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STATISTICAL STUDY
ON *HEMICRICONEMOIDES MANGIFERAE* SIDDIQI, (NEMATODA)

by

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Sixteen females of *Hemicriconemoides mangiferae* Siddiqi, 1963, were used to study the relationship between spear and tail length (measured from the latitude of anus to the tip of outer sheath) by the following formula:

$$\text{Log X} = 0.01596 + 1.71192 \log Y$$

where X and Y are the lengths of spear and tail respectively. Logarithms of the two body parameters have a linear relationship, the one increasing proportionally with the other (Table I). The standard methods for the assessment of other statistics were the same as given by Simpson and Roe (1939).

The tail/spear ratio, computed from the above data declined from 0.8722 to 0.7912. The standard deviation of the ratio for 15 degree of freedom was computed to be 1.1619; and, variance, coefficient of variance and standard error were found to be 1.5241, 2.7742 and ± 1.2342 respectively.

The total body length (measured from head up to the tip of the outer body cuticle) ranged from 430 to 590 μm . The logarithms of these two values were used in studying the heterogonic coefficients of the spear and tail with the help of the following formula:

$$H = \frac{\text{Log } A_n - \text{Log } A_i}{\text{Log } B_n - \text{Log } B_i}$$

where A_i and A_n are the lower and higher values of the variate, B_i and B_n are the lower and higher values of the standard parameter (total body length) and H is the heterogonic coefficient.

The study revealed that the heterogonic coefficient of the tail (0.0740) is slightly higher than that of the spear (0.0678). Probably

Table I - Relationship between tow morphometric characters in *Hemicricone-moides mangiferae*.

Log length (X) of Spear (μm)	Log length (Y) of Tail (μm)	Reg. Const.
1.7014	1.3461	
1.7014	1.3603	
1.7140	1.3741	
1.7140	1.3774	
1.7201	1.4004	
1.7262	1.4130	
1.7262	1.4252	a = 0.01596
1.7322	1.4252	b = 1.71192
1.7359	1.4252	
1.7381	1.4363	
1.7381	1.4371	
1.7439	1.4487	
1.7497	1.4710	
1.7503	1.4817	
1.7503	1.5124	
1.7560	1.5317	

due to this allometry Geraert (1968) was unable to explain why the very long tail of *Tylenchus agricola* behaved differently from the very long tail of *T. leptosoma*; the same applied to the long tails of *Basiria gracilis* and *Boleodorus thylactus*.

It is suggested that the evaluation of the degree of affinity in various body parts in adults as well as larvae of different size groups of nematode species may be helpful in indicating the effects of biotic and abiotic factors on the growth of the body components and on the nematode as a whole.

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L I T E R A T U R E C I T E D

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