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Contribution to the Variability of *Dermacentor marginatus* and *D. reticulatus* Ticks

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with 6 Figures

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Introduction

The variability in size of pasture ticks is well known (PERVOMAISKY 1953 a). This variability is the natural variability which is proper to each species or it may be caused by parthenogenesis, e. g., in *D. marginatus* or engorgement as was confirmed experimentally (e. g., skin immunity). Not fully fed nymphs of both species moult into smaller individuals. These phenomena are very important from systematical point of view.

Material and Methods

D. marginatus ticks were originated from localities in Hronsky Inovec, Krupinska upland and Slovakian karst: Cierna dolina, Plastovce, Hrhov, Ardovo. *D. reticulatus* ticks were collected on localities in Danube River and Latorica River regions: Stefanikovce, Samorin and Leles. Ticks of both species were collected in spring 1955. The specimens of *D. reticulatus* 184 in number and 155 specimens of *D. marginatus* were examined.

For establishment of variability in both species, we have carried out measurement of body size and scutum or dorsum (breadth \times length) respectively. The representative number of specimens of males and females of each species was measured exactly on three decimal of mm. The data obtained were calculated statistically. For graphic demonstration the results were rounded to one decimal. The length of scutum was measured in median line (without scapulae) and greatest breadth inclusive eyes.

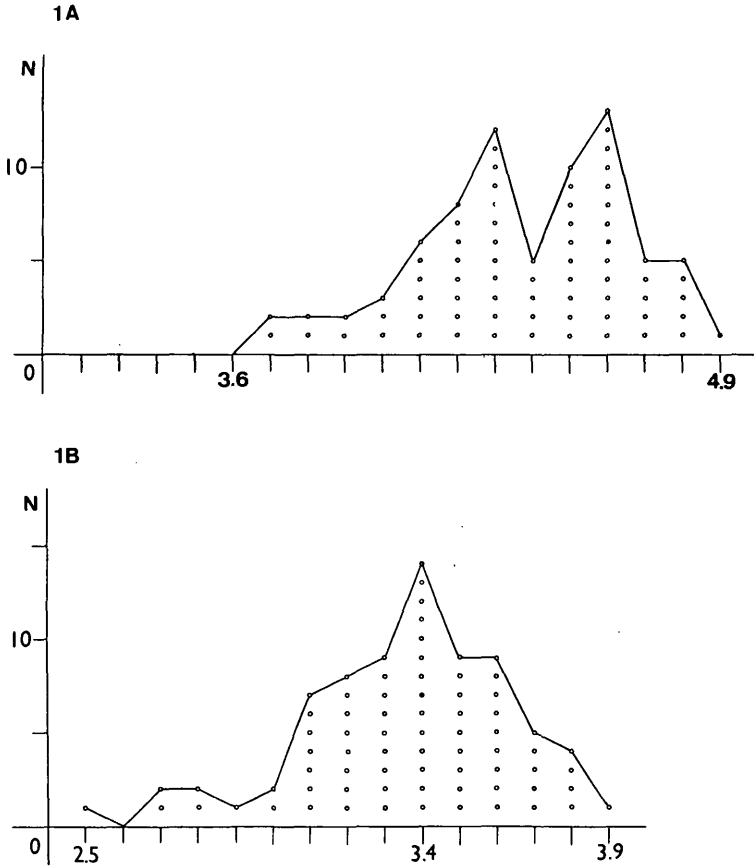


Fig. 1: *Dermacentor marginatus*. A: Body length; B: Body breadth (♀).

Results

The average size of scutum in *D. marginatus* tick amounts 1.9×1.7 mm (breadth \times length). The average body size in *D. marginatus* female amounts $4.3\text{--}4.6 \times 3.4$ mm (Figs. 1 A, B), that of male varies too much (Figs. 2 A, B).

The average size of scutum in *D. reticulatus* tick amounts 1.4×1.4 mm (Figs. 3 A, B). The average scutelar index is 1.0 (103 specimens were examined). The average body size in *D. reticulatus* female amounts 3.3×2.7 mm (Figs. 4 A, B), that of male is more variable (Figs. 5 A, B).

Scutelar index is much more constant than index of body size.

Summary

Scutelar index in great part of *D. marginatus* females reached 1.1, that of *D. reticulatus* females 1.0 but this index may be variable as you see in a specimen from Danube lowland (Fig. 6 B). Body size in males is more variable as that of females.

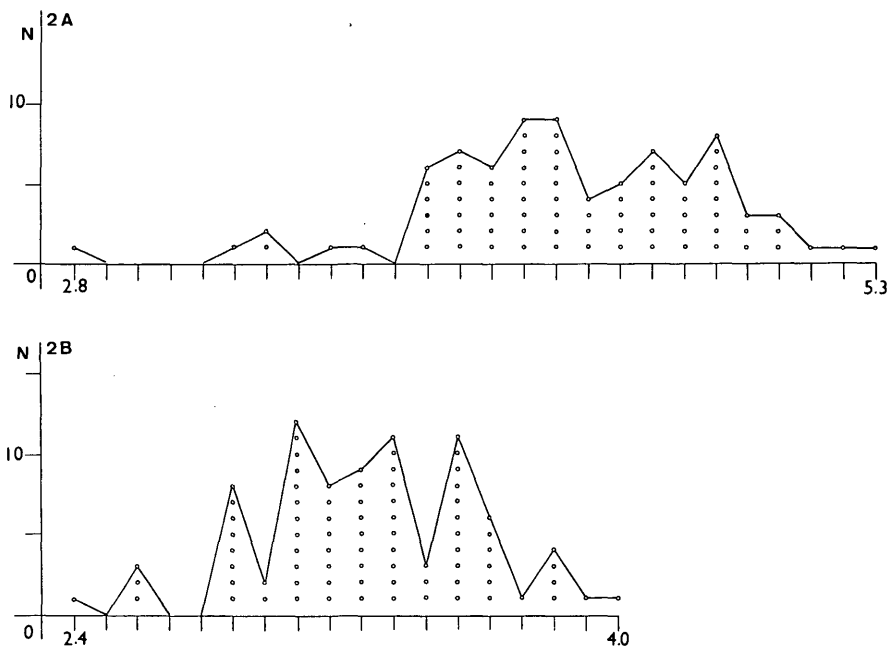


Fig. 2: *Dermacentor marginatus*. A: Body length; B: Body breadth (δ).

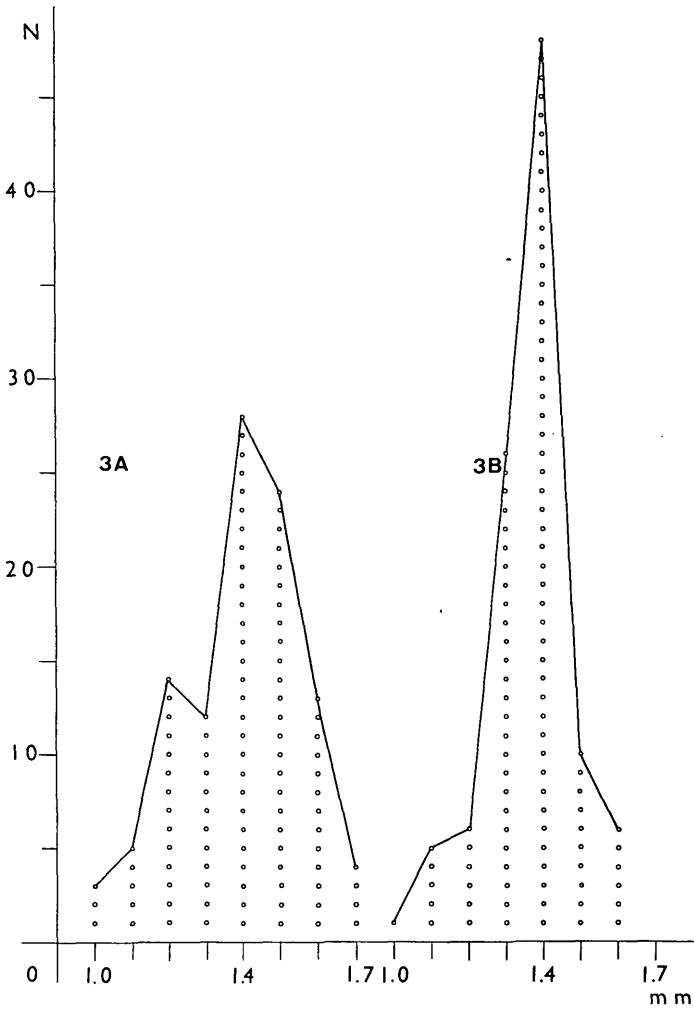


Fig. 3: *Dermacentor reticulatus*. A: Breath of scutum; B: Length of scutum (♀).

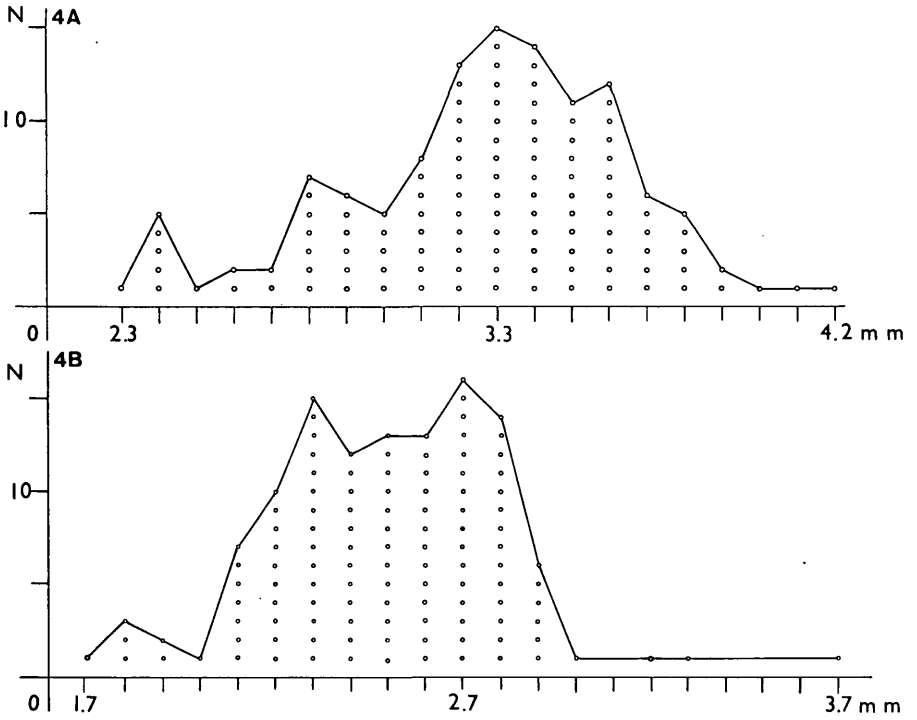


Fig. 4: *Dermacentor reticulatus*. A: Body length; B: Body breadth (♀).

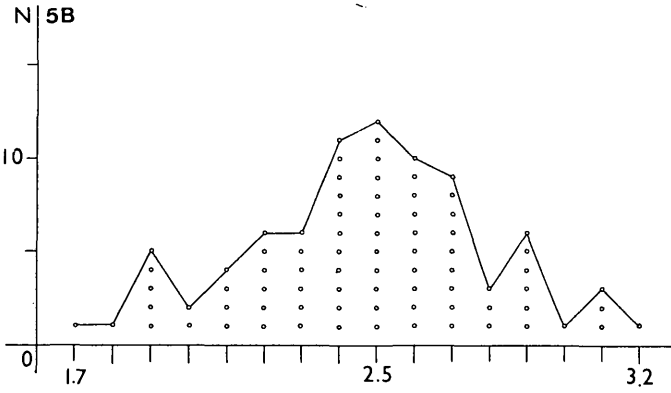
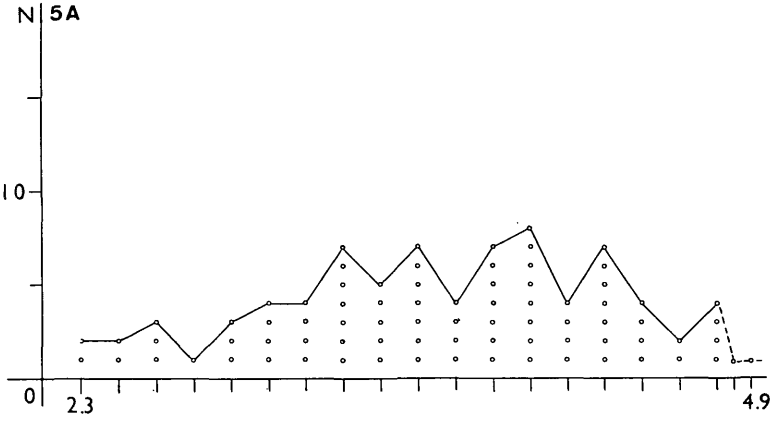


Fig. 5: *Dermacentor reticulatus*. A: Body length; B: Body breadth (♂).

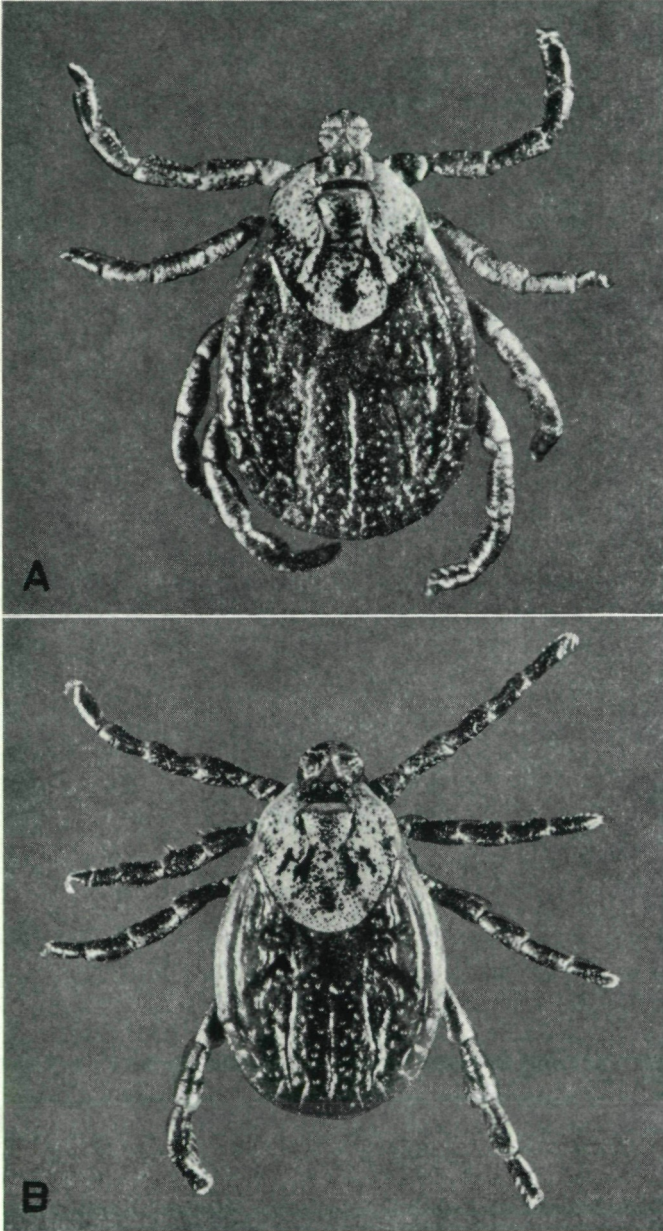


Fig. 6: A: *Dermacentor marginatus* ♀; B: *Dermacentor reticulatus* ♀.

Literatur cited

- ARTHUR D. R. 1960. Ticks. A Monograph of the Ixodoidea. Pt. 5. The genera *Dermacentor*, *Anocentor*, *Cosmiomma*, *Margaropus* and *Boophilus*. Cambridge University Press.
- PERVOMAISKY G. S. 1953 a. Variability of pasture ticks (family Ixodidae) and its significance for systematics (in Russian). Zool. Zh., 32 (3): 565—567.
- PERVOMAISKY G. S. 1953 b. Parthenogenetic development in ticks of the family Ixodidae. Rev. Appl. Ent. Sb., 41 (5): 67.

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Zoologisch-Botanische Datenbank/Zoological-Botanical Database

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