GenBank number	Reference
Thysanoptera/ Terebrantia	Thripidae/ Thripinae	<i>Anaphothrips obscurus</i>	KY498001	This study
		<i>Frankliniella intonsa</i>	NC_021378	28
		<i>Frankliniella occidentalis</i>	NC_018370	29
		<i>Thrips imaginis</i>	NC_004371	19
		<i>Scirtothrips dorsalis</i> EA1	NC_025241	20
		<i>Scirtothrips dorsalis</i> SA1	KM349827, KM349828	20
Hemiptera/ Heteroptera	Nabidae/ Prostemmainae	<i>Alloeorhynchus bakeri</i>	HM235722	52

Supplementary Figure S1. Inferred secondary structure of 22 tRNAs of *Anaphothrips obscurus*. The tRNAs are labeled with the abbreviations of their corresponding amino acids. Each arm and loop is illustrated as for tRNA-Val: AA-arm for amino acid acceptor arm, T-arm for T Ψ C arm, V-loop for variable loop, AC-arm for anticodon arm, and D-arm for dihydrouridine arm. Dashes (–) indicate Watson-Crick bonds, and dots (.) indicate bonds between other matches.

