

in Novata

✓ Godbole, N.N. and V.G. Vaidya, University of Poona, India. A new species of Drosophilidae from Poona (India): *Zaprionus* (*Zaprionus*) *paravittiger* sp. nov.

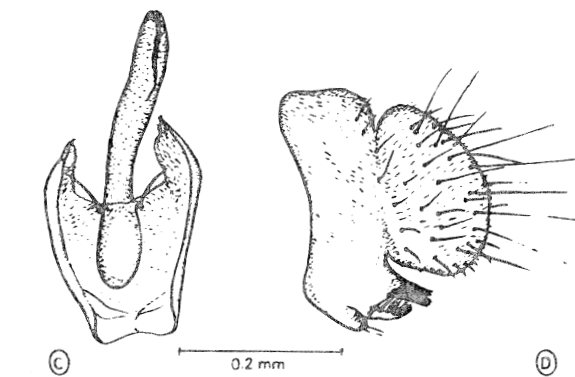
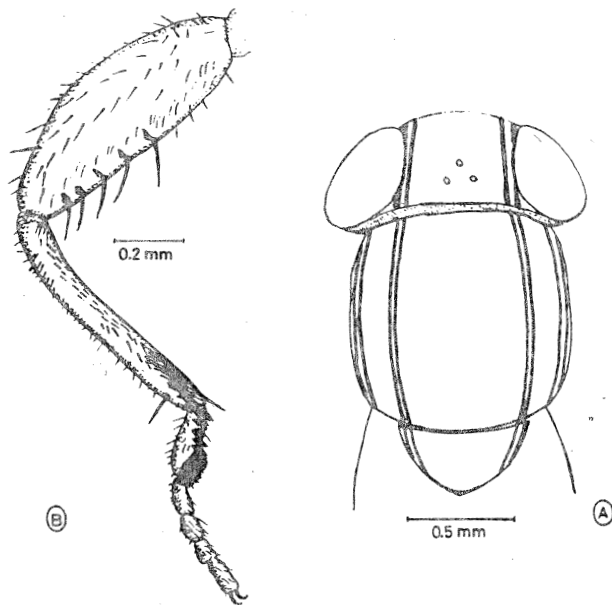
clinate). Second orbital (reclinate) about $3/4$ of the first. Antenna yellowish brown, third segment darker and longer than broad. Arista with about 5 dorsal and 3 ventral rays including the terminal fork. Front dark brown. Carina pale, exceedingly swollen, broad ventrally and

DESCRIPTION OF THE MALE IMAGO: General features and Head: Body about 2.8 mm in length. Eyes red with thick pile. Ocellar triangle small and pale. The three orbitals almost equally distant from the margin of the eye. First orbital (reclinate) slightly smaller than the third (proclinate). Second orbital (reclinate) about $3/4$ of the first. Antenna yellowish brown, third segment darker and longer than broad. Arista with about 5 dorsal and 3 ventral rays including the terminal fork. Front dark brown. Carina pale, exceedingly swollen, broad ventrally and touching the oral margin. One prominent oral bristle. Palpus yellowish with a few prominent bristles. Two longitudinal silvery white stripes between orbital bristles and eye margins, reaching anteriorly the outer distal part of the second antennal joint. The stripes lined by black borders.

Thorax: Thorax dark brown. Humerals 2 unequal. Acrostichal hairs in 6 rows. Anterior dorsocentrals nearly parallel to each other and shorter than the posterior convergent ones. Anterior scutellars convergent. Sterno-index about 0.43. Four longitudinal silvery white stripes with

Zaprionus paravittiger:

- A. Dorsal view of head and thorax
- B. Foreleg of male
- C. Phallic organs
- D. Periphthallic organs



black borders on thorax. Dorsal stripes arise just outside the base of the posterior scutellars and the lateral stripes from the bases of the wings.

Legs: Legs yellowish. Apicals on first and second, that on second prominent. Preapicals on first and third. Femur of first leg with about 4-5 tubercles each with 2 stout unequal spines. Metatarsus of first leg distally with a dense tuft of short hairs and proximally with 5 oblique rows of spines. All but the ultimate segments of second and third tarsi with lateral row of small cuneiform bristles.

Wings: Wings clear, about 2.7 mm in length. Costal index about 2.46. 4th vein index about 1.42. 4C-index about 0.9. 5X-index about 0.97. C-1 bristle one. C-3 bristles on about basal $1/2$.

Abdomen: Tergites yellowish, unicolourous.

Periphthallic organs: Genital arch yellowish and pubescent, with 3-4 bristles on the posterior margin. Heel rounded. Toe low, rounded apically, directed ventrally with about 4 terminal setae. Clasper 1, large, apically truncate, with about 5 strong black teeth and ventrally with about 8 setae. Anal plate fused with the genital arch, pubescent and with many long evenly distributed bristles.

Phallic organs: Phallic organs pale yellow. Aedeagus long, arched dorsally and bearing fine serrations apically. Apodeme of aedeagus paler, laterally compressed. Novasternum roughly triangular, each with a long submedian spine. Anterior and posterior parameres

These data provide further evidence for w^+ isoalleles and locus-specific action of w mutations in *D. melanogaster*. Comparison of Tables 1 and 2 shows that the phenotypic action of w^+ isoalleles in question is somewhat influenced by the genetic background. This influence, however, is not sufficient to cancel out the differences in the action of the w^+ isoalleles themselves and of the w mutations studied.

Ussén, D. and J. Ahlberg. University of Stockholm, Sweden. The effect of an electric field on somatic chromosomes in *Drosophila melanogaster*.

The present investigation was performed in order to study the effect of an electric field to somatic recombination and/or chromosome loss in larvae of *Drosophila melanogaster*. Previous observations on root tip cells of *Allium* have shown that the segregation of the chromosomes was disturbed by electric shocks.

The treatment was given to female larvae, heterozygous for yellow. The larvae were collected at random to all groups. The abdomen of hatched females was mounted on a slide in a drop of Euparal. The slides were coded and the bristles inspected under microscope. The size of the yellow spots was also recorded. In a preliminary test the females were also heterozygous for singed. As the classification of the singed character turned out to be unreliable, however, only the yellow character could be scored.

The electric treatment involved 250 volts, given to third instar larvae as a one second shock between two titan-electrodes in a bath of aq. dest. As a control that the larval age was sensitive to the induction of somatic recombination and/or chromosome loss, one group of larvae received 1800r of X-ray at an intensity of 90r/min. A third group consisted of a control without any treatment.

In Fig. 1, the number of spots per fly is presented. The irradiated group (R) shows a significantly higher number of yellow spots than the control (C), indicating that the treated

Fig. 1

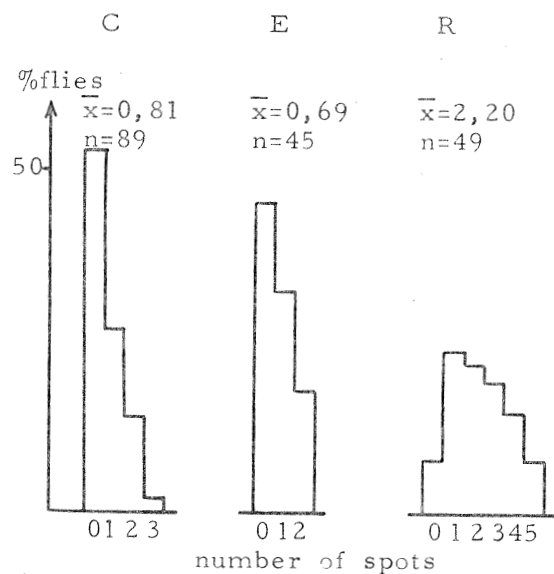
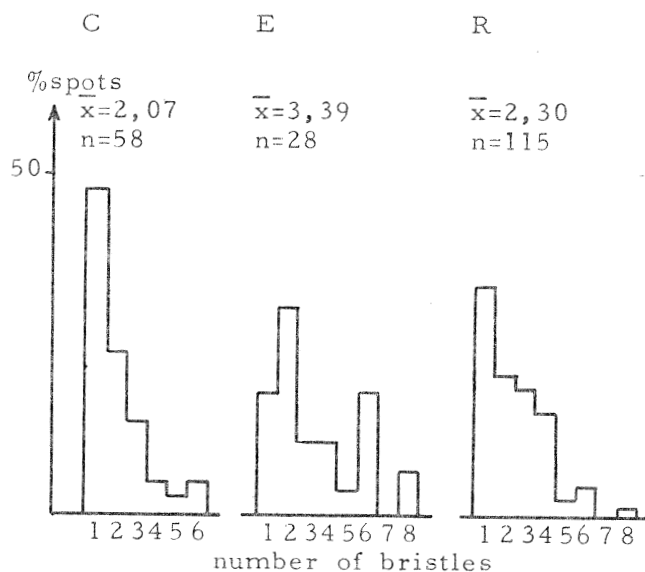


Fig. 2



age of the larvae was sensitive for induction of yellow spots. There is no difference between the control and the group receiving the electric shock (E).

An effect by the electric treatment is indicated, however, by the larger size of the yellow spots as compared to the control, as shown in Fig. 2, showing the number of bristles per yellow spot. The difference between groups C and E is highly significant both concerning the distribution ($\chi^2_5 = 22.4$, $P < 0.0005$) and the mean ($F_{1,84} = 11.7$, $P < 0.001$). A slight tendency in the same direction occurs for the irradiated group, the difference versus the control being at the border of significance ($P = 0.05$). Further investigations are being performed in order to reveal the biological significance of these observations.