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Chromosomal diversity and phylogenetic inferences concerning thrips (Insecta, Thysanoptera) in a semi-arid region of Brazil

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ABSTRACT. The order Thysanoptera is composed of cosmopolitan phytophagous and predaceous insects with diverse life histories, behaviors and habits. This order is currently thought to form a trichotomy with Hemiptera and Psocodea; Hemiptera and Thysanoptera are considered to be sister groups. The interrelationships within Thysanoptera remain unclear and cytotaxonomic studies are scarce in thrips. We report, for the first time, chromosomal data on seven species of thrips collected from a semi-arid region in the States of Bahia and Pernambuco (Northeast Brazil). A distinctive chromosomal pattern was observed in Thysanoptera when compared to other members within the infraclass Paraneoptera. Considerable karyotypic differences were also found within genera and species of Thysanoptera. Based on these data, we suggest that Paraneoptera forms a polyphyletic group and that Terebrantia and Tubulifera should be regarded as sister groups. The high chromosomal variability observed in Thysanoptera indicates that chromosomal rearrangements have played a key role in their speciation pathways.

Key words: Cytotaxonomy; Chromosomal evolution; Thysanoptera; Paraneoptera

