

PRELIMINARY RESEARCH NOTE

**A PRELIMINARY NOTE ON THE CHROMOSOME NUMBER OF
UROPETALA CAROVEI (WHITE) (ANISOPTERA: PETALURIDAE)**

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Received and Accepted August 11, 1978

In 2 ♂ final instar larvae from Lake Sarah, South Island, New Zealand, the chromosome complement was counted as $2n = 25$, $n = 13$ (X, m). The material originates from the same locality as that studied by L.S. WOLFE (1953, *Trans. R. Soc. N.Z.* 80: 245-275), who reported 17 elements in the diploid set. A re-examination of the latter's figures suggests that the count was erroneous.

INTRODUCTION

The genus *Uropetala* is endemic to New Zealand and is represented by a single species, *U. carovei*. The habitat and systematics of this species have been described by WOLFE (1949, 1953), who also determined the male diploid chromosome number of this species as 17.

In the present study, one of us (A.J.) collected two male final instar larvae from the mud flats by Lake Sarah in the South Island of New Zealand (43°03'S, 171°47'E). This is the same habitat as described by WOLFE (1953) for this species. On the basis of this particular habitat and on morphological grounds these larvae were determined as belonging to *U. carovei*.

The testes of the two specimens were removed cleared of fat bodies and trachea and fixed in 3:1 absolute alcohol : glacial acetic acid. The material was stained in basic fuchsin after hydrolysis in N HCl for 10 min at 60°C. Squash preparations were made in the usual way and the slides were observed under a Wild Research Photo Microscope.

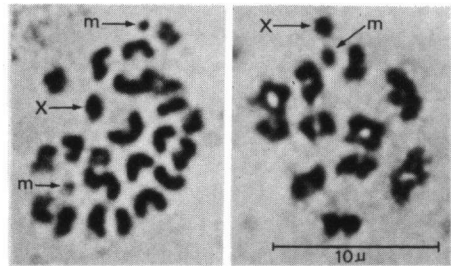
OBSERVATIONS AND DISCUSSION

There was an abundance of spermatocyte divisions, in particular, mid-diakine-

tic to late diakinetik stages were more frequent. In late diakinesis the chromosomes were well spread thus facilitating accurate counting.

We counted over fifty clear cells of diakinetik stage and recorded in each case the number as 25 chromosomes. This is made up of 12 bivalents and an X chromosome (Fig. 1). Of these bivalents there are 5 large pairs, six medium-sized pairs and 1 very small pair of *micro*-chromosomes (*m*). The X is unpaired and is closer in size to the medium-sized bivalents. There were also a number of mitotic divisions present but the chromosomes were not well spread in all of these plates. However, one such somatic metaphase plate was studied thoroughly (Fig. 2) and this confirms the number as 25.

In view of our findings and after examining the photomicrographs published by WOLFE (1949) we concluded that the diploid number 17 as determined by Wolfe is erroneous and the correct number is $2n\delta = 25$, as recorded here. In fact, in spite of the interpretation by WOLFE (1949) of his photomicrographs, there is evidence in some of these of 25 chromosomes. The lower count of 17 by Wolfe may have resulted from cell rupture and subsequent loss of chromosomes. Further work on karyotype analysis is continuing.



Figs. 1-2. Male germ cell chromosomes of *Uropetala carovei* (White) (Feulgen squash): (1) Late diakinesis showing 12 bivalents and a unpaired X; – (2) Mitotic metaphase, $2n = 25$.

ACKNOWLEDGEMENTS

We are grateful to the Nuffield Foundation for a grant to purchase a Wild Research Microscope. We are also thankful to Mr. K. DEACON for assistance in identifying the larvae.

REFERENCES

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