



European Science Foundation

Program in Population Biology 1994-1998

Announcement of Workshops for 1996

Call for Proposals for Workshops for 1997

The ESF Program in Population Biology aims to stimulate synthesis, integration, and an evolutionary approach to ecology and genetics across national borders in Europe.

1996 Workshops:

(2) *Developmental stability, individual performance, and population biology.*

Gilleleje Kursuscenter, Gilleleje, Denmark, 17-22 September 1996. Speakers include P. Brakefield, K. Fowler, J. Graham, J. B. Mitton, A. P. Møller, A. Pomiankowski, M. Raymond, J.P. Swaddle, R. Thornhill, and A. Wilkins. Theme: Individual developmental instability - ontogeny, patterns, influence of selection, environmental and genetic causes, consequences for performance and interactions. Send applications to Anders Pape Møller, Department of Population Biology, Copenhagen University, Universitetsparken 15, DK-2100 Copenhagen Ø, Denmark, Fax (+45) 3532 1250, email apmoller@biobase.dk.

Meristic variation of leg bristles in spider mites (*Tetranychus urticae*).

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Pattern of bristles (mechanoreceptor setae and chemoreceptor solenidia) on mite legs are well defined and species-specific. These bristles commonly show numerical variations in the form of unilateral or bilateral complete absences. Pattern (chaetotaxy) and numerical variation of leg bristles were studied in strain White Eyes I of *Tetranychus urticae* at each developmental stage and in pupae. Bristles emerged gradually and the proportion of variable bristles increased during the ontogeny: 5% in larvae, 5% in nymphs 1, 9% in nymphs 2, 33% in females, 49% in males. Female leg chaetotaxy comprised 123 setae and 8 solenidia on each side of the body. Males had 5 additional solenidia. Some bristles absent at their emergence stage consistently were lacking at later developmental stages whereas others bristles showed no persistent absence through growth. At the adult stage, most bristles varied in less than 5% of the individuals. By contrast, 2 setae and 4 male solenidia varied only in males with a frequency over 5% and 10 setae varied in 5-53% of the adults of both sexes. Such frequent variations might be related to the evolutionary trend for a reduced number of bristles known to occur in mites. The mean number of variable bristles within individuals was higher in males (3.2 ± 3.8) than in females (2.1 ± 1.9) (t-test, 104.3 df, $P=0.03$, considering the 131 bristles common to both sexes). The frequency of absences was similar on the left and right sides of the body. Variations in *T. urticae* conform to the concept of fluctuating asymmetry described in various other phyla. The higher asymmetry of males compared to females could be a consequence of their haploidy.