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Numerical variations of leg bristles in *Tetranychus urticae* (Acari: Prostigmata)

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In mites, bristles (mechanoreceptor setae and chemoreceptor solenidia) commonly show numerical variations in the form of unilateral or bilateral presences/absences. Numerical variations of leg bristles were studied in a population of *Tetranychus urticae* (White Eyes I

strain) on 50 individuals of each sex and immature stage (larva, nymphs, pupae). Females had 13 bristles on either side of the body, males had 5 more bristles. Thirty-one bristles were found variable on both sexes whereas 12 additional bristles varied only among females and 36 others only among males. The mean number of variable bristles within individuals was 3.8 (± 4.9) in males and 2.3 (± 2.2) in females. The frequency of absences was similar on the left and the right sides of the body. Most bristles showed little variation and some of these variations may be considered as "abnormalities" (Grandjean, 1973). By contrast, 11 setae varied in more than 5% of the individuals (of both sexes, except for one setae which varied only in males). Such frequent variations are probably related to the evolutionary trend for a reduction of the number of setae ("regression") in this species. Measured variations conform to the 3 models of regression described by Grandjean: (1) descendant regressions of setae which emerge early in the ontogeny (e.g. in the larval stage) and show numerical variations later (e.g. in the adult stage). (2) ascendant regressions of setae which emerge and show numerical variations late in the ontogeny. (3) vertical regressions expressed by unilateral or bilateral losses of setae throughout all ontogenetic stages. Variations in *T. urticae* conform to the concept of fluctuating asymmetry described in various other species. Our study shows males to be more variable than females, a possible consequence of their haploidy.