

A Strain of *Aedes (Stegomyia) vittatus* Bigot with an
Unusual Pattern on the Tarsi (Diptera: Culicidae)

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During the course of collection and laboratory rearing of several species of *Aedes*, we came across a special strain of *Aedes vittatus* differing from the typical form in the pattern of markings on the hind tarsi which in the typical *A. vittatus* have been reported by Barraud (1934) to carry each four patches of white scales alternating with four patches of black scales (Fig. I, A). The present strain, on the other hand, bears five distinct patches of white scales alternating with four patches of black scales (Fig. I, B). In view of the extreme importance of the tarsal maculation in the taxonomy of mosquitoes any variation from the typical situation could lead to misidentification and calls for a close scrutiny.

A comparison of the morphological characteristics of the normal and abnormal forms shows that there is a close similarity between the two and the ornamentation of their head, thorax and hind femora is almost of the same type. Likewise, a study of the male genitalia which are admittedly of great significance in taxonomy points to the conspecificity of the two forms.

Despite the morphological resemblance between the typical and abnormal strains of *A. vittatus*, efforts are being made to establish their identity through genetical experiments. This is considered to be important as the subgenus *Stegomyia*, to which *vittatus* belongs, is stated to be under a phase of rapid speciation (Huang, 1970). Moreover, abnormalities noted in the colour patterns of the hind tarsi in certain other species of *Aedes* (Matingly, 1963; Van Someren, 1969 and Jupp, 1970) have resulted in the erection of new species. Accordingly, genetic studies on reciprocal crosses between the abnormal and wild varieties of *vittatus* have already been undertaken. It is also proposed to initiate experiments with a view to studying the manner of inheritance in the F₂ generation and the result of direct back crosses of F₁ hybrids with the parents of both the varieties to verify the probable role of a recessive gene in the abnormal form. Besides the morphological and genetical information, the study of the distribution of the abnormal variety will also help in fixing the correct taxonomic status of this aberrant form in the *Aedes vittatus* group (Edwards, 1932) of species.

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References

- Barraud, P. J. 1934. The fauna of British India, including Ceylon and Burma. Diptera: Culicini. V, Plate VII, fig. 4: 245-246.
- Edwards, F. W. 1932. Diptera, family Culicidae, Genera Insectorum, Fascicle. 194: 166-167.
- Huang, Yai-Min. 1970. The subgenus *Stegomyia* in Southeast Asia. Mosq. Syst. Newsletter. 2(1): 6-8.
- Jupp, P. G. 1970. The taxonomic status of *Culex (Culex) univittatus* Theobald (Diptera: Culicidae) in South Africa. Mosq. Syst. Newsletter. 2: 9-13.
- Mattingly, P. F. 1963. New and remarkable *Aedes* (Diptera: Culicidae) from Africa. Proc. R. Ent. Soc. Lond. (B) 32: 165-170.
- Van Someren, E. C. C. 1969. Some interesting mosquitoes from Kenya Mosq. Syst. Newsletter. I (2): 17-18.

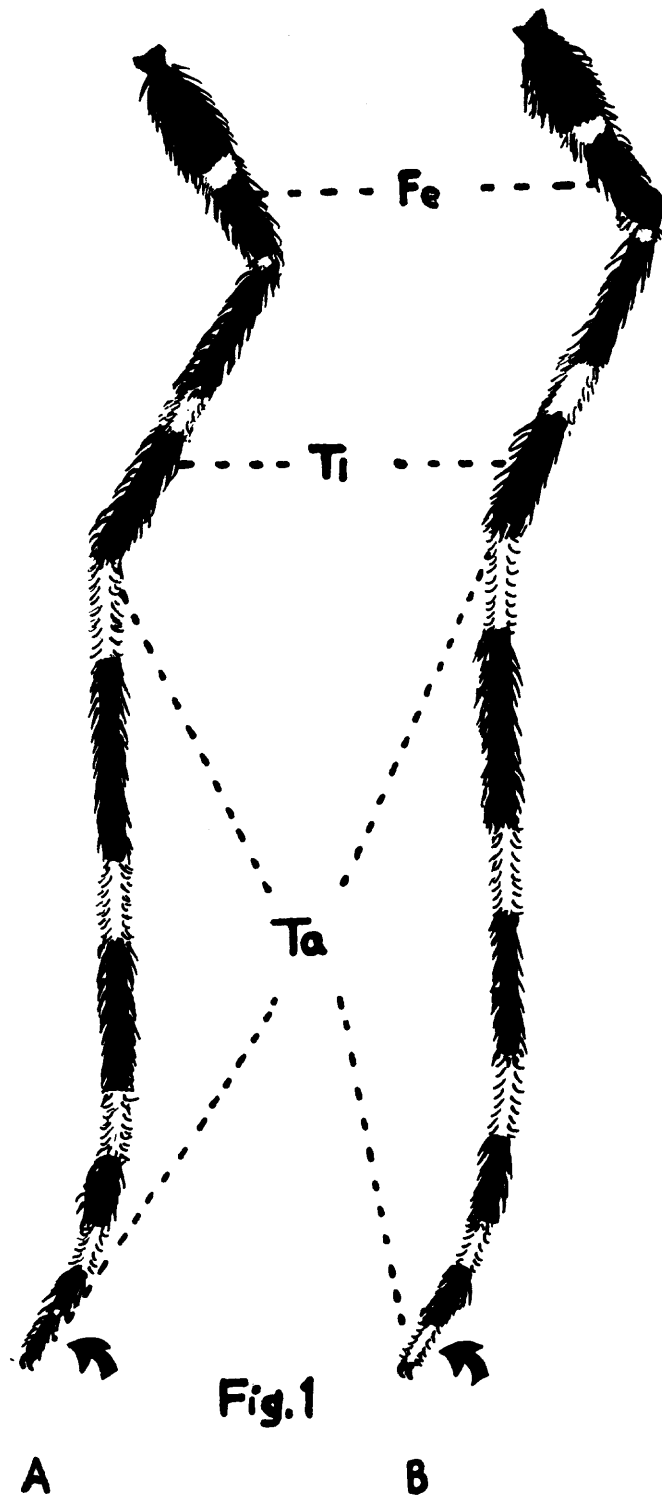


Fig. I, A. Hind leg normal form. Fig. I, B. Hind leg abnormal form.
Fe - Femur. Ti - Tibia. Ta - Tarsus.