ABSTRACT

Thrips are economically important insects of pummelo production in Thailand. Most of the thrips species associated with pummelo have been classified by morphological characteristics which sometimes caused an uncertainty in determination of closely related species and genetic variation between species. Thus, the objective of this study was to relate morphological and molecular systematics of thrips associated with pummelo. Thrips were collected from flowers of pummelo plantation in Nakorn Pathom, Ratchaburi, Chainat, Samutsonkram, Samutsakorn, Pragenburi and chumphorn provinces. Most of thrips were found on pummelo flowers. There were two thrips species morphologically classified into Thrips hawaiiensis (Morgan) and Scirtothrips dorsalis Hood. Then, DNA analysis was carried out by PCR-RFLP technique using the primers 28Z 5'AGACTCCTTGGTCGTTTTTC 3' and P1 5'ATCCTCGTGCCGTGCTCGTCTG 3' and restriction enzyme analysis using enzyme MspI, AluI and HaeIII. It was found that the size of pcr product for T. hawaiiensis was 1330 bp and S. dorsalis was 1337 bp. DNA sequence analysis was investigated using the ITS2 sequenced fragments in order to construct phylogenetic analysis. It was indicated that T. hawaiiensis and S. dorsalis are sibling species closely related to morphological studies, which and subfamily Thripinae both are belong to family Thripidae.