The finding of a micropterous new species in a flower-living thrips group species

A new species known only from micropterae, *Kakothrips borberae*, belongs to genus in which species live in the flowers of Fabaceae, and which is recorded mainly from South Europe or the Mediterranean Region. This new species was described from adults of both sexes that were collected in a small mountain area of Piedmont Appennines-about 1400 m asl- called Valle di Borbera (Alessandria, North- West Italy). The species was in *Vicia* flowers, and was found only in early May but in several years of collecting at the same locality. This might be an interesting case of a short-winged species in a genus that is known as having only fully-winged adults in both sexes.

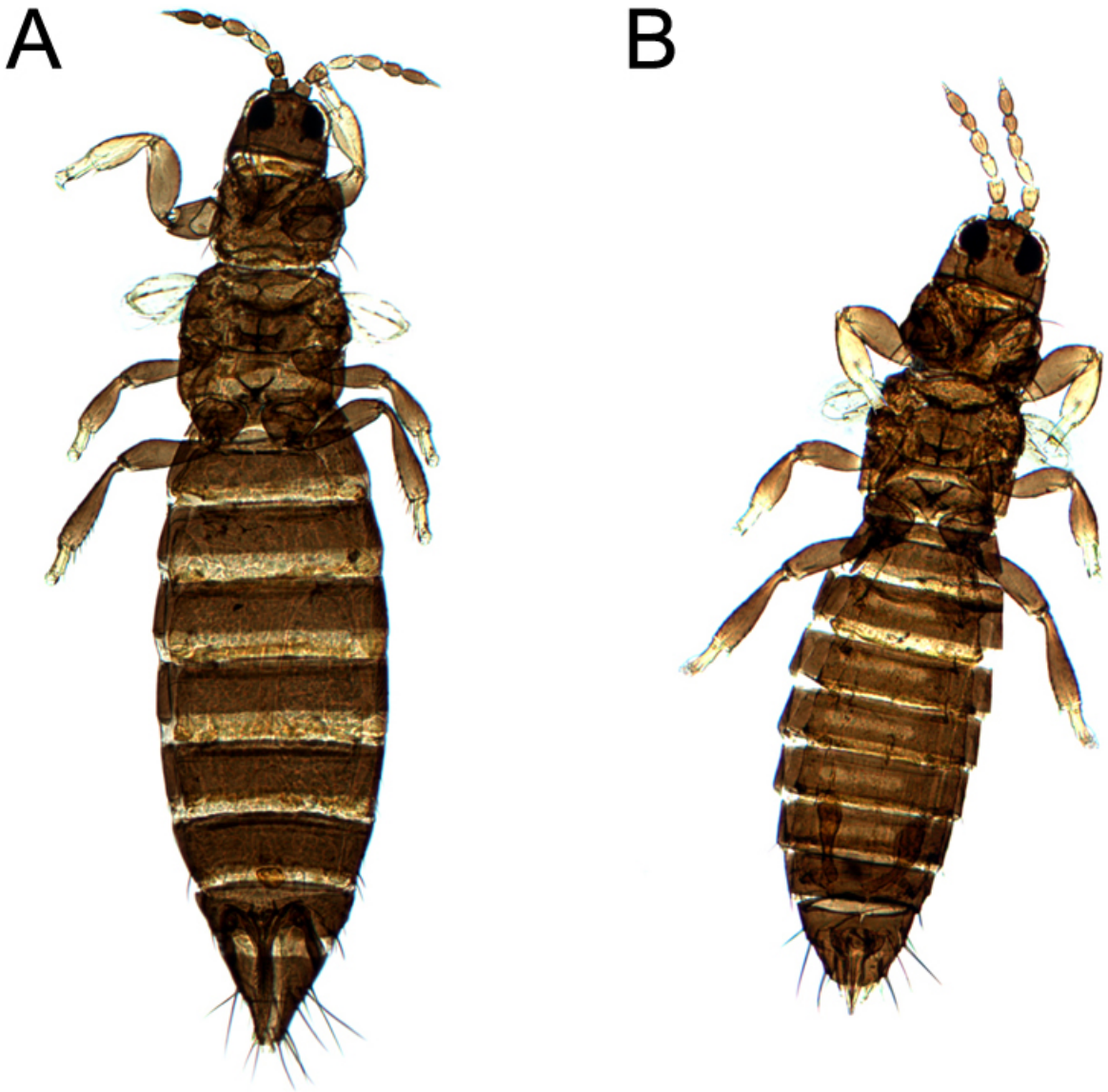

Fig. 1. A. Female of Kakothrips borberae Marullo & Ravazzi.
B. Male of Kakothrips borberae Marullo & Ravazzi.

The presence of wings in small and highly vagrant insects as thrips, increases their dispersive ability, but also it has some effects on mating systems and thus patterns of speciation. Moreover, wings can be reduced or absent in one or both sexes of many species, but there is a very little knowledge about the selective advantages of wing reduction or of the factors determing it. Intraspecific variation in wing length is probably an ancestral mode of thrips. However, within any species , wing development is usually monomorphic or dimorphic; rarely does any species exhibit more than two of the three potential morphs, macroptera, microptera and aptera. In a few species studied experimentally for wing production and development , the influencing factors have been day length, population density and availability of healthy food. Increase in population density and the reduction in the other two conditions favours the full development of wings. Identification of the new species is difficult: females share the main morphological characters with other con-generic, southern European, species, in particular with *Kakothrips acanthus* Berzosa, *K.firmoides* Priesner and *K.priesnerorum* Bournier. However, *K. borberae* is distinguished by the colour of the third antennal segment, tibiae and fore tarsus, and the chaetotaxy of the pronotum and tergite IX. Males of *K. borberae, firmoides* and *acanthus* cannot be distinguished on the chaetotaxy of tergite IX or sternite IX. Only the shape of the sternal pore plates distinguishes males of the species in *Kakothrips* genus, so that the availability of males is a basic condition for the morphological diagnosis of these species. The difficulties of identification and the scanty knowledges on biology could suggest to thysanopterologists to carry out molecular studies , through barcoding method (COI) both for diagnosis of a species and the possible intra-specific variation. Moreover, some ecological studies on these species could be interesting in order to better understand environmental relationships and , in particular, the insect-host plant ratio.

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