

On Certain Acanthagrions, Including Three New Species (Odonata).

By E. B. WILLIAMSON, Bluffton, Indiana.

(Plate XVII)

This paper is a brief account of material collected in Guatemala, British Guiana and Trinidad by B. J. Rainey, L. A. Williamson and myself. At Tumatumari, British Guiana, we were aided by Mr. A. F. Porter and Mr. J. M. Geddes; and in Trinidad we enjoyed the frequent companionship of Mr. F. W. Urich and Mr. P. L. Guppy.

Pruinescence. It is a matter of common observation that in many agrionines pruinescence appears first on the under parts of the thorax. Pruinescence in certain calopterygines is known to be displayed by the male and it is possible that pruinescence in agrionines may serve a similar purpose. In *Acanthagrion* there are between the first coxae, and probably also between the second coxae, bright shining black areas which, in the case of the first coxae at least, are not covered with pruinescence. These black areas in their white field might be displayed by the male fluttering over the female. However the female is about as definitely marked as the male and the theory of sexual display seems rather improbable unless the female uses the same parts to advertise her sexual maturity. I have not examined species in other genera to see how common this type of ventral coloration is. It may also be noticed in this connection that the lower posterior angle of the thorax is tipped with black and there is a more or less definite dark longitudinal mid-ventral line on the first abdominal segment. These various marks produce a definite and uniform ventral color pattern, the most plausible value of which would seem to have to do with the relation of the sexes.

The Penis. In his study of the penis of Zygoptera Mr. Kennedy has given systematic odonatology a new and valuable tool. Specimens from Trinidad appeared, when judged by conventional characters, to be scarcely distinct from *gracile*. However, there were enough differences to excite suspicion, and when specimens were given to Mr. Kennedy for study,